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EXISTING CONDUIT TO BE REMOVED

NEW UNDERGROUND/IN SLAB CONDUIT

CONDUIT STUB-UP WITH FLEXIBLE EQUIPMENT

FLEXIBLE EQUIPMENT CONNECTION

NEW CONCEALED CONDUIT

NEW EMERGENCY CONDUIT

CONDUIT TURNING UP

CAPPED CONDUIT

PUSH BUTTON

K = KEY OPERATED

H = HOLD UP

FEEDER DESIGNATION

A = SWITCHBOARD 'A'

1 = FEEDER NUMBER ONE

AUTOMATIC TRANSFER SWITCH

ATS = AUTOMATIC TRANSFER

MTS = MANUAL TRANSFER POLES

AND RATING AS NOTED

VOLTAGES, WINDINGS AND SIZE AS INDICATED

H = 480V

L = 208V

**GENERATOR** 

FUSED SWITCH

UNFUSED SWITCH

100 AMP SWITCH / 3 POLE

90 AMP TRIP / # OF POLES

NETWORK PROTECTOR

DIGITAL MULTIMETER

200A CAPACITY

FUSED SWITCH

\_\_\_\_\_

GROUND CONNECTION

100 AMP SWITCH / 90 AMP/ 3 POLE

CIRCUIT BREAKER - DRAW OUT TYPE

LT = LONG TIME SETTING

ST = SHORT TIME SETTING

2000 AMP FRAME / 1600 AMP TRIP

MEDIUM VOLTAGE CIRCUIT BREAKER

MEDIUM VOLTAGE CIRCUIT BREAKER

DRAW OUT TYPE - 200A CAPACITY

NUMBER AND RATIO AS INDICATED

HOOKSWITCH FUSE - 125A EXPULSION FUSE

LIGHTNING ARRESTOR WITH GROUND CONNECTION

MANUAL STATION - PULL STATION/FIRE ALARM BOX,

CURRENT TRANSFORMER

100 AMP SWITCH / 90 AMP

I = INSTANTANEOUS SETTING

CIRCUIT BREAKER - MOLDED CASE TYPE

100 AMP FRAME / 90 AMP TRIP

SINGLE LINE DIAGRAM SYMBOLS

P = PANIC

SECTION A-A

CONDUIT TURNING DOWN

NEW EXPOSED CONDUIT

EXISTING CONDUIT/EQUIPMENT TO REMAIN

**LIGHTING SYMBOLS** 2'x4'/2'x2' RECESSED FLUORESCENT CEILING MOUNTED FIXTURE 'A' = FIXTURE TYPE 'a' = CONTROLLED BY SWITCH 'a' NS = NOT SWITCHED NL = NIGHT LIGHT SIMILAR TO ABOVE EXCEPT WIRED TO LIFE SAFETY 'A' = FIXTURE TYPE 'a' = CONTROLLED BY SWITCH 'a' SIMILAR TO ABOVE EXCEPT WIRED TO CRITICAL 'A' = FIXTURE TYPE 'a' = CONTROLLED BY SWITCH 'a' WALL MOUNTED FLUORESCENT LIGHT FIXTURE 'A' = FIXTURE TYPE 'a' = CONTROLLED BY SWITCH 'a' NS = NOT SWITCHED NL = NIGHT LIGHT FLUORESCENT STRIP FIXTURE - TYPE AS NOTED 'A' = FIXTURE TYPE 'a' = CONTROLLED BY SWITCH 'a' EM = EMERGENCY BACKUP UNDERCABINET LIGHT FIXTURE 'A' = FIXTURE TYPE RECESSED CEILING MOUNTED FIXTURE 'A' = FIXTURE TYPE 'a' = CONTROLLED BY SWITCH 'a EM = EMERGENCY BACKUP WALL MOUNTED LIGHT FIXTURE 'A' = FIXTURE TYPE 'a' = CONTROLLED BY SWITCH 'a' EM = EMERGENCY BACKUP ACCENT LIGHT OR WALL WASHER 'A' = FIXTURE TYPE 'a' = CONTROLLED BY SWITCH 'a' EM = EMERGENCY BACKUP CEILING MOUNTED EXIT LIGHT; TYPE 'X' - DIRECTIONAL ARROWS WHERE INDICATED - SHADED AREAS INDICATE ILLUMINATED WALL MOUNTED EXIT LIGHT; TYPE 'X' - DIRECTIONAL ARROWS WHERE INDICATED - SHADED AREAS INDICATE ILLUMINATED EMERGENCY BATTERY LIGHT UNIT 'A' = FIXTURE TYPE REMOTE LIGHT HEADS FOR EMERGENCY BATTERY LIGHT UNIT TYPE AS NOTED **POWER SYMBOLS** SINGLE POLE SWITCH a = CONTROLLING OUTLET 'a 2 = DOUBLE POLE 3 = THREE-WAY 4 = FOUR-WAY K = KEY OPERATED MO = MOMENTARY CONTACT T = TIME SWITCH P = PILOT LIGHT DISCONNECT SWITCH - TOGGLE TYPE WITH THERMAL OVERLOAD - 277V HP RATED DISCONNECT SWITCH - TOGGLE TYPE MOTOR RATED, 20A, 1P, WALL DIMMER - TYPE 'A' NUMBER INDICATES WATTAGE RATING OCCUPANCY SENSOR, CEILING MOUNTED OCCUPANCY SENSOR, WALL MOUNTED PHOTO CONTROL SWITCH 20A, 125V DUPLEX RECEPTACLE - FLUSH WALL MOUNTED CONTROLLED FROM WALL SWITCH 'a' TR = TAMPER RESISTANT 20A, 125V DUPLEX RECEPTACLE - FLUSH WALL MOUNTED WITH TWO (2) INTEGRALLY POWERED USB PORTS 20A, 125V QUADRUPLEX RECEPTACLE - FLUSH WALL MOUNTED 20A, 125V ISOLATED GROUND, DUPLEX RECEPTACLE, FLUSH 20A, 125V DUPLEX RECEPTACLE - FLUSH WALL MOUNTED. 20A, 125V EMERGENCY DUPLEX RECEPTACLE - FLUSH WALL MOUNTED 20A, 125V EMERGENCY DUPLEX RECEPTACLE - FLUSH WALL MOUNTED WITH TWO (2) INTEGRALLY POWERED USB PORTS SINGLE RECEPTACLE - FLUSH WALL MOUNTED FM = FLOOR MACHINE WC = WATER COOLER

XR = X-RAY

20A, 125V DUPLEX RECEPTACLE SURFACE MOUNTED

FLUSH FLOOR MOUNTED JUNCTION BOX OR POKE-THRU

20A, 125V DUPLEX RECEPTACLE - FLUSH FLOOR MOUNTED

SPECIAL PURPOSE RECEPTACLE - FLUSH WALL MOUNTED

SPECIAL PURPOSE RECEPTACLE - FLUSH FLOOR MOUNTED

PLUG-IN SURFACE METAL RACEWAY - LETTER INDICATES

TYPE - WITH SPECIAL PURPOSE RECEPTACLES WHERE

HOMERUN-NUMERAL WHERE USED INDICATES CIRCUIT

2#12+1#12G-3/4"C FOR ONE CKT. HOMERUN, U.O.N.

3#12+1#12G-3/4"C FOR TWO CKT. HOMERUN, U.O.N.

HOMERUN - NUMERAL WHERE USED INDICATES CIRCUIT

4#12+1#12G-3/4"C FOR THREE CKT. HOMERUN, U.O.N.

COMBINATION MOTOR CONTROLLER AND DISCONNECT SWITCH

SWITCH AMPS/# OF POLES, VOLTAGE RATING AS REQUIRED

SWITCH AMPS/# OF POLES, VOLTAGE RATING AS REQUIRED

FUSED DISCONNECT SWITCH; SWITCH AMPS/FUSE AMPS/

TRIP AMPS/# OF POLES, VOLTAGE RATING AS REQUIRED

SURFACE MOUNTED POWER DISTRIBUTION PANELBOARD

CEILING MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT

FLUSH WALL MOUNTED JUNCTION BOX WITH FINAL EQUIPMENT

# OF POLES, VOLTAGE RATING AS REQUIRED

SURFACE MOUNTED LIGHTING PANELBOARD

FLUSH MOUNTED LIGHTING PANELBOARD

SURFACE MOUNTED POWER PANELBOARD

FLUSH MOUNTED POWER PANELBOARD

FLUSH FLOOR MOUNTED JUNCTION BOX

CONNECTION

20A, 125V QUADRUPLEX RECEPTACLE - FLUSH FLOOR

FOR ELECTRIFIED FURNITURE POWER FEED

C = VOICE/DATA FEED

A = INDICATES TYPE

NUMBER FOR REFERENCE ONLY.

NUMBER FOR REFERENCE ONLY

UNFUSED DISCONNECT SWITCH

ENCLOSED CIRCUIT BREAKER

NA = NON-AUTOMATIC

DIMMER ZONE HOMERUN

MOTOR CONTROLLER

INDICATED

COMBINATION MOTOR CONTROLLER AND FUSED DISCONNECT SWITCH: SWITCH AMPS / FUSE AMPS / # OF POLES. VOLTAGE RATING & STARTER SIZE AS REQUIRED COMBINATION MOTOR CONTROLLER AND CIRCUIT BREAKER TRIP AMPS / # OF POLES, VOLTAGE RATING & FIRE ALARM CONTROL PANEL FIRE ALARM DATA GATHERING PANEL FIRE ALARM ANNUNCIATOR 20A, 125V SURGE SUPPRESSION DUPLEX RECEPTACLE - FLUSH UNINTERRUPTIBLE POWER SUPPLY ELEVATOR STATUS/RECAL SIGNAL INITIATING DEVICES & ACTIVATION

SWITCHES SYMBOLS

CO2 = CARBON DIOXIDE DC = DRY CHEMICAL HL = HALON F = FIRE ALARM FO = FOAM WC = WET CHEMICAL CA = CLEAN AGENT WM = WATER MIST DL = DELUGE FIRE SPRINKLER PRE = PREACTION HEAT DETECTOR/SENSOR (THERMAL DETECTION) ORIENTATION NOT TO BE CHANGED HEAT DETECTOR/SENSOR, 'XX' DENOTES TYPE: R/F = COMBINATION RATE OF RISE/FIXED TEMPERATURE R/C = RATE COMPENSATION F = FIXED TEMPERATURE R = RATE OF RISE ONLY SMOKE DETECTOR/SENSOR, 'XX' DENOTES TYPE: AS = AIR SAMPLING P = PHOTOELECTRIC

'XX' DENOTES TYPE:

I = IONIZATION R = RELAY BASE SS = SINGLE STATION SB = SOUNDER BASE ID = IN DUCT SMOKE/HEAT DETECTOR/SENSOR COMBINATION SMOKE DETECTION/SENSOR FOR DUCT FLOW DETECTOR/SWITCH PRESSURE DETECTOR/SWITCH ADDRESSABLE INPUT MODULE ADDRESSABLE OUTPUT MODULE

ADDRESSABLE INPUT/OUTPUT MODULE

NON-ADDRESSABLE OUTPUT RELAY

# DENOTES NUMBER OF INPUTS AND OUTPUTS

NOTIFICATION APPLIANCES SYMBOLS

NOTIFICATION APPLIANCE SUBSCRIPTS ('XX')

nW = WATTAGE SETTING (n = SPEAKER TAP)

WP = WEATHERPROOF

C = CEILING MOUNT

P = PENDENT

HORN ONLY

SPEAKER ONLY

SL = SIGNAL LIGHT

C = CEILING MOUNT

C = CEILING MOUNT

VISIBLE ONLY (STROBE) - WALL MOUNT

CD = CANDELA RATING/SETTING

VISIBLE ONLY (STROBE) - CEILING MOUNT

CD = CANDELA RATING/SETTING

CD = CANDELA RATING/SETTING

CD = CANDELA RATING/SETTING

REMOTE ALARM INDICATING AND TEST SWITCH

COMBINATION HORN/VISIBLE

C = CEILING MOUNT

COMBINATION SPEAKER/VISIBLE

C = CEILING MOUNT

REMOTE INDICATOR - WALL MOUNT

REMOTE INDICATOR - CEILING MOUNT

DOOR HOLDER

DOOR CLOSER

END OF LINE RESISTOR

(STYLE 6 OR 7 FAULT PROTECTION)

— EQUIPMENT No. IF MORE THAN 1 SAME LOCATION

ISOLATOR MODULE

JUNCTION BOX

**ELECTRICAL PANEL DESIGNATIONS** 

CLOSET DESIGNATION

-- VOLTAGE: H=480/277; L=208/120

- D=DISTRIBUTION (OPTIONAL)

- P=POWER; L=LIGHTING/APPLIANCES

— E=EMERGENCY (OMITTED IF NORMAL)

— FLOOR OR AREA

EDPH-1-NA1

BELL - SINGLE STROKE

RI = REMOTE INDICATOR

H = HIGH AUDIBLE SETTING

L = LOW AUDIBLE SETTING

WG = WIRE GUARD

**ELECTRICAL ABBREVIATIONS** SPECIAL MOUNTING HEIGHT. COORDINATE LOCATION KCMIL WITH ARCHITECTURAL ELEVATIONS SINGLE POLE TWO POLE THREE POLE ABOVE COUNTER AIR CIRCUIT BREAKER ABOVE FINISHED FLOOR AMPERE INTERRUPTING CAPACITY AQST AQUASTAT ABOVE RAISED FLOOR ASYM ASYMMETRICAL AUTOMATIC TRANSFER SWITCH AUTOMATIC AUDIO VISUAL AMERICAN WIRE GAUGE BREAK GLASS SWITCH BASIC IMPULSE LEVEL BLDG CONDUIT CABINET CATALOG CIRCUIT BREAKER CCTV CLOSED CIRCUIT TELEVISION CIRCUIT CENTER LINE CLOSET CONDUIT ONLY COMMUNICATION CONN CONNECTED CONTINUATION **CURRENT TRANSFORMER** CONTROL COPPER CUH CABINET UNIT HEATER DOUBLE ENDED SUBSTATION DEGREE DRINKING FOUNTAIN DIAMETER DISCONNECT DIVISION DOWN DISTRIBUTION PANEL BOARD DUST TIGHT DRAWING DEGREE CELSIUS DEGREE FAHRENHEIT EXISTING TO BE REMOVED EXISTING TO BE REMOVED AND RELOCATED

MCB MECH MTD MTG MTS OCB RDCP EMPTY CONDUIT EACH ELECTRICAL CONTRACTOR ELEVATION ELECTRICAL **ELEVATOR EMERGENCY EQUIPMENT** ELECTRIC REHEAT COIL ELECTRIC WATER COOLER EXTERIOR FIRE ALARM FIRE ALARM CONTROL PANEL

THOUSAND CIRCULAR MILS

KILOVOLT

KILOWATT

LIGHTING

MAXIMUM

MECHANICAL

MANHOL

MOUNTED

MOUNTING

NEUTRAL

NOT IN CONTRACT

NORMALLY CLOSED

**NETWORK PROTECTOR** 

OIL CIRCUIT BREAKER

OUTSIDE DIAMETER

PUBLIC ADDRESS

PULL BOX

PRINTER

POWER

PHASE

PLUMBING ALARM PANEL

PUSH BUTTON SWITCH

PIPE HEATING CABLE

PRESSURE SWITCH

RELOCATED EXISTING

UNDERFLOOR DUCT

VOLT OR VOLTAGE

WATERFLOW SWITCH

WATT HOUR METER

WEATHERPROOF

EXPLOSION PROOF

WATERTIGHT

**VOLT AMPERE** 

VAPORPROOF

VOLTMETER

UNLESS OTHERWISE NOTED

VARIABLE FREQUENCY DRIVE

UNIT HEATER

UNFUSED

UNF

WFD

REMOTE CONTROL SWITCH

EXISTING TO BE REMOVED AND RETURN TO OWNER

POTENTIAL TRANSFORMER

NORMALLY OPEN

NOT TO SCALE

ON CENTER

MICROPHONE

MAIN LUG ONLY

KILOVOLT AMPERE

KILOWATT HOUR

LOCAL CONTROL PANEL

LINE ISOLATION MONITOR

MECHANICAL ALARM PANEL

MINIMUM CIRCUIT AMPERES

MOTOR CONTROL CENTER

MAIN DISTRIBUTION PANEL

MANUAL TRANSFER SWITCH

MAIN UNFUSED SWITCH

MECHANICAL EQUIPMENT ROOM

MAXIMUM OVERCURRENT PROTECTION

MAIN CIRCUIT BREAKER

MAIN FUSED SWITCH

MOPD, MOCP EMER,EN **EQUIP** EXIST,EX FACP FIRE ALARM ANNUNCIATOR PANEL FURNISHED BY OTHER DIVISION OF WORK SPKLR FCU FAN COIL UNIT

REMOTE DATA COLLECTION PANEL RECEPT.REC RECEPTACLE REFRIGERATOR REQUIRED RAISED FLOOR ROOM GROUND POINT ROOM RACEWAY ONLY REFERENCE GROUND POINT SPRINKLER ALARM PANEL SUBSTATION SCHED,SCH SCHEDULE SMOKE DETECTOR SMOKE DETECTION PANEL SINGLE ENDED SUBSTATION SIGNAL SOLID NEUTRAL SINGLE POLE **SPECIFICATION** SPRINKLER SPKR SPEAKER **FEEDER** SOLENOID VALVE FUSED DISCONNECT SWITCH SWITCH SWBD SWITCHBOARD SWGR SWITCHGEAR FULL LOAD AMPERES SYM SYMMETRICAL **FLEXIBLE** SYS SYSTEMS FLUORESCENT FLOOR MACHINE TROUBLE BELL FREEZER TO BE DETERMINED FAN SHUTDOWN PANE; TELEPHONE FEET OR FOOT TEMP TEMPERATURE THERM THERMOSTAT GROUND TLBD TERMINAL BOARD GENERATOR TAMPER PROOF GROUND FAULT INTERRUPTER TRANSF,XFMR TRANSFORMER TAMPER SWITCH HUNG CEILING TELEVISION HAND HOLE TVSS TRANSIENT VOLTAGE SURGE SUPPRESSION HIGH INTENSITY DISCHARGE TYPICAL HALF NEUTRAL

FDS

**FLUOR** 

GEN

HORSE POWER

HIGH VOLTAGE

INSIDE DIAMETER

ISOLATED GROUND

INCANDESCENT

INSTRUMENT

JUNCTION BOX

INTERRUPTING CAPACITY

ISOLATED POWER CENTER

ISOLATED POWER CENTER X-RAY

HERTZ

**ELECTRICAL DRAWING LIST** DRAWING No. DRAWING TITLE

ELECTRICAL GENERAL NOTES, SYMBOLS AND ABBREVIATION **ELECTRICAL SCHEDULES** ELECTRICAL SCHEDULES **ELECTRICAL SCHEDULES** ELECTRICAL DETAILS ELECTRICAL FIFTH FLOOR DEMOLITION PLAN - SECTOR 1 ELECTRICAL FIFTH FLOOR DEMOLITION PLAN - SECTOR 2 ELECTRICAL ROOF DEMOLITION PLAN - SECTOR1 ELECTRICAL ROOF DEMOLITION PLAN - SECTOR 2 ELECTRICAL FIFTH FLOOR POWER PLAN - SECTOR 1 ELECTRICAL FIFTH FLOOR POWER PLAN - SECTOR 2 ELECTRICAL SIXTH FLOOR POWER PLAN - SECTOR 1 ELECTRICAL SIXTH FLOOR POWER PLAN - SECTOR 2 ELECTRICAL SEVENTH FLOOR POWER PLAN - SECTOR 1 ELECTRICAL SEVENTH FLOOR POWER PLAN - SECTOR 2 ELECTRICAL ROOF POWER PLAN - SECTOR 1 ELECTRICAL ROOF POWER PLAN - SECTOR 2 ELECTRICAL PENTHOUSE POWER PLAN - SECTOR 1 ELECTRICAL PENTHOUSE POWER PLAN - SECTOR 2 ELECTRICAL SIXTH FLOOR LIGHTING PLAN - SECTOR 1 ELECTRICAL SIXTH FLOOR LIGHTING PLAN - SECTOR 2 ELECTRICAL SEVENTH FLOOR LIGHTING PLAN - SECTOR 1 ELECTRICAL SEVENTH FLOOR LIGHTING PLAN - SECTOR 2 ELECTRICAL ROOF LIGHTING PLAN - SECTOR 1 ELECTRICAL ROOF LIGHTING PLAN - SECTOR 2 ELECTRICAL PENTHOUSE LIGHTING PLAN - SECTOR 1 ELECTRICAL PENTHOUSE LIGHTING PLAN - SECTOR 2

ELECTRICAL PART PLANS

ELECTRICAL POWER RISER DIAGRAM

ELECTRICAL GENERAL NOTES

 GENERAL NOTES, SYMBOL LIST AND DETAILS ARE APPLICABLE TO ALL ELECTRICAL DRAWINGS. ALL WORK IS NEW UNLESS OTHERWISE NOTED. 3. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. FOLLOW DRAWINGS

IN LAYING OUT WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS. MAINTAIN HEADROOM AND SPACE CONDITIONS. 4. SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS (HOLLOW MASONRY), EXPANSION SHIELDS OR INSERTS (CONCRETE AND BRICK), MACHINE SCREWS (METAL), BEAM CLAMPS (FRAMEWORK), WOOD SCREWS (WOOD) OR PAN THRU STRAPS (METAL DECK). NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE

REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT HORIZONTAL RUNS OF METALLIC

RACEWAYS NOT MORE THAN 10 FT APART. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED

RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO WALLS. 5. PASS RACEWAYS OVER WATER, STEAM OR OTHER PIPING WHEN PULL BOXES ARE NOT REQUIRED. NO RACEWAY WITHIN 3 INCHES OF STEAM OR HOT WATER PIPES OR APPLIANCES (EXCEPT PIPE CROSSINGS WHERE RACEWAY SHALL

BE AT LEAST 1 INCH FROM PIPE COVERS). 6. CUT CONDUIT ENDS SQUARE. REAM SMOOTH. PAINT MALE THREAD OF FIELD THREADED RACEWAYS WITH GRAPHITE

BASE PIPE COMPOUND. DRAW UP TIGHT WITH RACEWAY COUPLING. 7. HORIZONTAL OR CROSS RUNS IN PARTITIONS AND WALLS ARE NOT PERMITTED. DO NOT RUN CONDUIT IN PRECAST

ROOF SLABS, IN 2 INCH SLABS OR IN TERRAZZO FLOOR FINISH. 8. LEAVE WIRES WITH SUFFICIENT SLACK TO PERMIT MAKING FINAL CONNECTIONS. RACEWAYS OVER 10 FT LONG IN

9. SET BOXES SQUARE AND TRUE WITH BUILDING FINISH. ERECT WALL AND SWITCH OUTLETS IN ADVANCE OF FURRING AND FIREPROOFING. SECURE TO BUILDING STRUCTURE BY ADJUSTABLE STRAP IRONS.

10. VERIFY LOCATIONS OF OUTLETS AND SWITCHES IN FINISHED ROOMS WITH ARCHITECTURAL DRAWINGS OF INTERIOR DETAILS AND FINISH. IN CENTERING OUTLETS AND LOCATING BOXES AND OUTLETS, ALLOW FOR OVERHEAD PIPES, DUCTS AND MECHANICAL EQUIPMENT, VARIATIONS IN FIREPROOFING AND PLASTERING, WINDOW AND DOOR TRIM, PANELING. HUNG CEILINGS AND THE LIKE. CORRECT ANY INACCURACY RESULTING FROM FAILURE TO DO SO WITHOUT EXPENSE TO OWNER.

11. LOCATIONS INDICATED FOR LOCAL WALL SWITCHES ARE SUBJECT TO MODIFICATIONS AT OR NEAR DOORS. COORDINATE WITH ARCHITECT AND INSTALL SWITCH ON SIDE OPPOSITE HINGE. VERIFY FINAL HINGE LOCATIONS IN FIELD PRIOR TO SWITCH OUTLET INSTALLATION.

12. COVERS OF JUNCTION AND PULLBOXES SHALL BE READILY ACCESSIBLE.

WHICH WIRING IS NOT INSTALLED: FURNISH FISH WIRE.

13. PROVIDE PULLBOXES WHERE INDICATED, WHERE REQUIRED BY CODE AND WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE. COORDINATE PULLBOX LOCATIONS WITH OTHER TRADES.

14. EMPTY RACEWAY RUNS: PROVIDE PULLBOXES EVERY 100 FT AND AS INDICATED. COORDINATE LOCATIONS WITH OTHER

15. JUNCTION AND PULLBOXES: LOCATE GENERALLY NOT EXPOSED IN FINISHED SPACES. WHERE NECESSARY, REROUTE RACEWAYS OR MAKE OTHER ARRANGEMENTS FOR CONCEALMENT. 16. SUPPORT PANEL, JUNCTION AND PULLBOXES INDEPENDENTLY TO BUILDING STRUCTURE WITH NO WEIGHT BEARING ON

RACEWAYS.

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

18. CONNECT CONDUIT TO MOTOR CONDUIT TERMINAL BOXES WITH FLEXIBLE CONDUIT (MINIMUM 18 IN. LENGTH AND 50% SLACK). DO NOT TERMINATE IN OR FASTEN RACEWAYS TO MOTOR FOUNDATION.

19. PROVIDE 2#14 INDICATING PILOT LIGHT WIRES FROM PILOT LIGHT IN CONTROLLER TO LOAD SIDE OF DISCONNECT

SWITCH. RUN WIRES IN BRANCH CIRCUIT CONDUIT AND INCREASE CONDUIT SIZE AS REQUIRED. 20. PULL NO THERMOPLASTIC WIRES AT TEMPERATURES LOWER THAN 32°F (0C). PROVIDE CABLE SUPPORTS FOR WIRE IN

RISER CONDUITS AS REQUIRED BY CODE.

21. PROVIDE SEPARATE RACEWAYS FOR CONDUCTORS OF NORMAL AND EMERGENCY CIRCUITS. COMMON BOXES: PROVIDE BARRIERS BETWEEN EMERGENCY AND NORMAL WIRING.

22. HEIGHTS OF OUTLETS FROM FINISHED FLOOR TO CENTERLINE OF OUTLET:

RECEPTACLES AND TELEPHONES: OVER WORK BENCHES WALL SWITCHES WALL FIXTURES MOTOR CONTROLLERS GONGS AND HORNS FIRE ALARM STATIONS CLOCKS 6'-8" TO BOTTOM STROBE LIGHTS

EXCEPTIONS: AT JUNCTION OF DIFFERENT WALL FINISH MATERIALS, ON MOLDING OR BREAK IN WALL SURFACE, IN VIOLATION OF CODE REQUIREMENTS, AS NOTED OR DIRECTED. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND CONFIRMING ALL MOUNTING HEIGHTS WITH ARCHITECT AND ARCHITECTURAL DRAWINGS.

23. WIRE COLOR CODING: AS PER CODE. WHERE COLOR-CODED CABLE IS NOT AVAILABLE, CERTIFY IN WRITING AND REQUEST PERMISSION FOR OVERLAP COLOR TAPING OF CONDUCTORS (MINIMUM LENGTH 6") IN ACCESSIBLE LOCATIONS. COLOR CODING, ONCE SELECTED, MUST BE USED CONSISTENTLY FOR THE ENTIRE PROJECT.

24. INSTALL NEW WORK AND CONNECT TO EXISTING WORK WITH MINIMUM. INTERFERENCE TO EXISTING FACILITIES TEMPORARY SHUTDOWNS: ONLY WITH WRITTEN CONSENT OF OWNER. MAINTAIN CONTINUOUS OPERATION OF

25. FIRESTOPPING SHALL BE INSTALLED WHENEVER WIRING OR RACEWAYS CROSS FIRE RATED CONSTRUCTION.

EXISTING FACILITIES. ALARM AND EMERGENCY SYSTEMS ARE NOT TO BE INTERRUPTED.

DESIGN. REFER TO ARCHITECTURAL DRAWINGS FOR FURTHER INFORMATION.

26. LIGHTING FIXTURE SCHEDULE STANDARD NOTE: LIGHTING FIXTURE SCHEDULE SHOWN ON ENGINEER'S DRAWINGS ARE FOR INFORMATION PURPOSES ONLY. LIGHTING FIXTURES SHOWN ARE THOSE SELECTED BY ARCHITECT. ENGINEER SHALL NOT BE RESPONSIBLE FOR INFORMATION SHOWN RELATED TO FIXTURE SELECTION AND OVERALL LIGHTING

27. TO THE BEST OF THE APPLICANT'S KNOWLEDGE, BELIEF AND PROFESSIONAL. JUDGEMENT, THESE PLANS ARE IN COMPLIANCE WITH THE INTERNATIONAL ENERGY CONSERVATION CODE.

ELECTRICAL DEMOLITION NOTES

SOURCE OF POWER SUPPLY.

TO REMAIN OR TO PANELBOARD.

DIRECTED BY THE OWNER.

1. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL COSTS ASSOCIATED WITH REMOVALS & RELOCATIONS OF ELECTRICAL WORK AS DESCRIBED IN THE SPECIFICATIONS WITH ALLOWANCES FOR EXPECTED OR UNFORESEEN DIFFICULTIES WHEN CONCEALED WORK HAS BEEN OPENED. NO CLAIMS FOR ADDITIONAL WORK ASSOCIATED WITH DEMOLITION WILL BE ACCEPTED, EXCEPT IN CERTAIN CASES CONSIDERED JUSTIFIABLE BY THE ARCHITECT.

THE CONTRACTOR SHALL REMOVE AND/OR RELOCATE ALL EXISTING ELECTRICAL WORK WHICH INTERFERES WITH THE NEW ARCHITECTURAL AND ELECTRICAL LAYOUTS IN FULL COORDINATION WITH THE ARCHITECT'S DEMOLITION PLANS.

ALL SYSTEMS WHICH ARE NO LONGER REQUIRED TO FUNCTION SHALL BE DE-ENERGIZED AND DISCONNECTED AT THE

FOR OPERATION. OTHERWISE, WIRING SHALL BE REMOVED BACK TO THE NEAREST ELECTRICAL JUNCTION BOX THAT IS

THE CONTRACTOR SHALL PERFORM DEMOLITION AND REMOVAL WORK WITH MINIMUM INTERFERENCE WITH FUNCTIONING ELECTRICAL SYSTEMS. ALL AFFECTED SYSTEMS SHALL BE RECONNECTED AND RESTORED.

4. DEMOLITION AND REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER. THE CONTRACTOR SHALL PATCH, REPAIR OR OTHERWISE RESTORE ANY DAMAGED INTERIOR OR EXTERIOR BUILDING SURFACE TO ITS

THE CONTRACTOR SHALL REMOVE ALL ELECTRICAL OUTLETS, SWITCHES AND OTHER DEVICES, COMPLETE WITH ASSOCIATED WIRING, CONDUITS, ETC., FROM PARTITIONS THAT ARE TO BE REMOVED. WHERE THE REMOVAL OF THESE ITEMS DISRUPTS EXISTING WIRING THAT IS TO REMAIN, THE CONTRACTOR SHALL INSTALL JUNCTION BOXES & OTHER DEVICES AND PROVIDE BYPASS CONNECTIONS NECESSARY TO MAKE CIRCUITS AFFECTED CONTINUOUS AND READY

6. ALL RACEWAYS WHICH BECOME EXPOSED DURING THE ALTERATION WORK SHALL BE REMOVED AND REROUTED CONCEALED BEHIND FINISHED SURFACES.

7. ALL UNUSED OUTLET BOXES OR CAPPED FLOOR OUTLETS SHALL BE PROVIDED WITH MATCHING BLANK COVERS. B. EXISTING PANEL DIRECTORIES AFFECTED BY THE ALTERATION WORK SHALL BE MODIFIED TO REFLECT THE BRANCH

CIRCUIT WIRING CHANGES. PORTIONS OF FEEDER RUNS TO BE REMOVED OR ABANDONED AS A RESULT OF DEMOLITION WORK, BUT WHICH ARE REQUIRED TO REMAIN ENERGIZED. SHALL BE CUT AT CONVENIENT LOCATIONS. REPOUTED AND RECONNECTED, NEW FEEDER EXTENSIONS SHALL MATCH EXISTING ONES IN ALL RESPECTS, CABLE TYPE, CONDUCTOR AMPACITY, CONDUIT

THE CONTRACTOR SHALL NOTIFY THE OWNER AT THE APPROPRIATE TIME OF THE PROJECTED DEMOLITION AND PHASING SCHEDULE SO THAT REMOVAL OR RELOCATION OF AFFECTED UTILITIES MAY BE CARRIED OUT IN COORDINATION WITH THE PROJECT REQUIREMENTS. THE CONTRACTOR SHALL FOLLOW CLOSELY THE ARCHITECT'S DEMOLITION AND PHASING SCHEDULE AND PROCEED IN THE SPECIFIED SEQUENCE.

11. ALL EXISTING MATERIAL AND EQUIPMENT IN USABLE CONDITION, WHICH IS TO BE REMOVED UNDER THIS CONTRACT, SHALL REMAIN THE PROPERTY OF THE OWNER OR SHALL BE DISPOSED OF BY THE ELECTRICAL CONTRACTOR, AS

ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVER TIME, IF REQUIRED, TO ASSURE THAT SYSTEMS WILL BE SHUT DOWN ONLY DURING THE TIME ACTUALLY REQUIRED TO MAKE THE NECESSARY CONNECTIONS TO THE EXISTING

13. THE SHUTDOWN OF EXISTING BUILDING ELECTRICAL SERVICES SHALL BE COORDINATED WITH THE OWNER. MAKE ARRANGEMENTS AT LEAST 5 BUSINESS DAYS PRIOR TO A SHUTDOWN.

PERKINS

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CONSTRUCTION MANAGER Turner Construction

> ELEVATOR CONSULTANT VDA (Van Deusen & Associates)

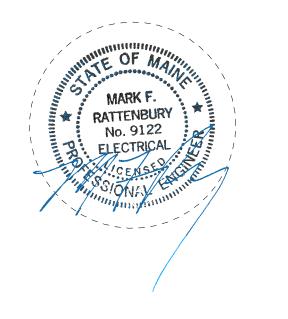
2 Seaport Lane, Suite 200, Boston, MA 02210

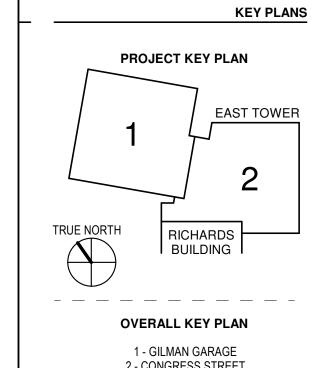
101 Summer Street, 4th Floor, Boston MA COST ESTIMATOR

D. G. Jones International 3 Baldwin Green Common, Suite 202, Woburn, MA 01801

PROJECT TITLE

East Tower 6 & 7 **Addition** 22 Bramhall Street Portland, ME 04102





2 - CONGRESS STREET 3 - VISITOR GARAGE 4 - EAST TOWER 5 - CENTRAL UTILITY PLANT 6 - BEAN BUILDING 7 - RICHARDS BUILDING 8 - MAINE GENERAL BUILDING

CONSTRUCTION DOCUMENTS JANUARY 26, 2018

ADDENDUM NO. 2 03/29/18 DATE B150312-000 Job Number MAS Checked MFR MFR

**ELECTRICAL GENERAL NOTES SYMBOLS AND ABBREVIATIONS** 

E00-01

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SHEET NUMBER