

ELECTRICAL NOTES

1.

REFER TO THE ARCHITECTURAL DOCUMENTS FOR ALL APPLICABLE CODES. THE WORK SHALL BE IN ACCORDANCE WITH THE 2008 NATIONAL ELECTRICAL CODE (NECA 70), THE 2010 FLORIDA BUILDING CODE, 2007 NFPA 72, 2009 NFPA-101, FAC, AND ANY OTHER LOCAL JURISDICTIONAL REQUIREMENTS. IN ADDITION, ANY BASE BUILDING OR TENANT GENERAL CONDITIONS SHALL GOVERN ACCEPTABLE MATERIALS AND WORK.

2.

THE CONTRACTOR SHALL BRING ANY CONFLICTS OR DISCREPANCIES TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO PROCEEDING WITH WORK.

3.

THE CONTRACTOR SHALL FIELD VISIT THE SITE PRIOR TO BID TO FAMILIARIZE HIMSELF WITH THE SCOPE OF WORK.

4.

ALL WORK SHALL BE DONE IN A FIRST CLASS WORKMANLIKE MANNER BY A LICENSED ELECTRICAL CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A SAFE, CLEANLY, AND UNDISRUPTIVE JOB SITE THAT DOES NOT IMPEDE EGRESS PATHS OR OTHER TENANTS. DISRUPTIONS TO POWER AFFECTING OTHER TENANTS OR AREAS OUTSIDE THE SCOPE OF WORK SHALL BE COORDINATED WITH THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING OF HIS WORK. WHEN THE WORK IS COMPLETE, ALL ELECTRICAL DEVICES SHALL BE VACUUMED CLEAN. THE FINAL PRODUCT SHALL BE A FULLY FUNCTIONAL SYSTEM MEETING THE INTENT OF THE DRAWINGS/DOCUMENTS. WORKMANSHIP AND ALL MATERIALS AND EQUIPMENT SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR IN WRITING COMMENCING UPON ACCEPTANCE OF INSTALLATION BY OWNER.

5.

WITHIN 30 DAYS AFTER THE DATE OF THE SYSTEM ACCEPTANCE, RECORD DRAWINGS OF THE ACTUAL INSTALLATION SHALL BE PROVIDED TO THE BUILDING OWNER, INCLUDING A SINGLE-LINE DIAGRAM OF THE BUILDING ELECTRICAL DISTRIBUTION SYSTEM AND FLOOR PLANS INDICATING LOCATION AND AREA SERVED FOR ALL DISTRIBUTION. ADDITIONALLY, AN OPERATING MANUAL AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OWNER INCLUDING THE FOLLOWING: SUBMITTAL DATA STATING EQUIPMENT RATING AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. OPERATING MANUALS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE INCLUDING CLEARLY IDENTIFIED ROUTINE MAINTENANCE ACTIONS, AND NAMES AND ADDRESSES OF AT LEAST ONE QUALIFIED SERVICE AGENCY.

6.

UNLESS PROVIDED WITH DIMENSIONS OR NOTED OTHERWISE, ELECTRICAL PLANS ARE STRICTLY DIAGRAMMATIC ONLY. REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS, MOUNTING HEIGHTS, ETC. EFFORT HAS BEEN MADE TO PROPERLY ACCOUNT FOR ALL SPACE REQUIREMENTS, CLEARANCES, ETC. BUT SITE CONDITIONS AND PRODUCTS SELECTED MAY VARY AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN PROPER ARRANGEMENTS AND CLEARANCES. DRAWINGS SHALL NOT BE SCALED.

7.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, PAYING ALL ASSOCIATED FEES, AND DOCUMENTING AND FILING ALL PAPERWORK ASSOCIATED WITH THIS SCOPE OF WORK. WHEN THE WORK IS COMPLETE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED CERTIFICATES OF INSPECTION.

8.

UNLESS NOTED OTHERWISE ALL EXISTING ELECTRICAL DEVICES INSTALLED UNDER PREVIOUS CONTRACTS SHALL REMAIN. CONTRACTOR SHALL EXTEND AND RELOCATE EXISTING DEVICES INTO NEW TENANT SPACE AND MOUNT TO PARTITIONS, CEILINGS, OR FINISHES AS REQUIRED.

9.

THE CONTRACTOR IS EXPECTED TO HAVE A FULL FUNCTIONAL KNOWLEDGE OF ELECTRICAL SYSTEMS AND WHETHER INDICATED ON THE DRAWINGS OR NOT SHALL PROVIDE THE CORRECT NUMBER OF WIRES AT NO ADDITIONAL CHARGE, TO FACILITATE PROPER OPERATION OF ALL EQUIPMENT. QUANTITY OF WIRES WILL ONLY BE INDICATED WHERE NECESSARY FOR CLARIFICATION.

10.

THE INSTALLATION SHALL BE IN COMPLIANCE WITH THE AMERICAN WITH DISABILITIES ACT (ADA), UNLESS INSTALLED FOR SPECIFIC USES EXEMPT FROM ADA OR IN AREAS NOT NORMALLY ACCESSED BY BUILDING OCCUPANTS.

11.

THE ELECTRICAL CONTRACTOR SHALL REFER TO THE MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS OF EQUIPMENT. PRIOR TO ORDERING ELECTRICAL EQUIPMENT SERVING MECHANICAL & PLUMBING EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL CONFIRM THE EQUIPMENT BEING ORDERED BY THE HVAC OR PLUMBING CONTRACTORS AND PROVIDE WIRING, CONDUIT, AND OVERCURRENT PROTECTION MEETING THE REQUIREMENTS AT NO ADDITIONAL COST. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING AND COORDINATING WITH THE HVAC CONTRACTOR FOR PROVIDING ANY NECESSARY LINE AND LOW VOLTAGE WIRING. FINAL TERMINATION TO BE MADE BY THE HVAC CONTRACTOR. ALL BREAKERS SUPPLYING HVAC LOADS SHALL BE HACR TYPE.

12.

ALL EXISTING CIRCUITS INDICATED AS SPARE SHALL BE TRACED AND VERIFIED BY THE CONTRACTOR. IF A CIRCUIT IS LABELED AS SPARE OR INDICATED FOR RE-USE BUT UTILIZED BY AN ADJACENT TENANT OR OCCUPIED SPACE, THE ENGINEER SHALL BE NOTIFIED AND A NEW CIRCUIT SHALL BE ASSIGNED.

13.

ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW (UNLESS NOTED OTHERWISE) AND BEAR THE U.L. LISTING FOR THEIR INTENDED USE. MATCH BUILDING STANDARDS FOR MANUFACTURER AND TYPE OF EQUIPMENT FOR LIGHTS, EXIT SIGNS, FIRE ALARM DEVICES, WIRING DEVICES, AND ELECTRICAL DISTRIBUTION EQUIPMENT WHERE NO BUILDING STANDARD EXISTS FOR ELECTRICAL EQUIPMENT, EQUIPMENT SHALL BE MANUFACTURED BY G.E., SQUARE-D, EATON CUTLER-HAMMER OR SIEMENS. INSTALL A PLASTIC-LAMINATE SIGN ON EACH NEW UNIT OF ELECTRICAL EQUIPMENT WITH 1/2" ENGRAVED LETTERING FOR IDENTIFICATION. IDENTIFICATION SHALL MATCH CONTRACT DOCUMENTS AND/OR INDICATE SOURCE FED (FOR DISCONNECTS, ETC.).

14.

THE CONTRACTOR SHALL GIVE PERMISSION FOR THE AHJ, ENGINEER, ARCHITECT, INSPECTOR, ETC. TO PERFORM TESTS OF THE ELECTRICAL SYSTEM AS REQUIRED.

15.

SWITCH OUTLETS SHALL NOT BE OBSTRUCTED BY DOORSWINGS AND OCCUPANCY SENSORS SHALL HAVE FULL VIEW OF THE INTENDED SPACE.

16.

SWITCH AND RECEPTACLES INDICATED IN THE SAME LOCATION SHALL BE MOUNTED UNDER A COMMON COVERPLATE UNLESS OTHERWISE NOTED. RECEPTACLES SHALL BE MOUNTED SUCH THAT THE GROUND TERMINAL IS ABOVE THE LIVE CONDUCTORS.

17.

EVEN IF THE PLANS INDICATE, OUTLETS SHALL NOT BE INSTALLED PRECISELY BACK TO BACK ON COMMON WALLS. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT MOUNTING METHODS AND LOCATIONS.

18.

JUNCTION AND PULL BOXES ARE ONLY INDICATED WHERE REQUIRED FOR LARGE SCALE COORDINATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING JUNCTION AND PULL BOXES AS REQUIRED BY THE CODE AND PER A STANDARD INSTALLATION, AND SHALL INCLUDE THIS IN THEIR BID. BOXES SHALL BE STEEL AND INCLUDE EARS INSIDE TO ATTACH COVERS. OUTLET BOXES SHALL BE FOUR INCH SQUARE DEEP TYPE. OUTLET BOXES FOR 120V OR HIGHER CIRCUITS SHALL INCLUDE A #12 AWG SOLID COPPER PIGTAIL. OUTLET BOXES LOCATED OUTDOOR OR EXPOSED TO WET CONDITIONS SHALL INCLUDE GASKETED COVERS. JUNCTION BOXES SHALL BE COLOR CODED WITH PAINT TO INDICATE THEIR USE AS FOLLOWS: NORMAL POWER - BLACK, STANDBY POWER - ORANGE, FIRE ALARM - RED, TELEPHONE/DATA - YELLOW, HVAC CONTROLS - BLUE.

19.

CONDUCTORS SHALL BE LOOPED AROUND SCREW POSTS SO THAT ROTATION OF THE SCREW TENDS TO FURTHER WRAP THE CONNECTION. SCREW TERMINALS SHALL BE WRAPPED IN ELECTRICAL TAPE. AT LEAST 6" OF FREE CONDUCTOR SHALL BE LEFT AT EACH J-BOX, OUTLET AND SWITCH BACK-BOX, ETC FOR FUTURE SPLICING.

20.

THE CONTRACTOR SHALL MAINTAIN THE FIRE RATING OF ALL FIRE-RATED PARTITIONS. IF A DEVICE WILL VOID THE FIRE RATING OF A WALL, IT SHALL BE INSTALLED IN AN ALTERNATE LOCATION PER THE ARCHITECT OR ENGINEER'S DIRECTION. ALL VOIDS AROUND CONDUITS AND/OR CORE DRILLS PENETRATING FIRE RATED PARTITIONS SHALL BE FILLED WITH FIRE-SAFING MATERIAL OR UL APPROVED FIRE RATING DEVICE. THE FIRE RATING OF A PARTITION SHALL NEVER BE COMPROMISED.

21.

THE CONTRACTOR SHALL MAINTAIN THE INSULATION RATING AND VAPOR BARRIERS ON ALL PERIMETER WALLS. IF A DEVICE WILL DAMAGE OR COMPROMISE THE VAPOR BARRIER OR INSULATION, IT SHALL BE INSTALLED IN AN ALTERNATE LOCATION PER THE ARCHITECT OR ENGINEER'S DIRECTION.

22.

PRIOR TO PENETRATING STRUCTURE, THE CONTRACTOR SHALL X-RAY THE SLABS. CONCRETE CUTTING, CORE DRILLING, AND ANY OTHER ACTION THAT COULD AFFECT OTHER SPACES BY NOISE OR INTRUSION SHALL BE DONE AFTER HOURS. ALL SLAB/STRUCTURE PENETRATIONS SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER FOR APPROVAL.

23.

ALL EQUIPMENT REQUIRING ACCESS SUCH AS J-BOXES, PULL BOXES, TRANSFORMERS, DRIVERS, ETC. SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS. EXISTING ELECTRICAL DEVICES WHICH ARE LOCATED BEHIND INACCESSIBLE LOCATIONS DUE TO THE RENOVATION SHALL BE REROUTED AND MADE ACCESSIBLE.

24.

CONDUITS AND/OR MATERIALS LOCATED IN ENVIRONMENTAL AIR PLENUMS SHALL BE PROPERLY LISTED FOR THE APPLICATION. INTERIOR CONCEALED RACEWAYS MAY BE AC OR MC CABLE IF ALLOWED BY THE AHJ. EXPOSED RACEWAYS, INCLUDING RACEWAYS EXPOSED IN THE BACK OF HOUSE SHALL BE GALVANIZED STEEL OR ALUMINUM EMT. MOTOR CONNECTIONS SHALL BE FLEXIBLE METAL CONDUIT FOR INTERIOR APPLICATIONS AND LIQUID TIGHT FLEX FOR EXTERIOR APPLICATIONS. ALL OTHER EXTERIOR CONDUITS SHALL BE GALVANIZED STEEL, ALUMINUM EMT OR RIGID STEEL IF EXPOSED TO STRIKING. EXTERIOR CONDUITS SHALL UTILIZE COMPRESSION CONNECTORS. AC/MC CABLE SHALL NOT TERMINATE AT PANELBOARDS.

25.

CABLE AND CONDUIT ROUTING SHALL BE DONE IN A NEAT AND ORDERLY FASHION. LINES SHALL BE RUN PARALLEL TO ALL BUILDING FEATURES, AND SHALL BE GROUPED TOGETHER TO CREATE AN AESTHETICALLY PLEASING AND EASY TO FOLLOW ROUTE. CABLES SHALL BE PERMITTED TO BE BUNDLED BUT SHALL NOT EXCEED TEN IN QUANTITY. ROUTING SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICT.

26.

CONDUITS SHALL BE RIGIDLY SUPPORTED TO THE BUILDING STRUCTURE. SUPPORT SPACINGS SHALL NOT EXCEED 10'-0" FOR VERTICAL RUNS AND 8'-0" FOR HORIZONTAL RUNS. COUPLINGS AND FITTINGS SHALL BE STEEL WITH COMPRESSION OR SET STEEL SCREW CONNECTIONS. THERE SHALL NOT BE MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (90 DEGREES TOTAL) BETWEEN PULL POINTS FOR POWER (120V OR HIGHER) CIRCUITS. ALL CONDUITS SHALL BE TERMINATED WITH INSULATED THROAT CONNECTORS FOR CONDUITS 1" AND SMALLER, AND WITH INSULATED BUSHINGS AND LOCKNUTS FOR CONDUITS OVER 1". EMPTY CONDUIT RUNS EXCEEDING 10' SHALL BE PROVIDED WITH PULL WIRES SECURELY FASTENED AT BOTH ENDS. EXPANSION FITTINGS SHALL BE PROVIDED AT ALL BUILDING EXPANSION JOINTS OR WHERE NEEDED TO ALLOW FOR THERMAL EXPANSION.

27.

WIRE SIZES INDICATED ARE BASED UPON DIRECT ORTHOGONAL PATHS TO THE PANELBOARD. FEEDERS ARE SIZED FOR A MAXIMUM OF 2% VOLTAGE DROP, AND BRANCH CIRCUITS ARE DESIGNED FOR A MAXIMUM OF 3% VOLTAGE DROP. IF FIELD CONDITIONS DO NOT ALLOW THE PATHS OR IF THE CONTRACTOR RUNS ADDITIONAL LENGTHS, THEY SHALL BE RESPONSIBLE FOR INCREASING WIRE SIZE TO ACCOUNT FOR VOLTAGE DROP AT NO ADDITIONAL COST. 20 AMP, 120 VOLT HOMERUNS EXCEEDING 57' SHALL BE A MINIMUM OF #10 AWG. WIRING SMALLER THAN #12 AWG SHALL NOT BE USED FOR ANY INSTALLATIONS.

28.

THE CONTRACTOR SHALL CIRCUIT PANELBOARDS EXACTLY AS INDICATED IN THE PANEL SCHEDULES. IF ANY DEVIATIONS ARE NECESSARY, THE ENGINEER SHALL BE NOTIFIED. TYPED DIRECTORY CARDS SHALL BE PROVIDED AT EACH PANELBOARD INDICATING LOAD SERVED AND FINAL ROOM NUMBERS PER THE NEC. WHEN EXISTING DIRECTORIES ARE REPLACED FOR RENOVATION WORK, EXISTING LOAD INFORMATION SHALL BE DIRECTLY TRANSFERRED TO THE NEW DIRECTORY CARDS.

ELECTRICAL NOTES

31.

NEUTRAL CONDUCTORS SHALL ONLY BE SHARED WHEN INDICATED ON THE DRAWINGS. WHERE NEUTRALS ARE INDICATED TO BE SHARED, THE NEUTRAL SHALL BE A MINIMUM OF #10 AWG.

32.

THE CONTRACTOR SHALL REMOVE ALL UNUSED AND ABANDONED WIRING AND CABLING FROM THE CEILING PLENUM THAT ISN'T LABELED FOR FUTURE USE, AS REQUIRED BY THE NEC. THIS SHALL INCLUDE BUT IS NOT LIMITED TO FIRE ALARM, POWER, SECURITY, CONTROLS, DATA, TELEPHONE, AV, ETC.

33.

ALL BRANCH CIRCUIT CONDUCTORS AND FEEDER CIRCUITS 100A OR SMALLER SHALL BE COPPER. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID, AND CONDUCTORS #8 AWG AND LARGER SHALL BE STRANDED. CONDUCTORS SHALL BE CODE TYPE THW, THHN, THWN, OR XHHW UNLESS OTHERWISE REQUIRED BY THE NEC. CONDUCTORS SHALL BE MARKED WITH INSULATION CODE, VOLTAGE RATING, AWG SIZE, AND MANUFACTURER AND INCLUDE A CONTINUOUS COLOR CODING FROM PANEL TO LOAD SERVED. WHERE CONTINUOUS MARKINGS ARE NOT AVAILABLE, USE COLOR CODED TAPE AT EACH TERMINATION. #8 AWG AND SMALLER CONDUCTORS SHALL BE SPLICED WITH SPRING CONNECTORS. #6 AWG AND LARGER SHALL BE SPLICED WITH BARREL CONNECTORS REQUIRING COMPRESSION ON EACH END.

34.

ALL LIGHT FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURAL SYSTEM BY SUPPORT WIRES, INDEPENDENT OF CEILING GRID SYSTEMS. TROFFER TYPE FIXTURES SHALL BE SUPPORTED BY WIRES AT ALL FOUR CORNERS. RECESSED DOWNLIGHTS SHALL BE SUPPORTED VIA HANGER BARS SUPPORTED BY WIRES AT ALL FOUR CORNERS. SUPPORT MEANS SHALL BE IN ACCORDANCE WITH LOCAL SEISMIC REQUIREMENTS.

35.

WHERE LIGHTNING PROTECTION SYSTEMS EXIST, OBJECTS INSTALLED ON ROOFTOPS AND EXTERIOR OF BUILDINGS SHALL BE PROPERLY BONDED PER NFPA 780.

36.

PROVIDE PAD LOCKING HARDWARE ON CIRCUIT BREAKERS FOR EQUIPMENT WHICH IS HARDWIRED WITHOUT A LOCAL DISCONNECTING MEANS THAT ARE NOT WITHIN SIGHT OF THE PANELBOARD.

37.

PROVIDE A 3/4" CONDUIT WITH PULLSTRING FOR ALL TELEPHONE AND DATA OUTLETS LOCATED IN INSULATED AND LOW HEIGHT WALLS, TERMINATED ABOVE THE ACCESSIBLE CEILING. GROMMETS SHALL BE PROVIDED AT THE END OF THE CONDUIT AT THE CEILING SPACE. OUTLETS LOCATED IN NON-INSULATED WALLS WILL REQUIRE PULLSTRING ONLY.

ELECTRICAL DEMOLITION NOTES

1.

THE CONTRACTOR SHALL REMOVE SUCH EXISTING WORK AS CALLED FOR ON THE DRAWINGS OR AS REQUIRED TO CLEAR THE AREAS OF NEW CONSTRUCTION.

2.

WHERE EXISTING EQUIPMENT IS TO BE RELOCATED, EXTREME CARE SHALL BE TAKEN TO PREVENT DAMAGE DURING THE REMOVAL AND REINSTALLATION.

3.

ALL EQUIPMENT REMOVED THAT IS NOT BEING REUSED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STORED OR DISPOSED OF AS DIRECTED.

4.

EXCEPT AS OTHERWISE NOTED, ALL EXISTING ELECTRICAL WORK WHICH WILL NOT BE RENDERED OBSOLETE AND WHICH MAY BE DISTURBED DUE TO CHANGES REQUIRED UNDER THIS CONTRACT, SHALL BE RESTORED TO ITS ORIGINAL OPERATING CONDITION. OTHER ELECTRICAL WORK OR MATERIAL RENDERED OBSOLETE SHALL BE ABANDONED WHERE CONCEALED AND REMOVED WHERE EXPOSED. OLD UNUSED WIRING AND DEVICES SHALL BE CONCEALED AND REMOVED WHERE EXPOSED. OLD UNUSED WIRING AND DEVICES SHALL BE REMOVED FROM THE ABANDONED (CONCEALED) CONDUITS. OUTLETS SHALL BE PROVIDED WITH BLANK COVERS. ANY CONDUITS STUBBED OUT OF MASONRY SURFACE SHALL BE CUT INTO SURFACE AND PATCHED.

5.

WHERE EXISTING ELECTRICAL WORK INTERFERES WITH NEW WORK AND WHERE SUCH INSTALLATIONS ARE TO REMAIN IN USE, THE INSTALLATIONS SHALL BE DISCONTINUED AND RELOCATED AND/OR RECONNECTED TO COORDINATE WITH THE WORK INDICATED ON THE CONTRACT DRAWINGS AND AS SPECIFIED.

6.

WHERE EXISTING RACEWAYS THAT ARE NOT TO BE REUSED INTERFERE WITH NEW WORK, THESE RACEWAYS SHALL BE REMOVED BACK TO THE NEAREST JUNCTION BOX OR PULL BOX AND THE OPENINGS BLANKED.

7.

EXISTING RACEWAYS AND/OR WIRING MAY BE REUSED WHERE PRACTICABLE. EXCEPT AS OTHERWISE INDICATED, PANELBOARD CABINETS SHALL NOT BE USED FOR OTHER PURPOSES THAN CIRCUIT PROTECTION AND DISTRIBUTION POINTS AND SHALL NOT BE USED AS JUNCTION OR PULL BOXES.

8.

ALL WORK SHALL BE PERFORMED IN SUCH A MANNER TO CREATE MINIMAL POWER OUTAGES FOR THE OWNER. ALL SUCH OUTAGES SHALL BE CAREFULLY COORDINATED WITH THE OWNER SO THAT POWER TO ESSENTIAL SERVICES CAN BE MAINTAINED.

9.

CONTRACTOR SHALL MAINTAIN CONTINUITY OF BRACH CIRCUITS SERVING MULTIPLE ITEMS OF WHICH ONE OR MORE ARE BEING DEMOLISHED. CONDUCTORS AND CONDUITS FOR THOSE ITEMS BEING DEMOLISHED SHALL BE REMOVED AS FAR AS PRACTICABLE.

10.

IT SHALL BE THE CONTRACTORS, RESPONSIBILITY TO REMOVE ALL EXISTING ELECTRICAL EQUIPMENT NOT REUSED OR NOT NECESSARY FOR THE COMPLETION OF THIS PROJECT.

11.

ALL EQUIPMENT INDICATED TO REMAIN IN PLACE SHALL REMAIN IN NORMAL OPERATION AT ALL TIMES DURING CONSTRUCTION. IF ANY BRANCH CIRCUIT WIRING FEEDING THIS EQUIPMENT IS DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL REPLACE WITH NEW BRANCH CIRCUIT WIRING OF THE SAME SIZE AND TYPE AS EXISTING AT NO COST TO THE OWNER.

12.

REFER TO THE TENANT GENERAL NOTES AND TENANT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

ELECTRICAL SYMBOL LEGEND

\$

\$

3-WAY, 20 AMP, SWITCH.

\$

\$

SINGLE POLE, 20 AMP, SWITCH WITH OCCUPANCY SENSOR.

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⌀

20 AMP DUPLEX RECEPTACLE

⌀

⌀

JUNCTION BOX

⌀

⌀

EMERGENCY LIGHT

⌀

⌀

RECESSED FLUORESCENT LAMP 2'x4'

⌀

⌀

RECESSED FIXTURE

⌀

⌀

RECESSED FLUORESCENT LAMP 2'x2'

⌀

⌀

WALL MOUNTED FIXTURE

⌀

⌀

FUSIBLE DISCONNECT SWITCH NFSS = NON FUSED, F30SS = FUSED

⌀

⌀

GROUNDING ELECTRODE & CONDUCTOR SYSTEM

⌀

⌀

120/208V ELECTRICAL PANELBOARD; MANDATORY CLEARANCE INDICATED WITH DASHED LINES.

⌀

⌀

WIRE CONCEALED IN WALLS/CEILINGS. NUMBER OF TICK MARKS INDICATES QUANTITY OF WIRES. GROUND WIRE IS IN ADDITION TO WIRES INDICATED. NO TICK MARKS INDICATES TWO WIRES PLUS GROUND.

⌀

⌀

EXIT SIGN. SHADED SIDES INDICATE FACES. ARROWS INDICATE CHEVRONS.

⌀

⌀

THREE PHASE MOTOR

⌀

⌀

MAGNETIC MOTOR STARTER AND DISCONNECT BY THE ELECTRICAL CONTRACTOR

⌀

⌀

T-STAT BY MECHANICAL CONTRACTOR, WIRING BY ELECTRICAL CONTRACTOR

⌀

⌀

METER

⌀

⌀

CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR. ARROWS INDICATE DIRECTION OF COVERAGE.

⌀

⌀

TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING.

NOTE: NOT ALL SYMBOLS MAY APPLY TO PLANS

ELECTRICAL SHEET INDEX

E0.1

ELECTRICAL NOTES & LEGEND

E1.1

ELECTRICAL PLANS

ELECTRICAL ABBREVIATIONS

A

- AMPERE

KW

-KILOWATT

AC

- ALTERNATING CURRENT

LTG

- LIGHTING

AF

- AMP FRAME

M

- METER

AFF

- ABOVE FINISHED FLOOR

MCA

-MINIMUM CIRCUIT AMPACITY

AHJ

-AUTHORITY HAVING JURISDICTION

MCB

-MAIN CIRCUIT BREAKER

AT

-AMP TRIP

MCC

- MOTOR CONTROL CENTER

ATC,BMS,EMCS

-HVAC CONTROLS

MFR

- MANUFACTURER

ATS

-AUTOMATIC TRANSFER SWITCH

*, MH

-MOUNTING HEIGHT

AIC

- AMPS INTERRUPTING CAPACITY

MFI

-MINERAL INSULATED

BRKR

- BREAKER

MLO

-MAIN LUGS ONLY

C or COND

- CONDUIT

MOP

-MAXIMUM OVERCURRENT PROTECTION

CD

-CANDELA

MS

-MAIN SWITCHBOARD

CKT

- CIRCUIT

NEC

- NATIONAL ELECTRICAL CODE

CT

- CURRENT TRANSFORMER

N

- NEW

CU

-COPPER

NA

- NOT APPLICABLE

DN

-DOWN

NC

-NORMALLY CLOSED

DPV

-DRY PIPE VALVE CABINET

NF

-NON-FUSED

DWG

-DRAWING

NFPA

-NATIONAL FIRE PROTECTION ASSOCIATION

DC

- DIRECT CURRENT

NFSS

-NON-FUSED SAFETY SWITCH

(E) or EXIST

- EXISTING

NIC

-NOT IN CONTRACT

EC

-EMPTY CONDUIT

NO

-NORMALLY OPEN

ELEV

-ELEVATOR

OCPD

-OVERCURRENT PROTECTION DEVICE

EMER

-EMERGENCY

P

-POLE

EMR

-ELEVATOR MACHINE ROOM

PH OR Ø

-PHASE

EMT

-ELECTRIC METALLIC TUBING

NEMA

- NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION

EPO

-EMERGENCY POWER OFF

PB

- PULL BOX

EUH

-ELECTRIC UNIT HEATER

PC

- PHOTOCELL

EWG

-ELECTRIC WATER COOLER

PNL

- PANELBOARD

EW-H

-ELECTRICAL WATER HEATER

PLC

- PROGRAMMABLE LOGIC CONTROLLER

F

-FUSE

RECEPT

- RECEPTACLE

FA

-FIRE ALARM

RM

-ROOM

FCA

-FAULT CURRENT AVAILABLE

SWBD

- SWITCHBOARD

FCR

-FAULT CURRENT RATING

THD

-TOTAL HARMONIC DISTORTION

FSS

-FUSED SAFETY SWITCH

TVSS

- TRANSIENT VOLTAGE SURGE SUPPRESSION

FTL

-FEED THRU LUGS

TYP

- TYPICAL

G, GND

- GROUND

UL

-UNDERWRITERS LABORATORIES

GFI

- GROUND FAULT INTERRUPT

UNO

-UNLESS NOTED OTHERWISE

GFP

-GROUND FAULT PROTECTION

UPS

-UNINTERRUPTIBLE POWER SUPPLY

HZ

-HERTZ

V

- VOLT

HP

- HORSEPOWER

VFD

- VARIABLE FREQUENCY DRIVE

IBC

- INTERNATIONAL BUILDING CODE

W

- WATT

IG

-ISOLATED GROUND

WI

-WITH

J

-JUNCTION BOX

WP

- WEATHERPROOF

KVA

-KILOVOLT-AMPERE

XFMR

- TRANSFORMER

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WHERE EXISTING EQUIPMENT IS TO BE RELOCATED, EXTREME CARE SHALL BE TAKEN TO PREVENT DAMAGE DURING THE REMOVAL AND REINSTALLATION.

3.

ALL EQUIPMENT REMOVED THAT IS NOT BEING REUSED SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STORED OR DISPOSED OF AS DIRECTED.

4.

EXCEPT AS OTHERWISE NOTED, ALL EXISTING ELECTRICAL WORK WHICH WILL NOT BE RENDERED OBSOLETE AND WHICH MAY BE DISTURBED DUE TO CHANGES REQUIRED UNDER THIS CONTRACT, SHALL BE RESTORED TO ITS ORIGINAL OPERATING CONDITION. OTHER ELECTRICAL WORK OR MATERIAL RENDERED OBSOLETE SHALL BE ABANDONED WHERE CONCEALED AND REMOVED WHERE EXPOSED. OLD UNUSED WIRING AND DEVICES SHALL BE CONCEALED AND REMOVED WHERE EXPOSED. OLD UNUSED WIRING AND DEVICES SHALL BE REMOVED FROM THE ABANDONED (CONCEALED) CONDUITS. OUTLETS SHALL BE PROVIDED WITH BLANK COVERS. ANY CONDUITS STUBBED OUT OF MASONRY SURFACE SHALL BE CUT INTO SURFACE AND PATCHED.

5.

WHERE EXISTING ELECTRICAL WORK INTERFERES WITH NEW WORK AND WHERE SUCH INSTALLATIONS ARE TO REMAIN IN USE, THE INSTALLATIONS SHALL BE DISCONTINUED AND RELOCATED AND/OR RECONNECTED TO COORDINATE WITH THE WORK INDICATED ON THE CONTRACT DRAWINGS AND AS SPECIFIED.

6.

WHERE EXISTING RACEWAYS THAT ARE NOT TO BE REUSED INTERFERE WITH NEW WORK, THESE RACEWAYS SHALL BE REMOVED BACK TO THE NEAREST JUNCTION BOX OR PULL BOX AND THE OPENINGS BLANKED.

7.

EXISTING RACEWAYS AND/OR WIRING MAY BE REUSED WHERE PRACTICABLE. EXCEPT AS OTHERWISE INDICATED, PANELBOARD CABINETS SHALL NOT BE USED FOR OTHER PURPOSES THAN CIRCUIT PROTECTION AND DISTRIBUTION POINTS AND SHALL NOT BE USED AS JUNCTION OR PULL BOXES.

8.

ALL WORK SHALL BE PERFORMED IN SUCH A MANNER TO CREATE MINIMAL POWER OUTAGES FOR THE OWNER. ALL SUCH OUTAGES SHALL BE CAREFULLY COORDINATED WITH THE OWNER SO THAT POWER TO ESSENTIAL SERVICES CAN BE MAINTAINED.

9.

CONTRACTOR SHALL MAINTAIN CONTINUITY OF BRACH CIRCUITS SERVING MULTIPLE ITEMS OF WHICH ONE OR MORE ARE BEING DEMOLISHED. CONDUCTORS AND CONDUITS FOR THOSE ITEMS BEING DEMOLISHED SHALL BE REMOVED AS FAR AS PRACTICABLE.

10.

IT SHALL BE THE CONTRACTORS, RESPONSIBILITY TO REMOVE ALL EXISTING ELECTRICAL EQUIPMENT NOT REUSED OR NOT NECESSARY FOR THE COMPLETION OF THIS PROJECT.

11.

ALL EQUIPMENT INDICATED TO REMAIN IN PLACE SHALL REMAIN IN NORMAL OPERATION AT ALL TIMES DURING CONSTRUCTION. IF ANY BRANCH CIRCUIT WIRING FEEDING THIS EQUIPMENT IS DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL REPLACE WITH NEW BRANCH CIRCUIT WIRING OF THE SAME SIZE AND TYPE AS EXISTING AT NO COST TO THE OWNER.

12.

REFER TO THE TENANT GENERAL NOTES AND TENANT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

ELECTRICAL SYMBOL LEGEND

\$

\$

3-WAY, 20 AMP, SWITCH.

\$

\$

SINGLE POLE, 20 AMP, SWITCH WITH OCCUPANCY SENSOR.

⌀

⌀

20 AMP DUPLEX RECEPTACLE

⌀

⌀

JUNCTION BOX

⌀

⌀

EMERGENCY LIGHT

⌀

⌀

RECESSED FLUORESCENT LAMP 2'x4'

⌀

⌀

RECESSED FIXTURE

⌀

⌀

RECESSED FLUORESCENT LAMP 2'x2'

⌀

⌀

WALL MOUNTED FIXTURE

⌀

⌀

FUSIBLE DISCONNECT SWITCH NFSS = NON FUSED, F30SS = FUSED

⌀

⌀

GROUNDING ELECTRODE & CONDUCTOR SYSTEM

⌀

⌀

120/208V ELECTRICAL PANELBOARD; MANDATORY CLEARANCE INDICATED WITH DASHED LINES.

⌀

⌀

WIRE CONCEALED IN WALLS/CEILINGS. NUMBER OF TICK MARKS INDICATES QUANTITY OF WIRES. GROUND WIRE IS IN ADDITION TO WIRES INDICATED. NO TICK MARKS INDICATES TWO WIRES PLUS GROUND.

⌀

⌀

EXIT SIGN. SHADED SIDES INDICATE FACES. ARROWS INDICATE CHEVRONS.

⌀

⌀

THREE PHASE MOTOR

⌀

⌀

MAGNETIC MOTOR STARTER AND DISCONNECT BY THE ELECTRICAL CONTRACTOR

⌀

⌀

T-STAT BY MECHANICAL CONTRACTOR, WIRING BY ELECTRICAL CONTRACTOR

⌀

⌀

METER

⌀

⌀

CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR. ARROWS INDICATE DIRECTION OF COVERAGE.

⌀

⌀

TELEPHONE/DATA OUTLET WITH 3/4" CONDUIT STUBBED OUT FROM WALL 6" ABOVE CEILING.

NOTE: NOT ALL SYMBOLS MAY APPLY TO PLANS

ELECTRICAL SHEET INDEX

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ELECTRICAL NOTES & LEGEND

E1.1

ELECTRICAL PLANS

ELECTRICAL ABBREVIATIONS

A

- AMPERE

KW

-KILOWATT

AC

- ALTERNATING CURRENT

LTG

- LIGHTING

AF

- AMP FRAME

M

- METER

AFF

- ABOVE FINISHED FLOOR

MCA

-MINIMUM CIRCUIT AMPACITY

AHJ

-AUTHORITY HAVING JURISDICTION

MCB

-MAIN CIRCUIT BREAKER

AT

-AMP TRIP

MCC

- MOTOR CONTROL CENTER

ATC,BMS,EMCS

-HVAC CONTROLS

MFR

- MANUFACTURER

ATS

-AUTOMATIC TRANSFER SWITCH

*, MH

-MOUNTING HEIGHT

AIC

- AMPS INTERRUPTING CAPACITY

MFI

-MINERAL INSULATED

BRKR

- BREAKER

MLO

-MAIN LUGS ONLY

C or COND

- CONDUIT

MOP

-MAXIMUM OVERCURRENT PROTECTION

CD

-CANDELA

MS

-MAIN SWITCHBOARD

CKT

- CIRCUIT

NEC

- NATIONAL ELECTRICAL CODE

CT

- CURRENT TRANSFORMER

N

- NEW

CU

-COPPER

NA

- NOT APPLICABLE

DN

-DOWN

NC

-NORMALLY CLOSED

DPV

-DRY PIPE VALVE CABINET

NF

-NON-FUSED

DWG

-DRAWING

NFPA

-NATIONAL FIRE PROTECTION ASSOCIATION

DC

- DIRECT CURRENT

NFSS

-NON-FUSED SAFETY SWITCH

(E) or EXIST

- EXISTING

NIC

-NOT IN CONTRACT

EC

-EMPTY CONDUIT

NO

-NORMALLY OPEN

ELEV

-ELEVATOR

OCPD

-OVERCURRENT PROTECTION DEVICE

EMER

-EMERGENCY

P

-POLE

EMR

-ELEVATOR MACHINE ROOM

PH OR Ø

-PHASE

EMT

-ELECTRIC METALLIC TUBING

NEMA

- NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION

EPO

-EMERGENCY POWER OFF

PB

- PULL BOX

EUH

-ELECTRIC UNIT HEATER

PC

- PHOTOCELL

EWG

-ELECTRIC WATER COOLER

PNL

- PANELBOARD

EW-H

-ELECTRICAL WATER HEATER

PLC

- PROGRAMMABLE LOGIC CONTROLLER

F

-FUSE

RECEPT

- RECEPTACLE

FA

-FIRE ALARM

RM

-ROOM

FCA

-FAULT CURRENT AVAILABLE

SWBD

- SWITCHBOARD

FCR

-FAULT CURRENT RATING

THD

-TOTAL HARMONIC DISTORTION

FSS

-FUSED SAFETY SWITCH

TVSS

- TRANSIENT VOLTAGE SURGE SUPPRESSION

FTL

-FEED THRU LUGS

TYP

- TYPICAL

G, GND

- GROUND

UL

-UNDERWRITERS LABORATORIES

GFI

- GROUND FAULT INTERRUPT

UNO

-UNLESS NOTED OTHERWISE

GFP

-GROUND FAULT PROTECTION

UPS

-UNINTERRUPTIBLE POWER SUPPLY

HZ

-HERTZ

V

- VOLT

HP

- HORSEPOWER

VFD

- VARIABLE FREQUENCY DRIVE

IBC

- INTERNATIONAL BUILDING CODE

W

- WATT

IG

-ISOLATED GROUND

WI

-WITH

J

-JUNCTION BOX

WP

- WEATHERPROOF

KVA

-KILOVOLT-AMPERE

XFMR

- TRANSFORMER

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ELECTRICAL ENGINEER

CERT OF AUTH. 5454

DATE 5.31.2012

ELECTRICAL SHEET INDEX

E0.1

ELECTRICAL NOTES & LEGEND

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