

ELECTRICAL GENERAL NOTES

- INSTALLATION OF ALL WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING REGULATIONS, CODES, ETC.
 - LOCAL CODES AND ORDINANCES
 - THE EDITION OF THE NATIONAL ELECTRICAL CODE NFPA 70 (NEC) IN EFFECT.
- CONTRACTOR TO PROVIDE SUFFICIENT NOTICE TO THE OWNERS REPRESENTATIVE PRIOR TO ANY WORK TO ALLOW ADEQUATE TIME FOR COORDINATION OF EXISTING SITE ACTIVITIES WITH THE CONSTRUCTION WORK.
- CONTRACTOR TO INCLUDE IN THEIR SCOPE ALL LABOR, MATERIALS, SERVICES, APPARATUS AND SHOP DRAWINGS IN ADDITION TO THE CONTRACT DOCUMENTS AS REQUIRED TO COMPLY WITH ALL APPLICABLE GOVERNING LAWS, CODES AND JURISDICTION REQUIREMENTS. PROVIDE ELECTRICAL EQUIPMENT WITH ALL ASSOCIATED ACCESSORIES, BRANCH CIRCUIT WIRING AND CONDUIT INFRASTRUCTURE AS REQUIRED TO ENSURE A COMPLETE AND OPERATIONAL SYSTEM.
- ALL MATERIALS AND WORK SHALL BE ACCORDING TO PROJECT SPECIFICATIONS.
- IF MATERIAL OR EQUIPMENT IS INSTALLED BEFORE IT IS APPROVED, THE CONTRACTOR SHALL BE LIABLE FOR ITS REMOVAL AND REPLACEMENT AT NO ADDITIONAL CHARGE IF IN THE OPINION OF THE ARCHITECT OR ENGINEER, THE MATERIAL OR EQUIPMENT DOES NOT MEET THE INTENT OF THE DRAWINGS AND/OR SPECIFICATIONS.
- REFER TO ARCHITECTURAL DRAWINGS FOR THE EXACT LOCATION, ELEVATION, MOUNTING HEIGHTS AND DETAILS OF ALL LIGHT FIXTURES AND DEVICES. REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY.
- ALL NEW SLAB PENETRATIONS MUST BE X-RAYED OR RADAR PRIOR TO CORE DRILLING. OBTAIN APPROVAL FROM OWNERS REPRESENTATIVE PRIOR TO ANY CORE DRILLING.
- PROVIDE FIRESTOPPING MATERIALS TO MAINTAIN INTEGRITY OF THE FIRE RATED CONSTRUCTION WHERE CONDUITS PASS THROUGH WALLS AND FLOORS.
- CONTRACTOR TO PROVIDE ALL LIGHT FIXTURE AND EQUIPMENT WITH INTEGRAL OR REMOTE MOUNTED ACCESSORY DEVICES WITH ALL NECESSARY COMPONENTS, BRANCH CIRCUIT WIRING AND CONDUITS TO ENSURE A COMPLETE AND OPERATIONAL SYSTEM. CONTRACTOR TO MAKE ALL FINAL CONNECTIONS TO THE EQUIPMENT.
- ELECTRICAL SYSTEMS SHALL BE GROUNDED PER ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
- PROVIDE AN INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ALL BRANCH CIRCUITS AND FEEDERS INSTALLED IN RACEWAYS. THE DEDICATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE SIZED PER NEC SECTION 250.122. SOLE USE OF METAL RACEWAY AS A GROUNDING CONDUCTOR SHALL NOT BE ACCEPTABLE. WIRING METHODS SHALL BE IN ACCORDANCE WITH NEC SECTION 518.4 FOR ALL ASSEMBLY AREAS.
- PROVIDE RED COLOR LOCKABLE TYPE BREAKERS FOR CIRCUITS SERVING LIFE SAFETY PANEL BOARDS.
- NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS, ONLY THOSE WHERE CLARIFICATION IS NECESSARY. PROVIDE THE NUMBER AND SIZE AS NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER SPECIFICALLY INDICATED ON PLAN OR NOT.
- UNLESS OTHERWISE NOTED, ALL CONDUCTORS SHALL BE #12 AWG MINIMUM. PROVIDE EACH CIRCUIT HOMERUN WITH A DEDICATED NEUTRAL CONDUCTOR AND INSULATED EQUIPMENT GROUNDING CONDUCTOR.
- GANG ALL SWITCHES INSTALLED AT THE SAME LOCATION UNDER A SINGLE COVER PLATE. PROVIDE BARRIERS WITHIN THE SWITCH BACK BOX AS REQUIRED TO SEPARATE 120V CIRCUITS FROM 277V CIRCUITS.
- ALL BACK BOXES INSTALLED IN PARTITION WALLS SHALL BE STAGGERED. BACK-TO-BACK INSTALLATION IS NOT PERMITTED.
- PROVIDE ACCESS PANELS FOR ALL INACCESSIBLE JUNCTION BOXES AS REQUIRED BY THE N.E.C.
- CONTRACTOR TO TEST AND VERIFY THE CAPACITY OF THE EXISTING FIRE ALARM SYSTEM SERVING BUILDING PRIOR TO STARTING ANY ASSOCIATED WORK. REPORT IN WRITING, THE TEST RESULTS INCLUDING ANY DEFICIENCIES IDENTIFIED WITHIN THE EXISTING SYSTEM. SUBMIT ASSOCIATED COSTS FOR OWNERS APPROVAL TO REPLACE AND/OR PROVIDE ADDITIONAL EQUIPMENT AND COMPONENTS AS REQUIRED TO ENSURE A COMPLETE AND OPERATIONAL SYSTEM.
- ELECTRICAL CONTRACTOR TO COORDINATE WITH MECHANICAL, PLUMBING AND OTHER TRADES TO PROVIDE ALL EQUIPMENT ASSOCIATED WITH THEIR RESPECTIVE TRADES WITH NECESSARY WIRING AND CONDUIT INFRASTRUCTURE FOR ALL SENSORS, CONTROL SYSTEMS AND REMOTE MOUNTED CONTROL PANELS AS REQUIRED.
- CONTRACTOR TO PROVIDE DEDICATED CIRCUIT FOR CONNECTION TO EACH MECHANICAL, PLUMBING AND MISCELLANEOUS EQUIPMENT CONTROL PANELS AS REQUIRED. COORDINATE EXACT LOCATION AND CONNECTION REQUIREMENTS WITH MECHANICAL AND CONTROL CONTRACTORS.
- CONTRACTOR TO COORDINATE ELECTRICAL WORK TO AVOID INTERFERENCE BETWEEN ALL TRADES.
 - DETERMINE INTERFERENCE BEFORE WORK IS FABRICATED OR INSTALLED. THE CONTRACTOR SHALL BE THOROUGHLY FAMILIAR WITH ALL DETAILS OF WORK AND WORKING CONDITIONS AND COORDINATE WORK DURING PRELIMINARY STAGES TO ENSURE ACTUAL ERECTION WILL PROCEED WITHOUT INTERFERENCE. COORDINATION IS OF PARAMOUNT IMPORTANCE AND REQUESTS FOR ADDITIONAL PAYMENT WILL BE CONSIDERED WHERE REQUEST IS BASED ON INTERFERENCE.
 - WHERE JOB CONDITIONS REQUIRE REASONABLE DEVIATIONS FROM CONTRACT DOCUMENTS, MAKE DEVIATIONS WITHOUT ADDITIONAL COST TO OWNER, AFTER OBTAINING APPROVAL OF ARCHITECT.
 - PROVIDE MAXIMUM PRACTICAL SPACE FOR OPERATION, REPAIR, REMOVAL, AND TESTING OF ELECTRICAL EQUIPMENT. DEVIATIONS MAY BE MADE TO PROVIDE REQUIRED ACCESSIBILITY PROVIDED THEY ARE APPROVED BY THE OWNERS OR THE ARCHITECTS.
 - KEEP CONDUITS, WIRE WAYS AND SIMILAR ITEMS AS CLOSE AS POSSIBLE TO CEILING, WALLS AND COLUMNS IN ORDER TO TAKE UP MINIMUM AMOUNT OF SPACE. ALL WORK TO BE IN STALLED IN A NEAT AND WORK MAN LIKE MANNER.
 - PROVIDE OFFSETS, FITTINGS AND SIMILAR ITEMS NECESSARY TO ACCOMPLISH REQUIREMENTS OF COORDINATION WITHOUT ADDITIONAL EXPENSE TO OWNER.
 - PROVIDE ACCESS TO AND CLEARANCES AROUND ELECTRICAL EQUIPMENT AS REQUIRED BY THE N.E.C.

120V BRANCH CIRCUIT WIRING CONDUCTOR SIZE

DEPENDING ON BRANCH CIRCUIT RUN LENGTH FROM PANELBOARD TO THE LAST DEVICE ON THE BRANCH CIRCUIT, THE CONTRACTOR SHALL INCREASE THE BRANCH CIRCUIT WIRE SIZE AS PER THE TABLE BELOW.

MAXIMUM #10 WIRE SHALL BE USED FOR GENERAL RECEPTACLE CIRCUIT WIRING.

LENGTH (FEET)	VOLTAGE (V)	AMPACITY (A)	WIRE SIZE (AWG TYP.)
0-66	120	20	#12
0-102	120	20	#10

ELECTRICAL GENERAL DEMOLITION NOTES

- GENERAL:
 - BEFORE SUBMITTING THEIR BID, THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE TO VERIFY THE EXISTING CONDITIONS AND SCOPE OF WORK AREA. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO VISIT THE SITE, NOR FOR ANY ALLEGED MISUNDERSTANDING OF WORK TO BE PERFORMED. THE CONTRACTOR SHALL INCLUDE IN HIS BID PRICE ALL LABOR AND MATERIAL THAT MAY AFFECT HIS WORK.
 - THE GENERAL EXTENT OF EXISTING ELECTRICAL WORK TO BE DISMANTLED AND REMOVED OR RELOCATED IS INDICATED ON THE DRAWINGS.
 - ALL COMPONENTS ASSOCIATED WITH SYSTEMS AND EQUIPMENT TO BE REMOVED OR RELOCATED MAY NOT BE SPECIFICALLY INDICATED. REMOVE ALL ASSOCIATED ELECTRICAL ACCESSORIES AND COMPONENTS INCLUDING BUT NOT LIMITED TO HANGERS, WIRING, CONDUIT, BOXES AND ALL ADDITIONAL MISCELLANEOUS ITEMS RELATED TO THE EXISTING EQUIPMENT INDICATED TO BE REMOVED OR RELOCATED. REMOVE ALL ASSOCIATED WIRING AND CONDUIT BACK TO THE SOURCE OF SUPPLY IN EXISTING CIRCUITS WHICH ARE TO BE DEMOLISHED. UNLESS SPECIFICALLY INDICATED, NO EQUIPMENT, MATERIALS OR ASSOCIATED COMPONENTS SHALL BE ABANDONED IN PLACE.
 - ABANDON ALL CONDUITS CONCEALED IN CONCRETE WALLS OR SLABS. REMOVE ALL WIRING FROM ABANDONED CONDUITS BACK TO SOURCE OF SUPPLY.
- DISPOSAL OF DEMOLITION:
 - CONTRACTOR SHALL CLEAN THE PROJECT SITE AT THE END OF EACH WORKING DAY. NOTIFY THE BUILDING OWNER PRIOR TO DISPOSAL OF DEMOLISHED MATERIALS TO ALLOW SALVAGE OF ANY USABLE MATERIALS. AFTER INSPECTION FROM THE OWNERS REPRESENTATIVE, ALL UNUSED MATERIALS SHALL BE REMOVED FROM THE JOB SITE WITH DISPOSAL IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS AND REGULATIONS.
- PROTECTION:
 - PROTECT FROM DAMAGE ALL EXISTING EQUIPMENT, DEVICES AND MATERIALS TO REMAIN. ANY EXISTING MATERIALS AND EQUIPMENT DAMAGED DURING THE COURSE OF THE CONSTRUCTION PROCESS SHALL BE REPLACED WITH MATERIALS AND EQUIPMENT CONFORMING TO EXISTING SPECIFICATIONS AT NO ADDITIONAL COST TO THE OWNER.
- TERMINATION AND PATCHING:
 - DISCONNECT EXISTING EQUIPMENT AND DEVICES WITH ASSOCIATED ACCESSORIES, CONDUIT AND WIRING BACK TO SOURCE OF SUPPLY.
 - WHERE EXISTING FLOORS, WALLS AND ROOFS MUST BE CUT OR ARE DAMAGED DURING THE CONSTRUCTION PROCESS, PATCH THE CUT OR DAMAGED AREAS TO MATCH THE ADJACENT CONSTRUCTION.
 - THE CONTINUITY OF ALL EXISTING CONDUITS AND FEEDERS SERVICING AREAS AND EQUIPMENT TO REMAIN SHALL BE MAINTAINED. MODIFY THE EXISTING CIRCUITS IF REQUIRED IN ORDER TO MAINTAIN THE EXISTING CIRCUITRY.
- ALL EXISTING LED FIXTURES WOULD BE SALVAGED AND RETURNED TO THE COLLEGE.

FIRE ALARM SYMBOL LIST

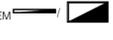
 /  CEILING/WALL MOUNTED FIRE ALARM COMBINATION AUDIO (HORN)/VISUAL DEVICE, ADA COMPLIANT NUMBER DENOTES CANDELA INTENSITY RATING, MINIMUM 15cd, MOUNTING HEIGHT FROM 80" UP TO A MAXIMUM OF 96" AFF

 /  CEILING/WALL MOUNTED FIRE ALARM VISUAL DEVICE (STROBE), ADA COMPLIANT NUMBER DENOTES CANDELA INTENSITY RATING, MINIMUM 15cd, MOUNTING HEIGHT FROM 80" UP TO A MAXIMUM OF 96" AFF

 FIRE ALARM TERMINAL CABINET

ELECTRICAL SYMBOL LIST

(STANDARD SYMBOLS ONLY, ALL SYMBOLS MAY NOT BE APPLICABLE TO THIS PROJECT)

- REFER TO THE LIGHTING FIXTURE SCHEDULE ON DRAWING E-501.00 FOR LIGHTING FIXTURE SPECIFICATIONS.
 - REFER TO DETAIL ON DRAWING E-701.00 FOR TYPICAL DEVICE MOUNTING HEIGHTS.
-  EXIT SIGN LIGHTING FIXTURES ON EMERGENCY LIGHTING CIRCUIT
-  TYPICAL INTERIOR LIGHTING FIXTURES
-  TYPICAL INTERIOR LIGHTING FIXTURES ON EMERGENCY LIGHTING CIRCUIT. FIXTURES MAY HAVE THE FOLLOWING SUBSCRIPTS:
EM : EMERGENCY
NL : NIGHT LIGHT
IB : INTEGRAL BATTERY PACK
-  WALL-MOUNTED DUPLEX OR QUAD RECEPTACLE, 20A, 125V, NEMA 5-20R
-  SINGLE POLE KEY OPERATED SWITCH. LOWERCASE LETTER SWITCHES MAY HAVE THE FOLLOWING SUBSCRIPTS:
a : LOWER CASE SUBSCRIPT INDICATES LIGHTING ZONE IDENTIFICATION.
-  CEILING MOUNTED LOW VOLTAGE OCCUPANCY SENSOR CONFIGURED AS AUTO-ON, AUTO OFF. CONFIGURE TIME-OUT SETTING FOR 20 MINUTES UNLESS OTHERWISE NOTED. DEVICES MAY HAVE THE FOLLOWING SUBSCRIPTS:
a,b : LIGHTING ZONE(S) CONTROLLED BY SENSOR
-  WALL/CEILING MOUNTED LOW VOLTAGE VACANCY SENSOR SWITCH CONFIGURED AS MANUAL ON, AUTO OFF. CONFIGURE TIME-OUT SETTING FOR 20 MINUTES. UNLESS OTHERWISE NOTED, DEVICES MAY HAVE THE FOLLOWING SUBSCRIPTS:
2 : DUAL SWITCH
a,b : LIGHTING ZONE(S) CONTROLLED BY SENSOR. IF NO LETTER SHOWN, SWITCH SHALL CONTROL ALL LIGHT FIXTURES IN THE ROOM
-  WALL CORNER MOUNTED OCCUPANCY SENSOR
-  WALL/CEILING/FLOOR MOUNTED JUNCTION BOX. JUNCTION BOXES MAY HAVE THE FOLLOWING SUBSCRIPTS TO INDICATE THE FUNCTIONAL PURPOSE:
HD : HAND DRYER
SD : SOAP DISPENSER
-  120/208V ELECTRICAL PANEL
-  480/277V ELECTRICAL PANEL
-  CIRCUIT NUMBER DESIGNATION FEEDING ELECTRICAL DEVICES, FIXTURES AND EQUIPMENT, UNLESS OTHERWISE NOTED, INSTALL ALL 20A-1P CIRCUITS WITH 2 #12 AWG + 1 #12 AWG G IN 3/4" CONDUIT:
PANEL : INDICATES THE PANEL NAME
XX : INDICATES THE CIRCUIT NUMBER
-  KEYED DRAWING NOTES
-  MICRO INVERTERS FOR THE EMERGENCY LIGHTS

ABBREVIATIONS

(NOTE : ALL ABBREVIATIONS MAY NOT APPEAR ON THE DRAWINGS)

- A AMPERE
ADA AMERICANS WITH DISABILITIES ACT
AFF ABOVE FINISHED FLOOR
AL ALUMINUM
ATS AUTOMATIC TRANSFER SWITCH
AWG AMERICAN WIRE GAUGE
- C CONDUIT
CB CIRCUIT BREAKER
CU COPPER
- D EXISTING TO BE DEMOLISHED
DISC. SW. DISCONNECT SWITCH
DWG DRAWING
- E, EX EXISTING TO REMAIN
EM DEVICE ON EMERGENCY CIRCUIT
EMT ELECTRICAL METALLIC TUBING
- FAFP FIRE ALARM ANNUNCIATOR PANEL
FACP FIRE ALARM CONTROL PANEL
FATC FIRE ALARM TERMINAL CABINET
FASP FIRE ALARM SMOKE PURGE PANEL
FLA FULL LOAD AMPS
- G GROUND
GFI GROUND FAULT INTERRUPTER
GRS GALVANIZED RESISTIVE CONDUIT
- HP HORSE POWER
- IG ISOLATED GROUND
IB INTEGRAL BATTERY PACK
- KVA KILOVOLT-AMPS
KW KILOWATT
- LM LUMEN
- MCB MAIN CIRCUIT BREAKER
MLO MAIN LUGS ONLY
MDP MAIN DISTRIBUTION PANEL
- N NEW
NEC NATIONAL ELECTRICAL CODE
NFSS NON FUSED SAFETY SWITCH
NL NIGHT LIGHT FIXTURE
NTS NOT TO SCALE
- P POLE
PH, Ø PHASE
PNL PANEL
- R RELOCATED AT NEW LOCATION
RR REMOVE AND RELOCATE
- SD SOAP DISPENSER
S/N SOLID NEUTRAL
SPD SURGE PROTECTIVE DEVICE
SWBD SWITCHBOARD
- XFMR TRANSFORMER
TYP. TYPICAL
- UON UNLESS OTHERWISE NOTED
- V VOLTS
- W WATTS
WP WEATHERPROOF

SUBSCRIPTS

RECEPTACLE OUTLETS AND JUNCTION BOX DEVICES MAY BE INDICATED WITH THE FOLLOWING SUBSCRIPTS:

- EM : RECEPTACLE ON EMERGENCY POWER
GFI : GROUND FAULT INTERRUPTER
WP : WEATHER PROOF OUTLET WITH PROTECTIVE IN-USE COVER
MD : MOTORIZED DAMPER

LIGHT FIXTURE SUBSCRIPT DETAIL:

-  HP-2 LIGHT FIXTURES MAY BE INDICATED WITH THE FOLLOWING SUBSCRIPTS:
 EM : LIGHT FIXTURE ON EMERGENCY CIRCUIT
A : UPPER CASE SUBSCRIPT INDICATES LIGHT FIXTURE IDENTIFICATION TAG
a : LOWER CASE SUBSCRIPT INDICATES LIGHTING ZONE IDENTIFICATION
HP-2 : PANEL NAME AND CIRCUIT NUMBER SERVING LIGHT FIXTURE

ELECTRICAL DRAWING LIST

SHEET	Sheet Number	Sheet Title
1	E-001.00	GENERAL NOTES, SYMBOLS & ABBREVIATIONS
2	E-101.00	MUSICAL INSTRUCTIONAL FACILITIES - ELECTRICAL PLANS
3	E-102.00	DANCE INSTRUCTIONAL FACILITIES - ELECTRICAL PLANS
4	E-103.00	PHYSICAL EDUCATION - ELECTRICAL PLANS
5	E-104.00	LIBRARY BUILDING - ELECTRICAL PLANS
6	E-501.00	ELECTRICAL RISER DIAGRAMS
7	E-502.00	FIRE ALARM RISER DIAGRAMS AND SCHEDULES
8	E-601.00	ELECTRICAL SCHEDULES
9	E-602.00	ELECTRICAL SCHEDULES
10	E-603.00	ELECTRICAL SCHEDULES
11	E-604.00	ELECTRICAL SCHEDULES
12	E-701.00	ELECTRICAL DETAILS
13	E-702.00	ELECTRICAL DETAILS

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PHASE 2:

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