GENERAL SYMBOLS

XX	KEYED SHEET NOTE (XX = NOTE NUMBER)
A	REVISION TAG (X = REVISION NUMBER)
XX	FEEDER SIZE TAG (XX = FEEDER SCHEDULE NUMBER)
	LEADER - ARROW
	LEADER - LOOP

DEVICE DISPOSITION ABBREVIATIONS

E, (E)	EXISTING TO REMAIN
R, (R)	EXISTING TO BE RELOCATED
D, (D)	EXISTING TO BE DEMOLISHED
N, (N)	NEW TO BE PROVIDED

SWITCHING SYMBOLS

S_F	CEILING FAN CONTROL SWITCH MOUNTING HEIGHT = +44" A.F.F. UON
S_{MC}	MOMENTARY CONTACT SWITCH. MOUNTING HEIGHT = +44" A.F.F. UON
S_{MS}	MOTORIZED SCREEN CONTROL MOUNT AT +44" A.F.F. UON
S_{OL}	SWITCH WITH OVERLOAD PROTECTION - FOR SINGLE PHASE MOTOR. MOUNTING HEIGHT = +48" A.F.F. UON
S_{EF}	EXHAUST FAN SWITCH; MOUNTED ABOVE CABINET UON
S_M	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION. MOUNT AS INDICATED ON DRAWINGS
S_{OS}	SWITCH WITH OCCUPANCY SENSOR. MOUNTING HEIGHT = 44" A.F.F. UON
S_{VS}	SWITCH WITH VACANCY/OCCUPANCY SENSOR. MOUNTING HEIGHT = 44" A.F.F. UON
S	SINGLE POLE SWITCH. MOUNTING HEIGHT = 44" A.F.F. UON
S_{LV}	LOW VOLTAGE-MOMENTARY CONTACT SWITCH. MOUNTING HEIGHT = 44" A.F.F. UON
S_3	THREE-WAY SWITCH. MOUNTING HEIGHT = 44" A.F.F. UON
S_4	FOUR-WAY SWITCH. MOUNTING HEIGHT = 44" A.F.F. UON
S_D	DIMMER SWITCH. MOUNTING HEIGHT = 44" A.F.F. UON
S_{VSD}	DIMMER SWITCH WITH VACANCY/OCCUPANCY SENSOR. MOUNTING HEIGHT = 44" A.F.F. UON
S_K	KEY OPERATED SWITCH. MOUNTING HEIGHT = 44" A.F.F. UON
S_T	TIMER SWITCH. MOUNTING HEIGHT = 44" A.F.F. UON
S_V	VOLUME CONTROL SWITCH. MOUNTING HEIGHT = 44" A.F.F. UON
VS / OS / PC	VACANCY/OCCUPANCY SENSOR AND ASSOCIATED POWERPACK/ROOM CONTROLLER FOR LIGHTING CONTROL
P	PHOTO-ELECTRIC SENSOR

FIRE ALARM SYMBOLS

FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FATC	FIRE ALARM TERMINAL CABINET
D_D	MAGNETIC DOOR HOLDER; MAGNET HOLDING DOOR SHALL RELEASE DURING A FIRE ALARM ANNUNCIATION
F	FIRE ALARM PULL STATION; ANNUNCIATING DEVICE. DEVICE SHALL BE MOUNTED WITHIN 5 FEET FROM THE EXIT. MH = 48" A.F.F. UON
SP_F	CEILING MOUNTED FIRE ALARM SPEAKER
	FIREMAN'S PHONE
F / F	CEILING/WALL MOUNTED COMBINATION FIRE ALARM STROBE LIGHT AND SPEAKER. WALL MOUNTED DEVICES SHALL BE MOUNTED +80" A.F.F. OR 6" BELOW CEILING, WHICHEVER IS LOWER. THE "CD" SUBSCRIPT SHALL INDICATE THE CANDELA RATING
V / V	CEILING/WALL VISUAL FIRE ALARM STROBE LIGHT. WALL MOUNTED DEVICES SHALL BE MOUNTED +80" A.F.F. OR 6" BELOW CEILING WHICHEVER IS LOWER. THE 'CD' SUBSCRIPT SHALL INDICATE CANDELA RATING
A	WALL MOUNTED FIRE ALARM HORN. DEVICE SHALL BE MOUNTED +80" A.F.F. OR 6" BELOW CEILING WHICHEVER IS LOWER
F 15	WALL MOUNTED COMBINATION FIRE ALARM STROBE AND HORN. DEVICE SHALL BE MOUNTED +80" A.F.F. OR 6" BELOW CEILING, WHICHEVER IS LOWER. THE "CD" SUBSCRIPT SHALL INDICATE CANDELA RATING
HB	WALL MOUNTED FIRE ALARM BELL. DEVICE SHALL BE MOUNTED +80" A.F.F. OR 6" BELOW CEILING, WHICHEVER IS LOWER
H	CEILING MOUNTED HEAT DETECTOR
D_F	CEILING MOUNTED FIXED TEMPERATURE HEAT DETECTOR
FID	FIRE ALARM INTERFACE DEVICE
SD	CEILING MOUNTED SMOKE DETECTOR
DD	DUCT MOUNTED SMOKE DETECTOR

POWER SYMBOLS

	NEW BRANCH CIRCUIT CONDUIT CONCEALED IN WALL OR CEILING
	BRANCH CIRCUIT HOMERUN, NUMBER OF ARROWS INDICATES THE NUMBER OF CIRCUITS. ALL CIRCUITS SHALL HAVE A SEPARATE GREEN COLORED INSULATED GROUND WIRE
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	UNDERGROUND DIRECT BURIAL CABLE
	UNDERGROUND DUCT LINE
X PB	PULLBOX 'X' INDICATES SIZE
LP-1	CIRCUIT NUMBER: 'LP' DENOTES PANEL; '1' DENOTES CIRCUIT
	GROUND; NEC 250
	120/208V MAIN DISTRIBUTION PANEL
	277/480V MAIN DISTRIBUTION PANEL
	120/208V SURFACE MOUNTED PANELBOARD
	277/480V SURFACE MOUNTED PANELBOARD
	120/208V RECESS MOUNTED PANELBOARD
	277/480V RECESS MOUNTED PANELBOARD
	120/208V RECESS MOUNTED LOAD CENTER
	277/480V RECESS MOUNTED LOAD CENTER
	MAGNETIC MOTOR STARTER; RATING AS INDICATED; MOUNTING HEIGHT = 54" UON
	COMBINATION MAGNETIC MOTOR STARTER WITH DISCONNECT SWITCH; RATING AS INDICATED; MOUNTING HEIGHT = 54" UON
WP 3 *A F-'X'	FUSED SAFETY SWITCH WP = WEATHER PROOF IN NEMA 3R ENCLOSURE 3 =DENOTES 3 POLES *A = DENOTES SAFETY SWITCH SIZE F'X' = DENOTES FUSE SIZE
WP 3 *A	NON-FUSED SAFETY SWITCH WP = WEATHER PROOF IN NEMA 3R ENCLOSURE 3 = DENOTES 3 POLES *A = DENOTES SAFETY SWITCH SIZE
	MOTOR CONNECTION
EPO	EMERGENCY POWER OFF
X	CEILING MOUNTED JUNCTION BOX
	WALL MOUNTED JUNCTION BOX
	FLOOR MOUNTED JUNCTION BOX
	VARIABLE FREQUENCY DRIVE - BY DIVISION 23
	WALL MOUNTED 20A (UON), 125V, 3W SIMPLEX RECEPTACLE, MOUNTED +18" A.F.F. UON
	WALL MOUNTED 20A (UON), 125V, 3W DUPLEX RECEPTACLE, MOUNTED +18" A.F.F. UON
	GROUND FAULT INTERRUPTING, WALL MOUNTED 20A (UON), 125V, 3W DUPLEX RECEPTACLE. MOUNT +42" A.F.F. UON
	CEILING MOUNTED 20A (UON), 125V, 3W DUPLEX RECEPTACLE
	FLOOR MOUNTED 20A (UON), 125V, 3W DUPLEX RECEPTACLE
	DOUBLE DUPLEX RECEPTACLE, TWO 20A (UON), 125V, 3W, UNDER THE SAME COVERPLATE. MOUNTED +18" A.F.F. UON
	CEILING MOUNTED DOUBLE DUPLEX RECEPTACLE, TWO 20A (UON), 125V, 3W, UNDER THE SAME COVERPLATE
	FLOOR MOUNTED DOUBLE DUPLEX RECEPTACLE, TWO 20A (UNO), 125V, 3W, UNDER THE SAME COVERPLATE
	SPECIAL RECEPTACLE, AMPERAGE AS STATED ON DRAWING
	COMBINATION POWER AND COMMUNICATIONS DUAL CHANNEL RACEWAY. POWER AND COMMUNICATION SYMBOLS ATTACHED INDICATE RACEWAY REQUIREMENTS
	WALL ELECTRICAL POWER CONNECTION FOR ELECTRIFIED FURNITURE
	FLOOR ELECTRICAL POWER CONNECTION FOR ELECTRIFIED FURNITURE
B	BLANK ELECTRICAL COVERPLATE
	BUSWAY (SERVICE FEEDER OR PLUG-IN)
	CABLE THRU LADDER OR CHANNEL
	WIREWAY
	TROLLEY DUCT
SC	SURFACE MOUNTED TERMINAL CABINET
TC	RECESSED TERMINAL CABINET

NOTE:

GENERAL NOTES, SPECIFICATIONS, SYMBOLS AND ABBREVIATIONS IN THIS DRAWING SET ARE A COMPLETE LIST AND SOME ITEMS MAY NOT BE APPLICABLE IN THE SCOPE OF WORK SHOWN IN THIS SET OF DRAWINGS.

ELECTRICAL ABBREVIATIONS

A, AMP	AMPERE
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
BKR	BREAKER
C, CND	CONDUIT
C/B	CIRCUIT BREAKER
EM	EMERGENCY
FLA	FULL LOAD AMPERES
FSS	FUSED SAFETY SWITCH
GFCI	GROUND FAULT CURRENT INTERRUPTER
GRND, G	GROUND
HP	HORSEPOWER
KAIC	1000 AMPERES INTERRUPTING CAPACITY
KCMIL	1000 CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATT
LTG	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUG ONLY
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NETA	NATIONAL ELECTRICAL TESTING AGENCY
NFSS	NON-FUSED SAFETY SWITCH
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
EPO	EMERGENCY POWER OFF
P	POLE
PNL	PANEL
RLA	RUNNING LOAD AMPERE
S, SW	SWITCH
SWBD	SWITCHBOARD
S/N	SOLID NEUTRAL
THRU	THROUGH
TYP	TYPICAL
U.O.N	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT
VA	VOLT-AMPERE
W	WATT
WP	WEATHER PROOF

ELECTRICAL GENERAL NOTES

1. THE FOLLOWING NOTES ARE GENERAL IN NATURE AND PERTAIN TO THE ENTIRE PROJECT. WHERE THERE ARE EXCEPTIONS, ADDITIONS OR REVISIONS TO THESE NOTES SUCH ARE SO NOTED ON THE PARTICULAR DRAWING WHERE THEY OCCUR. REFER TO SPECIFICATIONS FOR GENERAL REQUIREMENTS OF ALL WORK.
2. THE CONTRACTOR SHALL FABRICATE AND INSTALL ALL WORK IN STRICT ACCORDANCE WITH OSHA, ALL APPLICABLE STATE, COUNTY, AND LOCAL CODES, AND THE GENERAL AND SUPPLEMENTARY CONDITIONS OF THE CONTRACT.
3. PRIOR TO BID, THE CONTRACTOR SHALL EXAMINE ALL PROJECT DRAWINGS, AND SHALL VISIT THE SITE, AND VERIFY ALL CONDITIONS TO DEVELOP A COMPLETE UNDERSTANDING OF THE PROJECT SCOPE. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM ALL WORK REQUIRED. THE CONTRACTOR SHALL, UPON REVIEW OF THE DOCUMENTS, ADVISE THE ENGINEER OF ANY DISCREPANCIES WHICH WILL AFFECT THE WORK REQUIRED.
4. PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES. CONFLICTS ARISING FROM FAILURE TO DO SO SHALL BE RECTIFIED BY THE CONTRACTORS AT NO ADDITIONAL COST TO THE CONTRACT.
5. DRAWINGS ARE DIAGRAMMATIC; THEREFORE, THE CONTRACTOR SHALL MAKE ADJUSTMENTS AS REQUIRED FOR AN INSTALLATION IN CONFORMITY. CONTRACTOR SHALL CLOSELY EXAMINE ALL PROJECT DRAWINGS TO UNDERSTAND WORK REQUIRED AND TO AVOID INTERFERENCE WITH EXISTING AND NEW WORK SUCH AS DUCTS, PIPING, LIGHTING FIXTURES, STRUCTURAL BEAMS, RAIN LEADERS, ETC.. THESE DRAWINGS ARE BASED ON DOCUMENTS MADE AVAILABLE BY THE CLIENT. THE CONTRACTOR SHALL FIELD VERIFY ALL LAYOUTS AND MAKE NECESSARY ADJUSTMENTS AT NO ADDITIONAL COST TO THE CONTRACT.
6. ALL WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE BEST ACCEPTED TRADE PRACTICES AND AS PER MANUFACTURER'S RECOMMENDATIONS (HIGHEST STANDARD, LOWEST TOLERANCE TO RULE).
7. THE CONTRACTOR SHALL PROTECT ALL EQUIPMENT AND FIXTURES STORED OR SET IN PLACE IN THE JOB.
8. ALL EXISTING ELECTRICAL EQUIPMENT TO REMAIN IS TO BE PROTECTED DURING THE CONSTRUCTION PROCESS. CONTRACTOR TO PROVIDE ENGINEER WITH PUNCH LIST OF ALL EXISTING DAMAGE AND NON FUNCTIONING EQUIPMENT PRIOR TO THE START OF CONSTRUCTION.
9. ANY DAMAGE TO THE NEW OR EXISTING CONSTRUCTION CAUSED BY THE CONTRACTOR'S NEGLIGENCE OR INADEQUATE PROTECTION OR SECURITY MEASURES DURING CONSTRUCTION ARE TO BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
10. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND DEVICES SO THEY ARE READILY ACCESSIBLE. PRIOR TO INSTALLING EQUIPMENT, DISCONNECTS, STARTERS, ETC., THE CONTRACTOR SHALL VERIFY EQUIPMENT SERVICE CLEARANCES AS REQUIRED BY THE CURRENT NATIONAL ELECTRIC CODE AND SHALL REPORT ANY INADEQUACIES TO THE ENGINEER.
11. THE CONTRACTOR SHALL PROVIDE ALL TOOLS, MATERIALS, EQUIPMENT AND NECESSARY FACILITIES, AND PERFORM ALL LABOR AND SERVICES OF EVERY DESCRIPTION AS MAY BE NECESSARY TO COMPLETE THE SCOPE OF WORK DEFINED IN THE DRAWINGS.
12. ALL CONTRACTORS AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR THE PROPER PERFORMANCE OF THEIR WORK, COORDINATE WITH OTHER TRADES, MEANS AND METHODS OF CONSTRUCTION, SAFETY AND SECURITY ON SITE.
13. UNLESS ITEMS OF MATERIAL, EQUIPMENT OR WORK ARE SPECIFICALLY NOTED TO BE PROVIDED OR FURNISHED BY OTHERS, THEY SHALL BE PROVIDED UNDER THIS CONTRACT.
14. WORK INDICATED AS HAVING MINOR DETAILS OBVIOUSLY OMITTED FOR CLARITY SHALL BE INCLUDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
15. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE, AND SHALL VERIFY ALL ROUGH-IN REQUIREMENTS FOR ELECTRICALLY-OPERATED EQUIPMENT. VERIFICATIONS SHALL BE MADE WITH THE EQUIPMENT SUPPLIERS.
16. FIRE STOPPING WITH A FIRE RESISTANT RATING IN ACCORDANCE WITH ASTM E119 SHALL BE PROVIDED BY THE CONTRACTOR FOR ANY REQUIRED OR THOSE DUE TO DEMOLITION WORK PENETRATIONS OF FIRE RATED ASSEMBLIES. THE CONTRACTOR SHALL ADVISE THE OWNER 24 HOURS IN ADVANCE OF COMMENCING FIRE STOPPING WORK.
17. ALL SUPPORTS SHALL BE DESIGNED AND INSTALLED IN COMPLIANCE WITH THE SEISMIC PROVISIONS OF IBC.
18. THE CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS STEEL SHAPES, HANGER RODS, STRAPS, ETC. REQUIRED FOR ALL ELECTRICAL SYSTEM INSTALLATIONS.
19. THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF 6'-8" CLEARANCE TO THE UNDERSIDE OF CONDUITS, SUSPENDED EQUIPMENT, ETC., THROUGHOUT ACCESS ROUTES IN MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS.
20. ALL NEW WORK SHALL BE CONCEALED IN FINISHED AREAS. NO SURFACE MOUNTED CONDUIT, OUTLET BOXES, RACEWAYS, OR DEVICES WILL BE PERMITTED UNLESS SPECIFICALLY SHOWN ON THE CONTRACT DOCUMENTS.
21. THE CONTRACTOR SHALL PLACE ALL EQUIPMENT INTO OPERATION AND ADJUST ALL EQUIPMENT FOR PROPER OPERATION. THE CONTRACTOR SHALL EXPLAIN THE SYSTEM OPERATION AND MAINTENANCE PROCEDURES TO THE OWNER.
22. ALL COLORS OF EXPOSED EQUIPMENT SHALL BE APPROVED BY THE ENGINEER, ARCHITECT, AND OWNER PRIOR TO ORDERING.
23. REFER TO ARCHITECTURAL ELEVATIONS AND REFLECTED CEILING PLANS WHERE SUCH ARE SHOWN FOR EXACT LOCATION OF ALL WALL AND CEILING MOUNTED ELECTRICAL WORK.
24. THE CONTRACTOR SHALL COORDINATE FINAL LOCATIONS OF LIGHTING FIXTURES, SPEAKERS, SMOKE DETECTORS, AND OTHER ITEMS WITH THE REFLECTED CEILING PLAN(S). LIGHTING FIXTURES SHALL BE MOUNTED SQUARELY AND CENTERED WITHIN ACOUSTIC CEILING PANELS.
25. LETTER DESIGNATION DIRECTLY ADJACENT TO LIGHTING FIXTURE SYMBOL INDICATED THE TYPE OF LIGHTING FIXTURE.
26. LOCATE LIGHT SWITCHES APPROXIMATELY 4 TO 6 INCHES FROM THE LATCH SIDE OF DOOR FRAME WHERE POSSIBLE EXCEPT AS NOTED OTHERWISE.
27. LOCATE LIGHT SWITCHES DIRECTLY BENEATH THERMOSTATS WHERE THEY ARE SHOWN IN CLOSE PROXIMITY. SEE MECHANICAL DRAWINGS FOR LOCATIONS OF THERMOSTATS.
28. LOCATE WALL BOXES APPROXIMATELY AS SHOWN, EXACTLY AS DIRECTED OR AS NECESSARY TO ACHIEVE SYMMETRY AND COORDINATION WITH THE BUILDING FINISHES AND EQUIPMENT.
29. LOCATE ALL PULL BOXES SUCH THAT THEY ARE ACCESSIBLE.
30. MOUNT FLUSH BOXES WITH THEIR FRONT EDGE EVEN WITH THE FINISH SURFACE. SINGLE GANG BOXES SHALL BE MOUNTED WITH LONGER DIMENSION VERTICAL UNLESS NOTED OTHERWISE. MOUNT ALL BOXES AND PLATES PLUMB.
31. BOXES SHALL NOT BE INSTALLED BACK TO BACK ON BOTH SIDES OF A WALL. OFFSET BOXES A MINIMUM OF 6 INCHES.
32. COORDINATE OUTLET LOCATIONS AND CIRCUIT RATINGS WITH EQUIPMENT SHOWN ON MECHANICAL AND PLUMBING DRAWINGS AND WITH ALL EQUIPMENT AND FURNISHINGS SHOWN ON ARCHITECTURAL AND INTERIORS DRAWINGS.
33. BRANCH CIRCUIT AND FEEDER NUMBERS ARE INDICATED BY NUMBER DESIGNATION ONLY. SEE BRANCH CIRCUIT AND FEEDER SCHEDULES FOR SIZE.
34. INDICATED BRANCH CIRCUIT CONDUCTOR SIZES ARE BASED ON NO MORE THAT 3 CURRENT CARRYING CONDUCTORS AND A NON-CURRENT CARRYING CONDUCTOR IN EACH RACEWAY. WHERE THE NUMBER OF CONDUCTORS EXCEED THIS AMOUNT, ADJUST CONDUCTOR SIZES IF AND AS NECESSARY TO ACCOUNT FOR DERATING THEIR AMPACITY AS IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE ARTICLE 310.
35. FOR EACH INDICATED CONNECTION TO EQUIPMENT, PROVIDE AN OUTLET BOX AND FLEXIBLE CONDUIT AS APPROPRIATE FOR ASSOCIATED EQUIPMENT. FOR EXTERIOR EQUIPMENT, BOX SHALL BE NEMA-3R AND CONDUIT SHALL BE FLEXIBLE LIQUIDTIGHT. FOR INTERIOR EQUIPMENT, BOX SHALL BE GENERAL PURPOSE AND CONDUIT SHALL BE FLEXIBLE METALLIC. WHERE THE EQUIPMENT COMES WITH A CORD AND PLUG, PROVIDE A COMPATIBLE RECEPTACLE. WHERE REQUIRED BY CODE PROVIDE AND INSTALL A SAFETY DISCONNECT SWITCH ADJACENT TO EQUIPMENT.
36. PROVIDE TIME CLOCK AND CONTROL UNITS IN ELECTRICAL ROOM. PROVIDE AUTOMATIC LIGHT CONTROLS AS INDICATED. PROVIDE ASSOCIATED RELAYS AND CONTACTORS AS NECESSARY FOR REQUIRED CONTACT QUANTITIES AND RATINGS. LOCATE CONTACTORS AND RELAYS IN MECHANICAL SPACES OR ABOVE ACCESSIBLE CEILINGS.
37. EACH RECEPTACLE CIRCUIT SHALL HAVE AN INDIVIDUAL GROUND WIRE. ISOLATED GROUND RECEPTACLES SHALL HAVE (2) GROUND WIRES.
38. WHERE (2) OR MORE WIRING DEVICES ARE SHOWN IN CLOSE PROXIMITY, USE A MULTI-GANG BOX AND FACEPLATE. PROVIDE AND INSTALLED DIVIDER AS REQUIRED.
39. BRANCH CIRCUIT VOLTAGE DROP SHALL NOT EXCEED 3%. FEEDER VOLTAGE DROP SHALL NOT EXCEED 5%. ADJUST CABLE SIZE ACCORDINGLY.
40. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR X-RAYING SLABS IN AREAS WHERE CORE DRILLING IS TO TAKE PLACE. E.C. SHALL VERIFY THAT SLAB IS FREE OF CONFLICTING WITH EXISTING SYSTEMS AND STRUCTURES PRIOR TO DRILLING.
41. ALL WORK SHALL BE COMPLETED IN A MANNER TO MINIMIZE INTERRUPTIONS OF BUILDING SERVICES. IN THE EVENT THAT SERVICES MUST BE INTERRUPTED, NOTIFY OWNER AND GET WRITTEN APPROVAL, MINIMUM OF 5 DAYS PRIOR TO INTERRUPTION.
42. CONTRACTOR SHALL VERIFY EXACT ELECTRICAL CHARACTERISTICS REQUIRED WITH MECHANICAL EQUIPMENT SHOP DRAWINGS PRIOR TO INSTALLATION OF FEEDERS AND BRANCH CIRCUITS TO ASSURE CORRECT SIZE WITH FINAL EQUIPMENT BEING SUPPLIED. MECHANICAL EQUIPMENT CHARACTERISTICS MAY VARY FROM NOTES AND PANEL SCHEDULE INDICATED.
43. ALL EMERGENCY LIGHTING FIXTURES SHALL CONTAIN AN INTEGRAL EMERGENCY BATTERY UNIT, CONSISTING OF NICKEL-CADMIUM BATTERY AND AN AUTOMATIC SOLID STATE CHARGER WITH VISIBLE CHARGING LED. UNIT SHALL ILLUMINATE (1) ONE LAMP PER FIXTURE AT A NORMAL LAMP LUMEN OUTPUT OF 30% MINIMUM RATED LUMEN OUTPUT FOR A MINIMUM OF 90 MINUTES. BATTERY PACKS SHALL BE CONNECTED TO UNSWITCHED LEG OF LIGHTING CIRCUIT SERVING ROOM.

ELECTRICAL DEMOLITION NOTES

1. IN GENERAL, THESE DRAWINGS ARE DIAGRAMMATIC ONLY, AND ONLY REPRESENT THE GENERAL SCOPE OF THE WORK. IT IS THE INTENT OF THIS CONTRACT TO REMOVE ALL UNUSED EXISTING CONDUCTORS, CONDUIT, SUPPORTS, DEVICES, ELECTRICAL EQUIPMENT, CONTROLS, AND OTHER RELATED APPURTENANCES ON EXISTING WALLS/CEILINGS TO BE REMOVED UNLESS SPECIFICALLY NOTED OTHERWISE. THE CONTRACTOR SHALL BE REQUIRED TO INVESTIGATE, AND VERIFY ALL CONDITIONS AT THE SITE, PRIOR TO HIS BIDDING, TO DETERMINE THE EXTENT OF THE DEMOLITION.
2. ALL EXISTING ELECTRICAL WORK TO BE REMOVED WILL BECOME THE PROPERTY OF THE ELECTRICAL CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM THE PREMISES, EXCEPT AS OTHERWISE NOTED.
3. REMOVE AS IT ACCUMULATES, ALL DEBRIS RESULTING FROM CONSTRUCTION AND DEMOLITION OPERATIONS. DO NOT STORE OR PERMIT DEBRIS TO ACCUMULATE ON SITE. IF CONTRACTOR FAILS TO REMOVE EXCESS DEBRIS PROPERLY OR PROMPTLY, OWNER RESERVES RIGHT TO CAUSE SAME TO BE REMOVED AT CONTRACTOR'S EXPENSE.
4. ALL AREAS OF EGRESS SHALL BE KEPT OPEN AND FREE OF DEBRIS AT ALL TIMES.
5. REMOVAL OF ANY MATERIAL AND EQUIPMENT SHALL INCLUDE ALL ASSOCIATED ITEMS SUCH AS SUPPORTS, FASTENINGS, CONDUITS, FLASHING, ADHESIVE, ETC.
6. WHERE ELECTRICAL WORK IS REMOVED, PATCH EXISTING CONSTRUCTION IN ACCORDANCE WITH UL CLASSIFICATIONS TO MAINTAIN REQUIRED FIRE, SMOKE, AND ACOUSTIC SEPARATIONS. FINISHES IN PUBLIC AREAS SHALL BE PATCHED AND FINISHED SO THAT THE APPEARANCE OF DEMOLITION WORK IS COMPLETELY REMOVED.
7. ALL HOLES IN SLABS ABOVE AND BELOW ARE TO BE FILLED WITH CONCRETE AS REQUIRED.
8. ALL WORK SHALL BE EXECUTED IN AN ORDERLY AND CAREFUL MANNER WITH DUE CONSIDERATION FOR PUBLIC SAFETY, AND IN CONFORMANCE WITH OSHA STANDARDS.
9. PROCEED WITH DEMOLITION FROM TOP TO BOTTOM. DO NOT REMOVE ITEMS SUPPORTING OTHER MEMBERS WITHOUT PROVIDING TEMPORARY OR PERMANENT BRACING AS REQUIRED. SEE DRAWINGS FOR AREAS AND EXTENT OF DEMOLITION.
10. IF EXISTING CONDITIONS ARE DIFFERENT THAN WHAT IS INDICATED ON CONTRACT DOCUMENTS, THE CONTACTORS SHALL NOTIFY THE DEPARTMENT, ARCHITECT, OR ENGINEER.
11. PROTECT REMOVED ITEMS WHICH ARE TO BE REUSED ON SITE TO MINIMIZE POST-CONSTRUCTION REPAIRS. ANY ITEMS WHICH ARE DAMAGED SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST.
12. PROPERLY SUPPORT EXISTING LIGHTING, CONDUIT, RACEWAY, AND CABLE TRAY TO REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING REQUIRED SUPPORTS FOR WORK AFFECTING ANY OF THESE ITEMS.
13. EQUIPMENT INDICATED FOR REMOVAL SHALL BE REVIEWED BY THE OWNER. ELECTRICAL CONTRACTOR SHALL REMOVE EQUIPMENT OWNER WISHES TO RETAIN AND DELIVER TO THE LOCATION DESIGNATED BY OWNER. ELECTRICAL CONTRACTOR SHALL REMOVE PROMPTLY FROM THE SITE MATERIALS AND EQUIPMENT INDICATED FOR REMOVAL WHICH ARE NOT SPECIFIED FOR REUSE, STORAGE, OR RETENTION BY OWNER.
14. POWER DEVICE REMOVAL: WHERE INDICATED ON THE DRAWINGS, DISCONNECT ALL EXISTING POWER DEVICES FROM THE POWER SUPPLY AND REMOVE DEVICES. REMOVE ALL BOXES, ENCLOSURES, RACEWAY, AND SUPPORTS ASSOCIATED WITH EACH DEVICE AS WELL AS ALL ASSOCIATED CONDUCTORS AND CONDUIT BACK TO THE PANELBOARD. IF DEVICE IS BEING REMOVED FROM A CONTINUING CIRCUIT, CONTRACTOR SHALL SPLICE CIRCUIT TO ALLOW NORMAL OPERATION OF REMAINING WIRING DEVICES.
15. ELECTRICAL CONTRACTOR SHALL PERFORM ALL CUTTING AND ROUGH PATCHING REQUIRED FOR DEMOLITION WORK IN ACCORDANCE WITH THE ARCHITECT. FINAL PATCHING AND SURFACE PREPARATION SHALL BE PERFORMED BY THE GENERAL CONTRACTOR.
16. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ALL SWITCHES, CONTROLLERS, RECEPTACLES, TELE/DATA OUTLETS, ETC. ON EXISTING WALLS TO BE REMOVED. SEE NOTES ABOVE FOR EXTENT OF REMOVAL.

SHEET LIST - ELECTRICAL

SHEET #	SHEET NAME
E-001	ELECTRICAL LEGEND
E-101	POWER & SIGNAL DEMO PLAN - FIRST FLOOR
E-102	POWER & SIGNAL DEMO PLAN - SECOND FLOOR
E-103	POWER & SIGNAL DEMO PLAN - ROOF
E-201	POWER & SIGNAL NEW WORK PLAN - FIRST FLOOR
E-202	POWER & SIGNAL NEW WORK PLAN - SECOND FLOOR
E-203	POWER & SIGNAL NEW WORK PLAN - ROOF
E-301	POWER & SIGNAL DEMOLITION PLAN - FIRST FLOOR - ADD-ALT
E-302	POWER & SIGNAL DEMOLITION PLAN - SECOND FLOOR - ADD-ALT
E-303	POWER & SIGNAL DEMOLITION PLAN - ROOF - ADD-ALT
E-401	POWER & SIGNAL NEW WORK PLAN - FIRST FLOOR - ADD-ALT
E-402	POWER & SIGNAL NEW WORK PLAN - SECOND FLOOR - ADD-ALT
E-403	POWER & SIGNAL NEW WORK PLAN - ROOF - ADD-ALT
E-500	ELECTRICAL DETAILS
E-600	ELECTRICAL PARTIAL RISER DIAGRAM & SCHEDULES
E-601	ELECTRICAL PARTIAL RISER DIAGRAM & SCHEDULES - ADD/ALT
E-700	ELECTRICAL PANEL SCHEDULES
E-701	ELECTRICAL PANEL SCHEDULES

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646

OWNER: COLLEGE OF SOUTHERN MARYLAND

STATE PROJ. NO: Project Number not bidding

SEAL

KEY PLAN

N

REVISIONS

MARK	DATE	ISSUE

ISSUES

DATE	ISSUE
02.14.2022	BID DOCUMENTS

ELECTRICAL LEGEND

E-001

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GENERAL NOTES

A. REFER TO SHEETS E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. ALL WORK SHOWN ON THIS PLAN WITH SUBSCRIPT (D) SHALL BE DEMOLISHED U.O.N. DEVICES SHALL BE REMOVED ALONG WITH ALL WIRING AND APPURTENANCES BACK TO THE SOURCE. DO NOT ABANDON CABLING OR SUPPORT DEVICES IN PLACE. REFER TO ELECTRICAL DEMOLITION NOTES ON E-002 FOR FURTHER INFORMATION.

C. DEVICES WITH THE SUBSCRIPT (R) SHALL BE RELOCATED. DEVICES SHALL BE REMOVED WITH ALL THEIR ASSOCIATED COMPONENTS, THOROUGHLY CLEANED AND STORED IN A SAFE PLACE FOR USE IN NEW WORK.

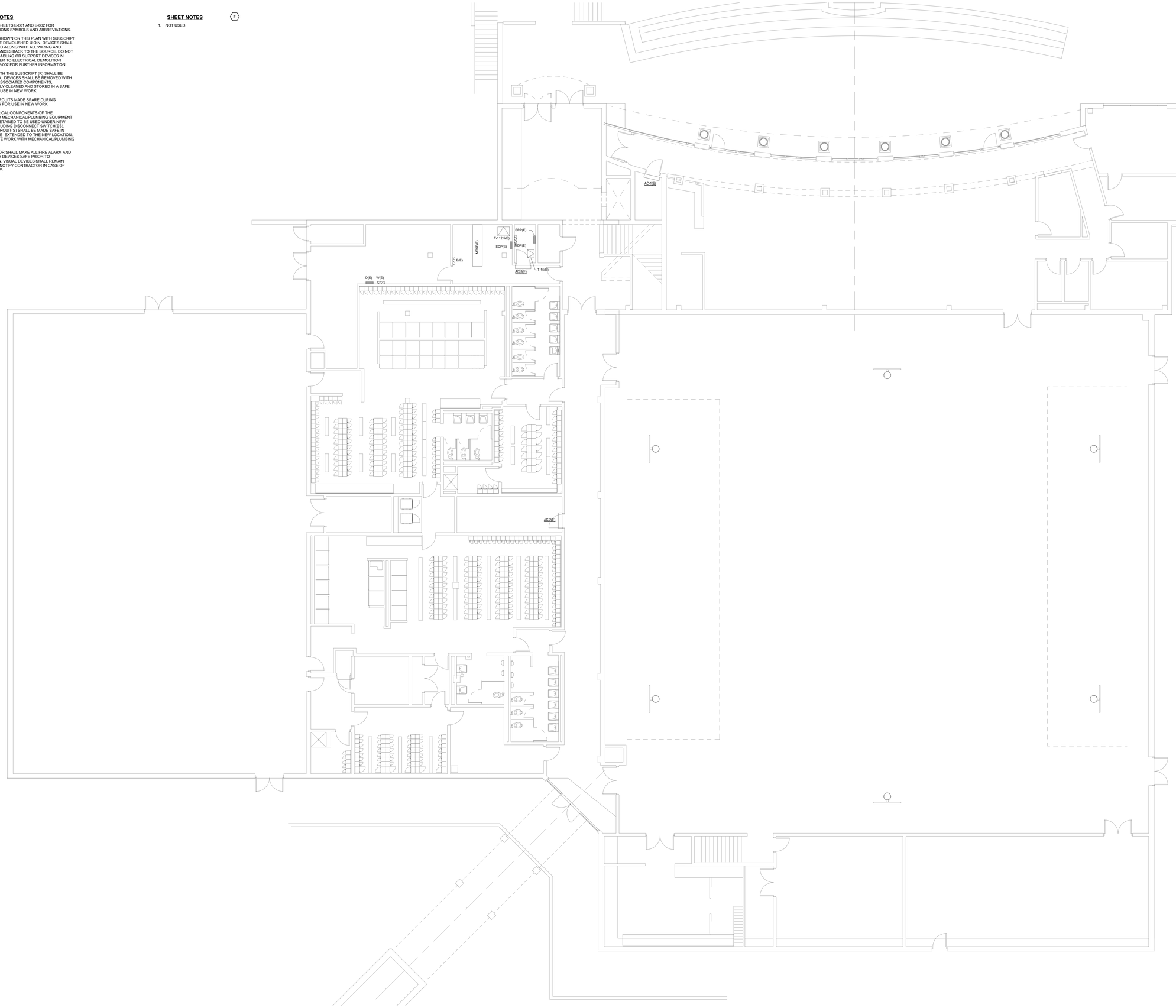
D. RECORD CIRCUITS MADE SPARE DURING DEMOLITION FOR USE IN NEW WORK.

E. ALL ELECTRICAL COMPONENTS OF THE RELOCATED MECHANICAL/PLUMBING EQUIPMENT SHALL BE RETAINED TO BE USED UNDER NEW WORK, INCLUDING DISCONNECT SWITCH(ES). EXISTING CIRCUIT(S) SHALL BE MADE SAFE IN PLACE TO BE EXTENDED TO THE NEW LOCATION. COORDINATE WORK WITH MECHANICAL/PLUMBING PLANS.

F. CONTRACTOR SHALL MAKE ALL FIRE ALARM AND LIFE SAFETY DEVICES SAFE PRIOR TO DEMOLITION. VISUAL DEVICES SHALL REMAIN ACTIVE, TO NOTIFY CONTRACTOR IN CASE OF EMERGENCY.

SHEET NOTES (#)

1. NOT USED.



1 POWER & SIGNAL DEMOLITION PLAN - FIRST FLOOR
1/8" = 1'-0"

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646

OWNER: COLLEGE OF SOUTHERN MARYLAND

STATE PROJ. NO: Project Number

SEAL

KEY PLAN

REVISIONS

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ISSUES

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02.14.2022	BID DOCUMENTS

POWER & SIGNAL DEMO PLAN - FIRST FLOOR

E-101

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GENERAL NOTES

A. REFER TO SHEETS E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. ALL WORK SHOWN ON THIS PLAN WITH SUBSCRIPT (D) SHALL BE DEMOLISHED U.O.N. DEVICES SHALL BE REMOVED ALONG WITH ALL WIRING AND APPURTENANCES BACK TO THE SOURCE. DO NOT ABANDON CABLING OR SUPPORT DEVICES IN PLACE. REFER TO ELECTRICAL DEMOLITION NOTES ON E-002 FOR FURTHER INFORMATION.

C. DEVICES WITH THE SUBSCRIPT (R) SHALL BE RELOCATED. DEVICES SHALL BE REMOVED WITH ALL THEIR ASSOCIATED COMPONENTS, THOROUGHLY CLEANED AND STORED IN A SAFE PLACE FOR USE IN NEW WORK.

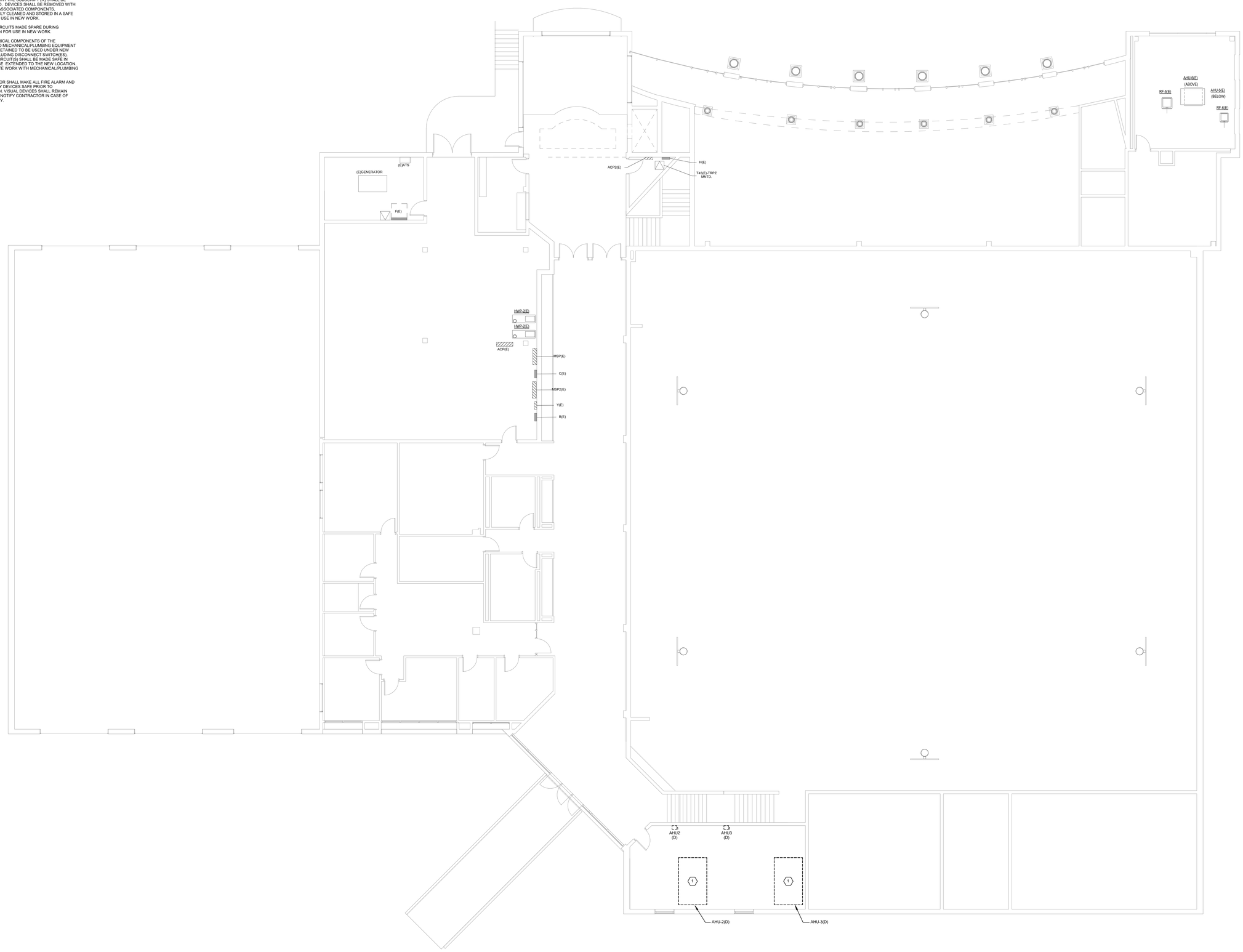
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F. CONTRACTOR SHALL MAKE ALL FIRE ALARM AND LIFE SAFETY DEVICES SAFE PRIOR TO DEMOLITION. VISUAL DEVICES SHALL REMAIN ACTIVE. TO NOTIFY CONTRACTOR IN CASE OF EMERGENCY.

SHEET NOTES

1. EXISTING HVAC UNIT SHALL BE REMOVED. DEMOLISH EXISTING DISCONNECT SWITCH, APPURNTENANCES, AND ASSOCIATED WIRING BACK TO THE SOURCE. SWITCH EXISTING CIRCUIT BREAKER TO THE "OFF" POSITION AND LABEL AS SPARE.



1 POWER & SIGNAL DEMOLITION PLAN - SECOND FLOOR
1/8" = 1'-0"

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646

OWNER: COLLEGE OF SOUTHERN MARYLAND

STATE PROJ. NO: Project Number

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POWER & SIGNAL DEMO PLAN - SECOND FLOOR

E-102

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GENERAL NOTES

A. REFER TO SHEETS E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. ALL WORK SHOWN ON THIS PLAN WITH SUBSCRIPT (D) SHALL BE DEMOLISHED U.O.N. DEVICES SHALL BE REMOVED ALONG WITH ALL WIRING AND APPURTENANCES BACK TO THE SOURCE. DO NOT ABANDON CABLING OR SUPPORT DEVICES IN PLACE. REFER TO ELECTRICAL DEMOLITION NOTES ON E-002 FOR FURTHER INFORMATION.

C. DEVICES WITH THE SUBSCRIPT (R) SHALL BE RELOCATED. DEVICES SHALL BE REMOVED WITH ALL THEIR ASSOCIATED COMPONENTS, THOROUGHLY CLEANED AND STORED IN A SAFE PLACE FOR USE IN NEW WORK.

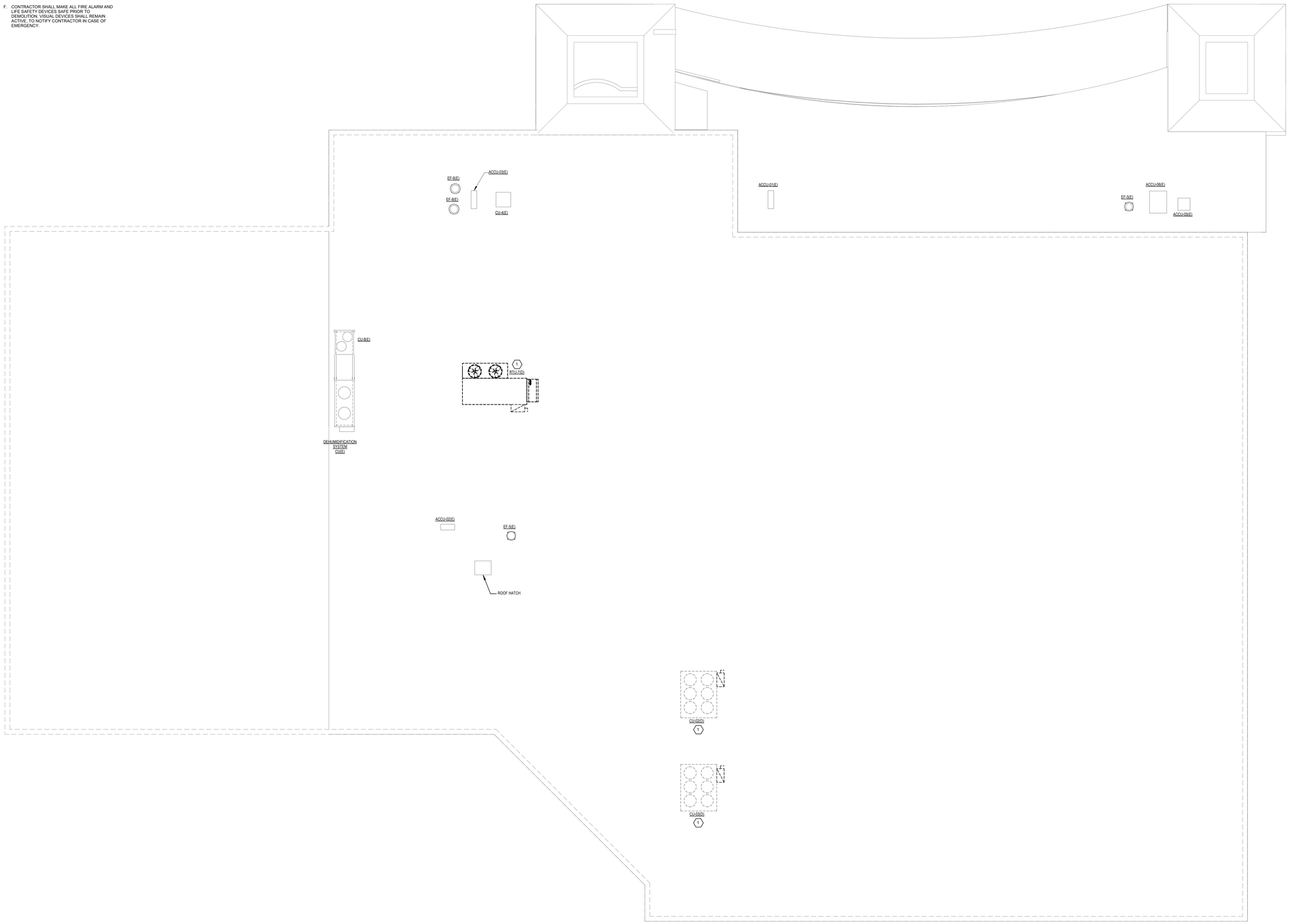
D. RECORD CIRCUITS MADE SPARE DURING DEMOLITION FOR USE IN NEW WORK.

E. ALL ELECTRICAL COMPONENTS OF THE RELOCATED MECHANICAL/PLUMBING EQUIPMENT SHALL BE RETAINED TO BE USED UNDER NEW WORK, INCLUDING DISCONNECT SWITCH(ES). EXISTING CIRCUIT(S) SHALL BE MADE SAFE IN PLACE TO BE EXTENDED TO THE NEW LOCATION. COORDINATE WORK WITH MECHANICAL/PLUMBING PLANS.

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SHEET NOTES (#)

1. EXISTING HVAC UNIT SHALL BE REMOVED. DEMOLISH EXISTING DISCONNECT SWITCH, APPURTENANCES, AND ASSOCIATED WIRING BACK TO THE SOURCE. SWITCH EXISTING CIRCUIT BREAKER TO THE "OFF" POSITION AND LABEL AS SPARE.



1 POWER DEMO WORK PLAN - ROOF
1/8" = 1'-0"

HG HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646
OWNER: COLLEGE OF SOUTHERN MARYLAND
STATE PROJ. NO: Project Number

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KEY PLAN

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POWER & SIGNAL DEMO PLAN - ROOF

E-103

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GENERAL NOTES

A. REFER TO SHEET E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. ALL WORK SHOWN ON THIS PLAN IS NEW U.O.N.

C. THE SCOPE OF WORK FOR DEVICES/EQUIPMENT/CONNECTIONS SHOWN HALF-TONE IS ADDRESSED IN THE BASE-BID DESIGN. REFER TO THE E-200 SERIES DRAWINGS FOR ADDITIONAL INFORMATION.

D. REFER TO RISER DIAGRAM AND BRANCH CIRCUIT SCHEDULE FOR FEEDER AND BRANCH CIRCUIT CONDUCTOR SIZES U.O.N.

E. REFER TO RISER DIAGRAM, DRAWING E-600, FOR ADDITIONAL DETAILS.

F. ALL ELECTRICAL EQUIPMENT ON THE ROOF SHALL BE WEATHERPROOF. DISCONNECT SWITCHES FOR HVAC EQUIPMENT SHALL BE HEAVY DUTY FUSED TYPE - FUSED PER MANUFACTURER'S RECOMMENDATION.

G. REUSE AND MODIFY THE EXISTING FIRE ALARM CONTROL AND ANNUNCIATING PANELS OR PROVIDE NEW AS NECESSARY TO ACCOMMODATE THE NEW ANNUNCIATING APPLIANCES THAT WILL BE INSTALLED FOR THE FIRE ALARM WORK REQUIRED UNDER THIS CONTRACT.

H. MAINTAIN THE CONTINUITY OF ALL EXISTING FIRE ALARM SYSTEM DEVICES AND KEEP THEM OPERATIONAL DURING ALL PHASES OF THIS CONTRACT. PROVIDE A MINIMUM OF 24-HOUR WRITTEN NOTICE TO THE BUILDING OWNER'S REPRESENTATIVE PRIOR TO ANY INTERRUPTION OF THE BUILDING FIRE ALARM SYSTEM. COORDINATE THIS WORK WITH WITH THE OWNER'S REPRESENTATIVE.

I. THE NEW FIRE ALARM APPLIANCES AND WIRING SHALL BE COMPLETELY COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM.

J. THE FIRE ALARM SYSTEM SHALL BE SUPERVISED.

K. IN EXPOSED AREAS, FIRE ALARM WIRING SHALL BE IN EMT. MC FIRE ALARM CABLE MAY BE UTILIZED WHERE CONCEALED IN WALLS OR CEILINGS. RACEWAYS THAT CONTAIN FIRE ALARM WIRING SHALL NOT CONTAIN ANY OTHER WIRING. ONLY CABLES IN CONDUIT AND MC CABLES SHALL BE USED. NO OTHER TYPE OF WIRING (E.G. FPLP CABLES) SHALL BE USED.

L. TEST THE FIRE ALARM SYSTEM AND HAVE ALL FIRE ALARM APPLIANCES OPERATIONAL PRIOR TO INSPECTION BY THE AUTHORITY HAVING JURISDICTION.

M. ALL EMPTY RACEWAY SHALL CONTAIN A PULL WIRE.

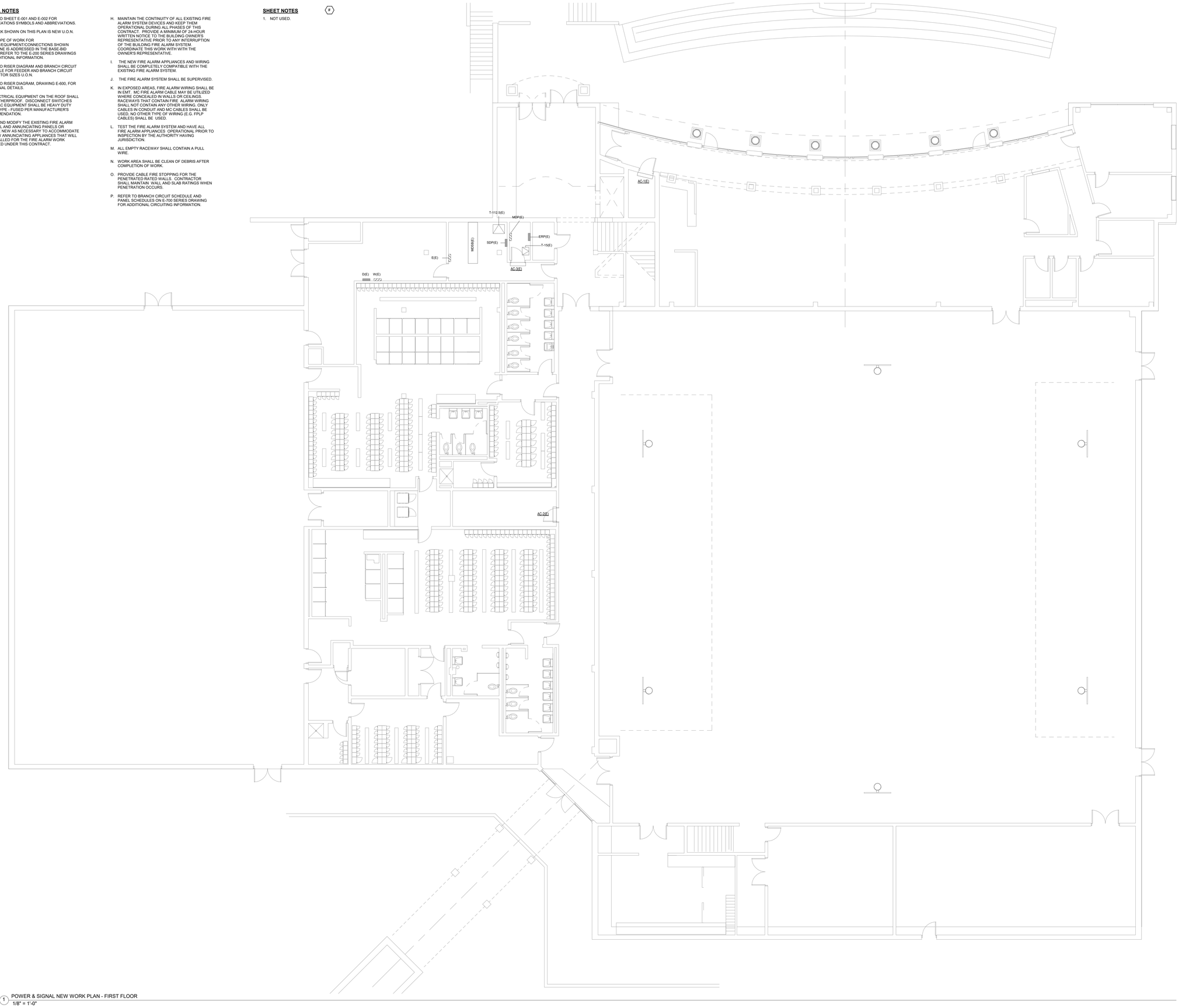
N. WORK AREA SHALL BE CLEAN OF DEBRIS AFTER COMPLETION OF WORK.

O. PROVIDE CABLE FIRE STOPPING FOR THE PENETRATED RATED WALLS. CONTRACTOR SHALL MAINTAIN WALL AND SLAB RATINGS WHEN PENETRATION OCCURS.

P. REFER TO BRANCH CIRCUIT SCHEDULE AND PANEL SCHEDULES ON E-700 SERIES DRAWING FOR ADDITIONAL CIRCUITING INFORMATION.

SHEET NOTES

1. NOT USED.



1 POWER & SIGNAL NEW WORK PLAN - FIRST FLOOR
1/8" = 1'-0"

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646

OWNER: COLLEGE OF SOUTHERN MARYLAND

STATE PROJ. NO: Project Number

SEAL

KEY PLAN

REVISIONS

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ISSUES

DATE	ISSUE
02.14.2022	BID DOCUMENTS

POWER & SIGNAL NEW WORK PLAN - FIRST FLOOR

E-201

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GENERAL NOTES

A. REFER TO SHEET E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. ALL WORK SHOWN ON THIS PLAN IS NEW U.O.N.

C. THE SCOPE OF WORK FOR DEVICES/EQUIPMENT/CONNECTIONS SHOWN HALF-TONE IS ADDRESSED IN THE BASE-BID DESIGN. REFER TO THE E-200 SERIES DRAWINGS FOR ADDITIONAL INFORMATION.

D. REFER TO RISER DIAGRAM AND BRANCH CIRCUIT SCHEDULE FOR FEEDER AND BRANCH CIRCUIT CONDUCTOR SIZES U.O.N.

E. REFER TO RISER DIAGRAM, DRAWING E-600, FOR ADDITIONAL DETAILS.

F. ALL ELECTRICAL EQUIPMENT ON THE ROOF SHALL BE WEATHERPROOF. DISCONNECT SWITCHES FOR HVAC EQUIPMENT SHALL BE HEAVY DUTY FUSED TYPE - FUSED PER MANUFACTURER'S RECOMMENDATION.

G. REUSE AND MODIFY THE EXISTING FIRE ALARM CONTROL AND ANNUNCIATING PANELS OR PROVIDE NEW AS NECESSARY TO ACCOMMODATE THE NEW ANNUNCIATING APPLIANCES THAT WILL BE INSTALLED FOR THE FIRE ALARM WORK REQUIRED UNDER THIS CONTRACT.

H. MAINTAIN THE CONTINUITY OF ALL EXISTING FIRE ALARM SYSTEM DEVICES AND KEEP THEM OPERATIONAL DURING ALL PHASES OF THIS CONTRACT. PROVIDE A MINIMUM OF 24-HOUR WRITTEN NOTICE TO THE BUILDING OWNER'S REPRESENTATIVE PRIOR TO ANY INTERRUPTION OF THE BUILDING FIRE ALARM SYSTEM. COORDINATE THIS WORK WITH WITH THE OWNER'S REPRESENTATIVE.

I. THE NEW FIRE ALARM APPLIANCES AND WIRING SHALL BE COMPLETELY COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM.

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K. IN EXPOSED AREAS, FIRE ALARM WIRING SHALL BE IN EMT. MC FIRE ALARM CABLE MAY BE UTILIZED WHERE CONCEALED IN WALLS OR CEILINGS. RACEWAYS THAT CONTAIN FIRE ALARM WIRING SHALL NOT CONTAIN ANY OTHER WIRING. ONLY CABLES IN CONDUIT AND MC CABLES SHALL BE USED. NO OTHER TYPE OF WIRING (E.G. FPLP CABLES) SHALL BE USED.

L. TEST THE FIRE ALARM SYSTEM AND HAVE ALL FIRE ALARM APPLIANCES OPERATIONAL PRIOR TO INSPECTION BY THE AUTHORITY HAVING JURISDICTION.

M. ALL EMPTY RACEWAY SHALL CONTAIN A PULL WIRE.

N. WORK AREA SHALL BE CLEAN OF DEBRIS AFTER COMPLETION OF WORK.

O. PROVIDE CABLE FIRE STOPPING FOR THE PENETRATED RATED WALLS. CONTRACTOR SHALL MAINTAIN WALL AND SLAB RATINGS WHEN PENETRATION OCCURS.

P. REFER TO BRANCH CIRCUIT SCHEDULE AND PANEL SCHEDULES ON E-700 SERIES DRAWING FOR ADDITIONAL CIRCUITING INFORMATION.

SHEET NOTES (#)

1. CONNECT NEW DUCT SMOKE DETECTORS TO THE EXISTING FIRE ALARM SYSTEM. PROVIDE MONITOR MODULES INSIDE THE FIRE ALARM CONTROL PANEL, POWER SUPPLIES, AND/OR NAC PANELS, AS NEEDED, FOR PROPER OPERATION OF THE SYSTEM.
2. PROVIDE DEDICATED CIRCUIT FOR ROOF TOP UNIT CONTROLS. COORDINATE THE EXACT LOCATION WITH THE EQUIPMENT INSTALLER, PRIOR TO ROUGH-IN.
3. PROVIDE 120V/1P CIRCUIT FOR MOTORIZED DAMPER.



1 POWER & SIGNAL NEW WORK PLAN - SECOND FLOOR
1/8" = 1'-0"

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646

OWNER: COLLEGE OF SOUTHERN MARYLAND

STATE PROJ. NO: Project Number

SEAL

KEY PLAN

REVISIONS

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DATE	ISSUE
02.14.2022	BID DOCUMENTS

POWER & SIGNAL NEW WORK PLAN - SECOND FLOOR

E-202

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GENERAL NOTES

A. REFER TO SHEET E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. ALL WORK SHOWN ON THIS PLAN IS NEW U.O.N.

C. THE SCOPE OF WORK FOR DEVICES/EQUIPMENT/CONNECTIONS SHOWN HALF-TONE IS ADDRESSED IN THE BASE-BID DESIGN. REFER TO THE E-200 SERIES DRAWINGS FOR ADDITIONAL INFORMATION.

D. REFER TO RISER DIAGRAM AND BRANCH CIRCUIT SCHEDULE FOR FEEDER AND BRANCH CIRCUIT CONDUCTOR SIZES U.O.N.

E. REFER TO RISER DIAGRAM, DRAWING E-600, FOR ADDITIONAL DETAILS.

F. ALL ELECTRICAL EQUIPMENT ON THE ROOF SHALL BE WEATHERPROOF. DISCONNECT SWITCHES FOR HVAC EQUIPMENT SHALL BE HEAVY DUTY FUSED TYPE - FUSED PER MANUFACTURER'S RECOMMENDATION.

G. REUSE AND MODIFY THE EXISTING FIRE ALARM CONTROL AND ANNUNCIATING PANELS OR PROVIDE NEW AS NECESSARY TO ACCOMMODATE THE NEW ANNUNCIATING APPLIANCES THAT WILL BE INSTALLED FOR THE FIRE ALARM WORK REQUIRED UNDER THIS CONTRACT.

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I. THE NEW FIRE ALARM APPLIANCES AND WIRING SHALL BE COMPLETELY COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM.

J. THE FIRE ALARM SYSTEM SHALL BE SUPERVISED.

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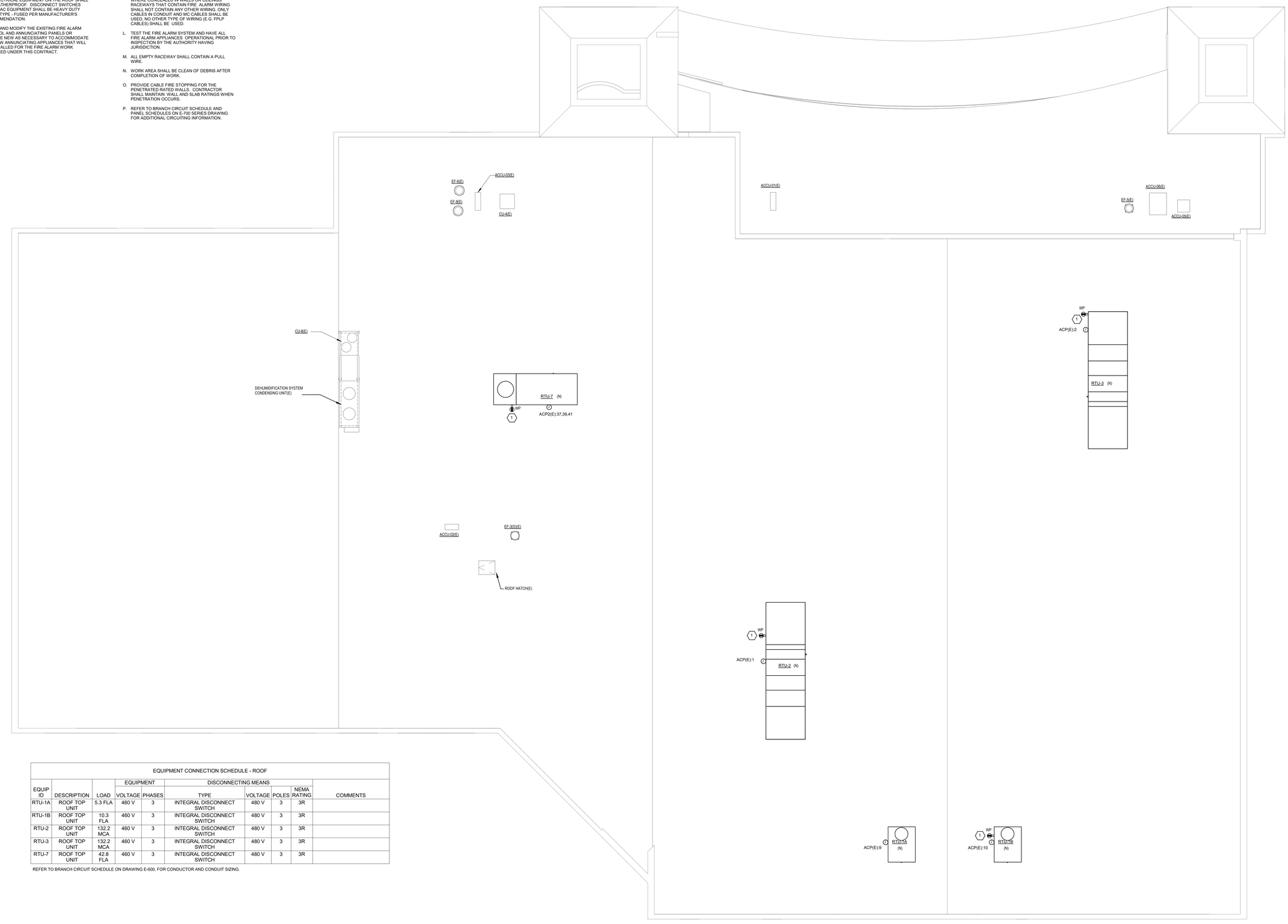
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O. PROVIDE CABLE FIRE STOPPING FOR THE PENETRATED RATED WALLS. CONTRACTOR SHALL MAINTAIN WALL AND SLAB RATINGS WHEN PENETRATION OCCURS.

P. REFER TO BRANCH CIRCUIT SCHEDULE AND PANEL SCHEDULES ON E-700 SERIES DRAWING FOR ADDITIONAL CIRCUITING INFORMATION.

SHEET NOTES

1. CONNECT NEW WP GFI RECEPTACLE TO THE EXISTING CIRCUIT (H-17). USING 2#10 + 1#10G IN 3/4" CONDUIT. FEEDING CONVENIENCE GFI'S ON THE ROOF. ENSURE CIRCUIT LOAD DOES NOT EXCEED NEC LOAD LIMITS. .



EQUIPMENT CONNECTION SCHEDULE - ROOF

EQUIP ID	DESCRIPTION	LOAD	EQUIPMENT VOLTAGE	EQUIPMENT PHASES	DISCONNECTING MEANS TYPE	DISCONNECTING MEANS VOLTAGE	DISCONNECTING MEANS POLES	DISCONNECTING MEANS NEMA RATING	COMMENTS
RTU-1A	ROOF TOP UNIT	5.3 FLA	460 V	3	INTEGRAL DISCONNECT SWITCH	480 V	3	3R	
RTU-1B	ROOF TOP UNIT	10.3 FLA	460 V	3	INTEGRAL DISCONNECT SWITCH	480 V	3	3R	
RTU-2	ROOF TOP UNIT	132.2 MCA	460 V	3	INTEGRAL DISCONNECT SWITCH	480 V	3	3R	
RTU-3	ROOF TOP UNIT	132.2 MCA	460 V	3	INTEGRAL DISCONNECT SWITCH	480 V	3	3R	
RTU-7	ROOF TOP UNIT	42.8 FLA	460 V	3	INTEGRAL DISCONNECT SWITCH	480 V	3	3R	

REFER TO BRANCH CIRCUIT SCHEDULE ON DRAWING E-600, FOR CONDUCTOR AND CONDUIT SIZING.

1 POWER & SIGNAL NEW WORK PLAN - ROOF
1/8" = 1'-0"

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646
OWNER: COLLEGE OF SOUTHERN MARYLAND
STATE PROJ. NO: Project Number

SEAL

KEY PLAN

REVISIONS

MARK	DATE	ISSUE

ISSUES

DATE	ISSUE
02.14.2022	BID DOCUMENTS

POWER & SIGNAL NEW WORK PLAN - ROOF

E-203

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GENERAL NOTES

A. REFER TO SHEETS E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. ALL WORK SHOWN ON THIS PLAN WITH SUBSCRIPT (D) SHALL BE DEMOLISHED U.O.N. DEVICES SHALL BE REMOVED ALONG WITH ALL WIRING AND APPURTENANCES BACK TO THE SOURCE. DO NOT ABANDON CABLING OR SUPPORT DEVICES IN PLACE. REFER TO ELECTRICAL DEMOLITION NOTES ON E-002 FOR FURTHER INFORMATION.

C. DEVICES WITH THE SUBSCRIPT (R) SHALL BE RELOCATED. DEVICES SHALL BE REMOVED WITH ALL THEIR ASSOCIATED COMPONENTS, THOROUGHLY CLEANED AND STORED IN A SAFE PLACE FOR USE IN NEW WORK.

D. RECORD CIRCUITS MADE SPARE DURING DEMOLITION FOR USE IN NEW WORK.

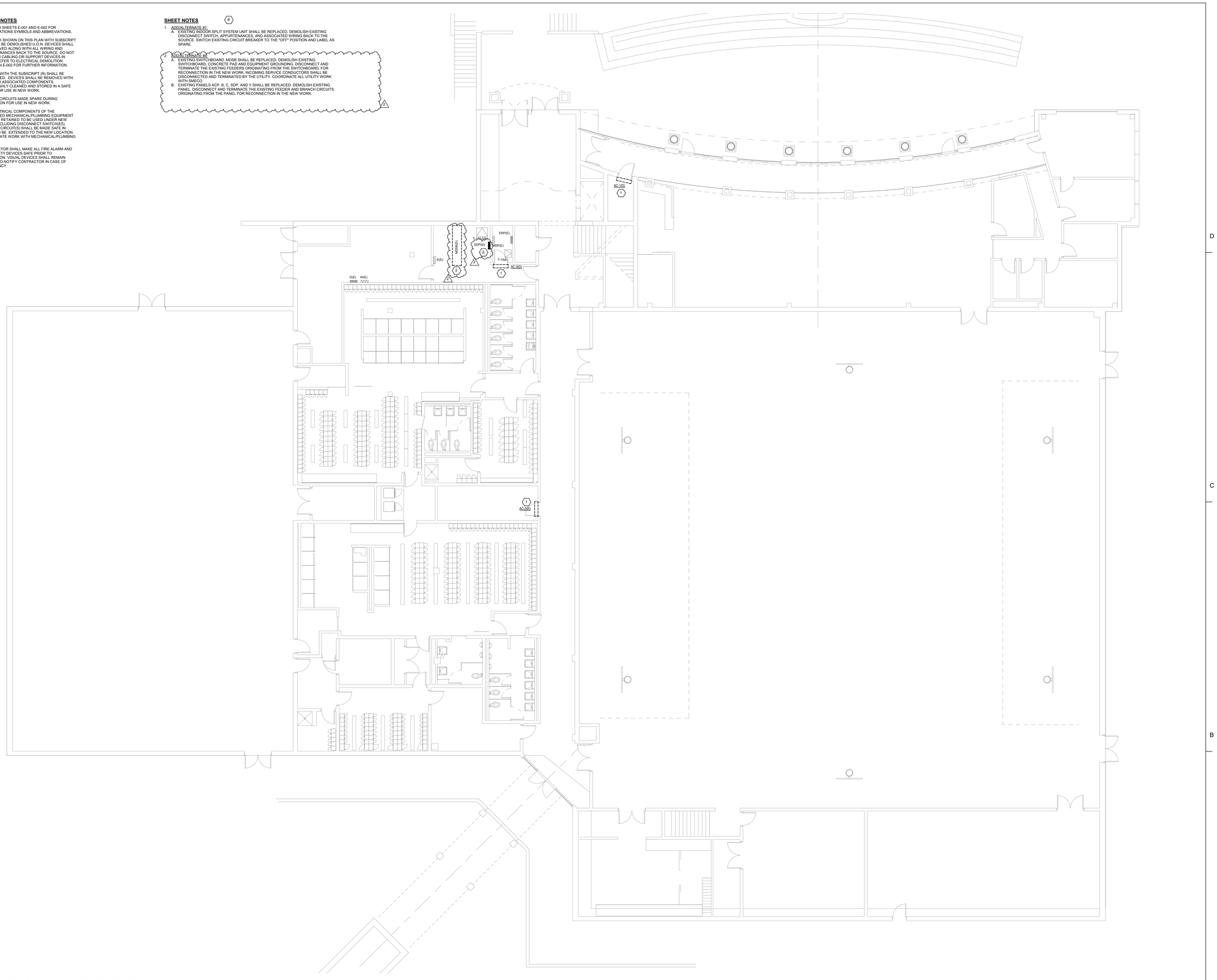
E. ALL ELECTRICAL COMPONENTS OF THE RELOCATED MECHANICAL/PLUMBING EQUIPMENT SHALL BE RETAINED TO BE USED UNDER NEW WORK, INCLUDING DISCONNECT SWITCH(ES). EXISTING CIRCUIT(S) SHALL BE MADE SAFE IN PLACE TO BE EXTENDED TO THE NEW LOCATION. COORDINATE WORK WITH MECHANICAL/PLUMBING PLANS.

F. CONTRACTOR SHALL MAKE ALL FIRE ALARM AND LIFE SAFETY DEVICES SAFE PRIOR TO DEMOLITION. VISUAL DEVICES SHALL REMAIN ACTIVE, TO NOTIFY CONTRACTOR IN CASE OF EMERGENCY.

SHEET NOTES (#)

1. ADD/ALTERNATE #1:
   A. EXISTING INDOOR SPLIT SYSTEM UNIT SHALL BE REPLACED. DEMOLISH EXISTING DISCONNECT SWITCH, APPURTENANCES, AND ASSOCIATED WIRING BACK TO THE SOURCE. SWITCH EXISTING CIRCUIT BREAKER TO THE "OFF" POSITION AND LABEL AS SPARE.

2. ADD/ALTERNATE #2:
   A. EXISTING SWITCHBOARD, MDSB SHALL BE REPLACED. DEMOLISH EXISTING SWITCHBOARD, CONCRETE PAD AND EQUIPMENT GROUNDING. DISCONNECT AND TERMINATE THE EXISTING FEEDERS ORIGINATING FROM THE SWITCHBOARD, FOR RECONNECTION IN THE NEW WORK. INCOMING SERVICE CONDUCTORS SHALL BE DISCONNECTED AND TERMINATED BY THE UTILITY. COORDINATE ALL UTILITY WORK WITH SMECO.
   B. EXISTING PANELS ACP, B, C, SDP, AND Y SHALL BE REPLACED. DEMOLISH EXISTING PANEL. DISCONNECT AND TERMINATE THE EXISTING FEEDER AND BRANCH CIRCUITS ORIGINATING FROM THE PANEL FOR RECONNECTION IN THE NEW WORK.



1 POWER & SIGNAL DEMOLITION PLAN - FIRST FLOOR - ADD-ALTERNATE
1/8" = 1'-0"

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646

OWNER: COLLEGE OF SOUTHERN MARYLAND

STATE PROJ. NO: Project Number

SEAL

KEY PLAN

REVISIONS

MARK	DATE	ISSUE
2	6/24/2022	IFC Electrical Changes

ISSUES

DATE	ISSUE
02.14.2022	BID DOCUMENTS

POWER & SIGNAL DEMOLITION PLAN - FIRST FLOOR - ADD-ALT

E-301

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GENERAL NOTES

A. REFER TO SHEETS E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. ALL WORK SHOWN ON THIS PLAN WITH SUBSCRIPT (D) SHALL BE DEMOLISHED U.O.N. DEVICES SHALL BE REMOVED ALONG WITH ALL WIRING AND APPURTENANCES BACK TO THE SOURCE. DO NOT ABANDON CABLING OR SUPPORT DEVICES IN PLACE. REFER TO ELECTRICAL DEMOLITION NOTES ON E-002 FOR FURTHER INFORMATION.

C. DEVICES WITH THE SUBSCRIPT (R) SHALL BE RELOCATED. DEVICES SHALL BE REMOVED WITH ALL THEIR ASSOCIATED COMPONENTS, THOROUGHLY CLEANED AND STORED IN A SAFE PLACE FOR USE IN NEW WORK.

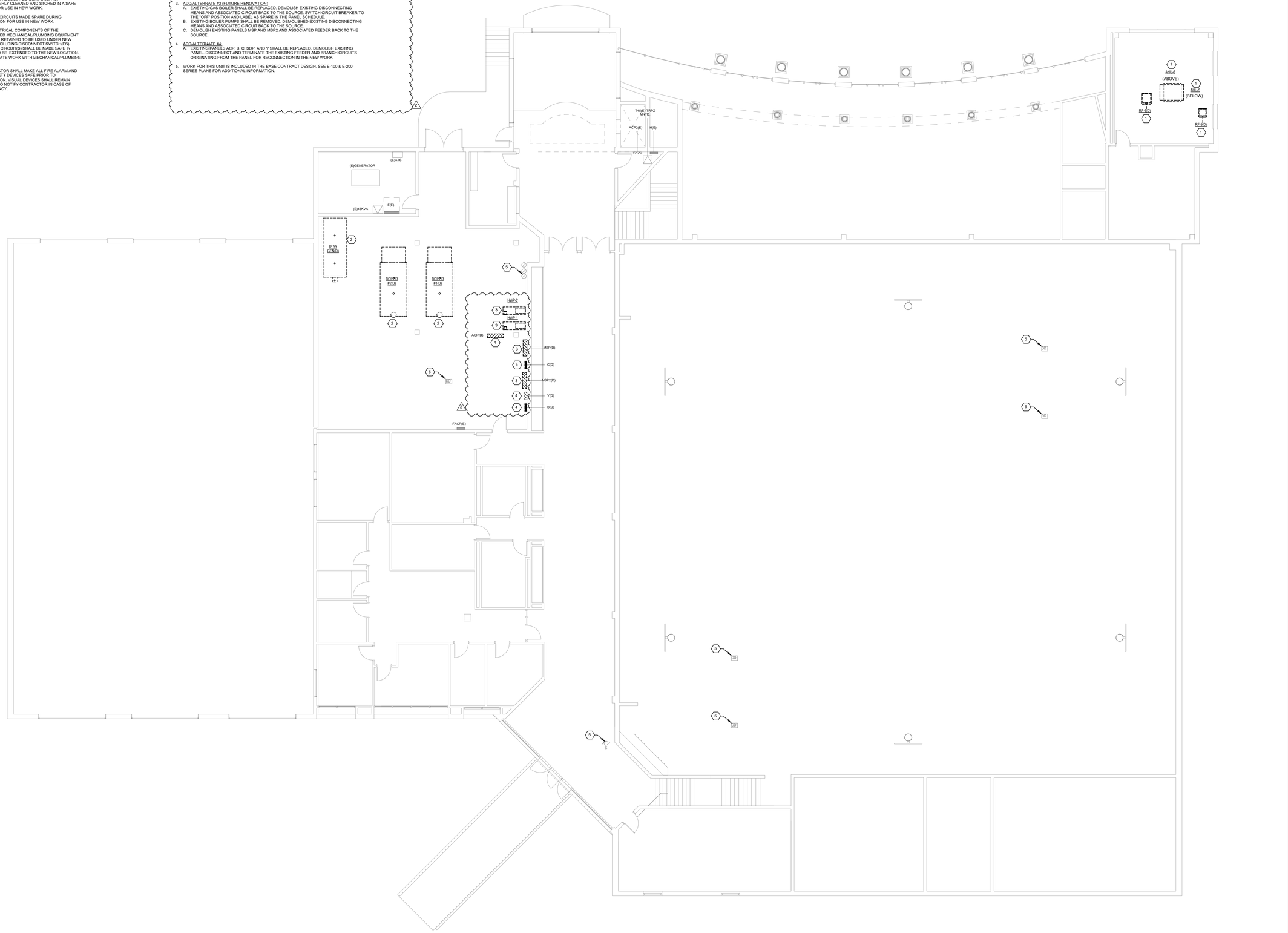
D. RECORD CIRCUITS MADE SPARE DURING DEMOLITION FOR USE IN NEW WORK.

E. ALL ELECTRICAL COMPONENTS OF THE RELOCATED MECHANICAL/PLUMBING EQUIPMENT SHALL BE RETAINED TO BE USED UNDER NEW WORK, INCLUDING DISCONNECT SWITCH(ES). EXISTING CIRCUIT(S) SHALL BE MADE SAFE IN PLACE TO BE EXTENDED TO THE NEW LOCATION. COORDINATE WORK WITH MECHANICAL/PLUMBING PLANS.

F. CONTRACTOR SHALL MAKE ALL FIRE ALARM AND LIFE SAFETY DEVICES SAFE PRIOR TO DEMOLITION. VISUAL DEVICES SHALL REMAIN ACTIVE, TO NOTIFY CONTRACTOR IN CASE OF EMERGENCY.

SHEET NOTES (#)

1. ADD/ALTERNATE #1
   A. EXISTING AIR HANDLING UNIT SHALL BE REPLACED. DEMOLISH EXISTING DISCONNECTING MEANS AND ASSOCIATED WIRING BACK TO THE SOURCE. SWITCH EXISTING CIRCUIT BREAKER TO THE "OFF" POSITION AND LABEL AS SPARE IN THE PANEL SCHEDULE.
   B. EXISTING DUCT FAN SHALL BE REPLACED IN KIND. DISCONNECT AND TERMINATE EXISTING CIRCUIT FOR RECONNECTION IN THE NEW WORK.
2. ADD/ALTERNATE #2 (FUTURE RENOVATION)
   A. EXISTING GAS HOT WATER HEATER SHALL BE REPLACED. DEMOLISH EXISTING DISCONNECTING MEANS AND ASSOCIATED CIRCUIT BACK TO THE SOURCE. SWITCH CIRCUIT BREAKER TO THE "OFF" POSITION AND LABEL AS SPARE IN THE PANEL SCHEDULE.
3. ADD/ALTERNATE #3 (FUTURE RENOVATION)
   A. EXISTING GAS BOILER SHALL BE REPLACED. DEMOLISH EXISTING DISCONNECTING MEANS AND ASSOCIATED CIRCUIT BACK TO THE SOURCE. SWITCH CIRCUIT BREAKER TO THE "OFF" POSITION AND LABEL AS SPARE IN THE PANEL SCHEDULE.
   B. EXISTING BOILER PUMPS SHALL BE REMOVED. DEMOLISHED EXISTING DISCONNECTING MEANS AND ASSOCIATED CIRCUIT BACK TO THE SOURCE.
   C. DEMOLISH EXISTING PANELS MSP AND MSP2 AND ASSOCIATED FEEDER BACK TO THE SOURCE.
4. ADD/ALTERNATE #4:
   A. EXISTING PANELS ACP, B, C, SDP, AND Y SHALL BE REPLACED. DEMOLISH EXISTING PANEL, DISCONNECT AND TERMINATE THE EXISTING FEEDER AND BRANCH CIRCUITS ORIGINATING FROM THE PANEL FOR RECONNECTION IN THE NEW WORK.
5. WORK FOR THIS UNIT IS INCLUDED IN THE BASE CONTRACT DESIGN. SEE E-100 & E-200 SERIES PLANS FOR ADDITIONAL INFORMATION.



1 POWER & SIGNAL DEMOLITION PLAN - SECOND FLOOR - ADD-ALTERNATE
1/8" = 1'-0"

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646

OWNER: COLLEGE OF SOUTHERN MARYLAND

STATE PROJ. NO: Project Number

SEAL

KEY PLAN

REVISIONS

MARK	DATE	ISSUE
2	6/24/2022	IFC Electrical Changes

ISSUES

DATE	ISSUE
02.14.2022	BID DOCUMENTS

POWER & SIGNAL DEMOLITION PLAN - SECOND FLOOR - ADD-ALT

E-302

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GENERAL NOTES

A. REFER TO SHEETS E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. ALL WORK SHOWN ON THIS PLAN WITH SUBSCRIPT (D) SHALL BE DEMOLISHED U.O.N. DEVICES SHALL BE REMOVED ALONG WITH ALL WIRING AND APPURTENANCES BACK TO THE SOURCE. DO NOT ABANDON CABLING OR SUPPORT DEVICES IN PLACE. REFER TO ELECTRICAL DEMOLITION NOTES ON E-002 FOR FURTHER INFORMATION.

C. DEVICES WITH THE SUBSCRIPT (R) SHALL BE RELOCATED. DEVICES SHALL BE REMOVED WITH ALL THEIR ASSOCIATED COMPONENTS, THOROUGHLY CLEANED AND STORED IN A SAFE PLACE FOR USE IN NEW WORK.

D. RECORD CIRCUITS MADE SPARE DURING DEMOLITION FOR USE IN NEW WORK.

E. ALL ELECTRICAL COMPONENTS OF THE RELOCATED MECHANICAL/PLUMBING EQUIPMENT SHALL BE RETAINED TO BE USED UNDER NEW WORK, INCLUDING DISCONNECT SWITCH(ES). EXISTING CIRCUIT(S) SHALL BE MADE SAFE IN PLACE TO BE EXTENDED TO THE NEW LOCATION. COORDINATE WORK WITH MECHANICAL/PLUMBING PLANS.

F. CONTRACTOR SHALL MAKE ALL FIRE ALARM AND LIFE SAFETY DEVICES SAFE PRIOR TO DEMOLITION. VISUAL DEVICES SHALL REMAIN ACTIVE. TO NOTIFY CONTRACTOR IN CASE OF EMERGENCY.

SHEET NOTES (#)

1. ADD/ALTERNATE #1:
   A. EXISTING CONDENSING UNIT SHALL BE REMOVED. DEMOLISH EXISTING DISCONNECT SWITCH, APPURTENANCES, AND ASSOCIATED CIRCUIT BACK TO THE SOURCE. SWITCH EXISTING CIRCUIT BREAKER TO THE "OFF" POSITION AND LABEL AS SPARE.
   B. EXISTING EXHAUST FAN SHALL BE REPLACED IN KIND. DEMOLISH EXISTING DISCONNECTING MEANS. DISCONNECT AND TERMINATE EXISTING CIRCUIT FOR RECONNECTION IN THE NEW WORK.

2. WORK ASSOCIATED WITH THIS EQUIPMENT IS INCLUDED IN THE BASE CONTRACT DESIGN. REFER TO E-100 AND E-200 SERIES DRAWING FOR ADDITIONAL INFORMATION.



1 POWER & SIGNAL DEMOLITION WORK PLAN - ROOF - ADD-ALTERNATE
1/8" = 1'-0"

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646
OWNER: COLLEGE OF SOUTHERN MARYLAND
STATE PROJ. NO: Project Number

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02.14.2022	BID DOCUMENTS

POWER & SIGNAL DEMOLITION PLAN - ROOF - ADD-ALT

E-303

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GENERAL NOTES

A. REFER TO SHEET E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. ALL WORK SHOWN ON THIS PLAN IS NEW U.O.N.

C. THE SCOPE OF WORK FOR DEVICES/EQUIPMENT/CONNECTIONS SHOWN HALF-TONE IS ADDRESSED IN THE BASE-BID DESIGN. REFER TO THE E-200 SERIES DRAWINGS FOR ADDITIONAL INFORMATION.

D. REFER TO RISER DIAGRAM AND BRANCH CIRCUIT SCHEDULE FOR FEEDER AND BRANCH CIRCUIT CONDUCTOR SIZES U.O.N.

E. REFER TO ADD/ALTERNATE RISER DIAGRAM, DRAWING E-601, FOR ADDITIONAL DETAILS.

F. ALL ELECTRICAL EQUIPMENT ON THE ROOF SHALL BE WEATHERPROOF. DISCONNECT SWITCHES FOR HVAC EQUIPMENT SHALL BE HEAVY DUTY FUSED TYPE - FUSED PER MANUFACTURER'S RECOMMENDATION.

G. REUSE AND MODIFY THE EXISTING FIRE ALARM CONTROL AND ANNUNCIATING PANELS OR PROVIDE NEW AS NECESSARY TO ACCOMMODATE THE NEW ANNUNCIATING APPLIANCES THAT WILL BE INSTALLED FOR THE FIRE ALARM WORK REQUIRED UNDER THIS CONTRACT.

H. MAINTAIN THE CONTINUITY OF ALL EXISTING FIRE ALARM SYSTEM DEVICES AND KEEP THEM OPERATIONAL DURING ALL PHASES OF THIS CONTRACT. PROVIDE A MINIMUM OF 24-HOUR WRITTEN NOTICE TO THE BUILDING OWNER'S REPRESENTATIVE PRIOR TO ANY INTERRUPTION OF THE BUILDING FIRE ALARM SYSTEM. COORDINATE THIS WORK WITH WITH THE OWNER'S REPRESENTATIVE.

I. THE NEW FIRE ALARM APPLIANCES AND WIRING SHALL BE COMPLETELY COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM.

J. THE FIRE ALARM SYSTEM SHALL BE SUPERVISED.

K. IN EXPOSED AREAS, FIRE ALARM WIRING SHALL BE IN EMT. MC FIRE ALARM CABLE MAY BE UTILIZED WHERE CONCEALED IN WALLS OR CEILINGS. RACEWAYS THAT CONTAIN FIRE ALARM WIRING SHALL NOT CONTAIN ANY OTHER WIRING. ONLY CABLES IN CONDUIT AND MC CABLES SHALL BE USED. NO OTHER TYPE OF WIRING (E.G. FPLP CABLES) SHALL BE USED.

L. TEST THE FIRE ALARM SYSTEM AND HAVE ALL FIRE ALARM APPLIANCES OPERATIONAL PRIOR TO INSPECTION BY THE AUTHORITY HAVING JURISDICTION.

M. ALL EMPTY RACEWAY SHALL CONTAIN A PULL WIRE.

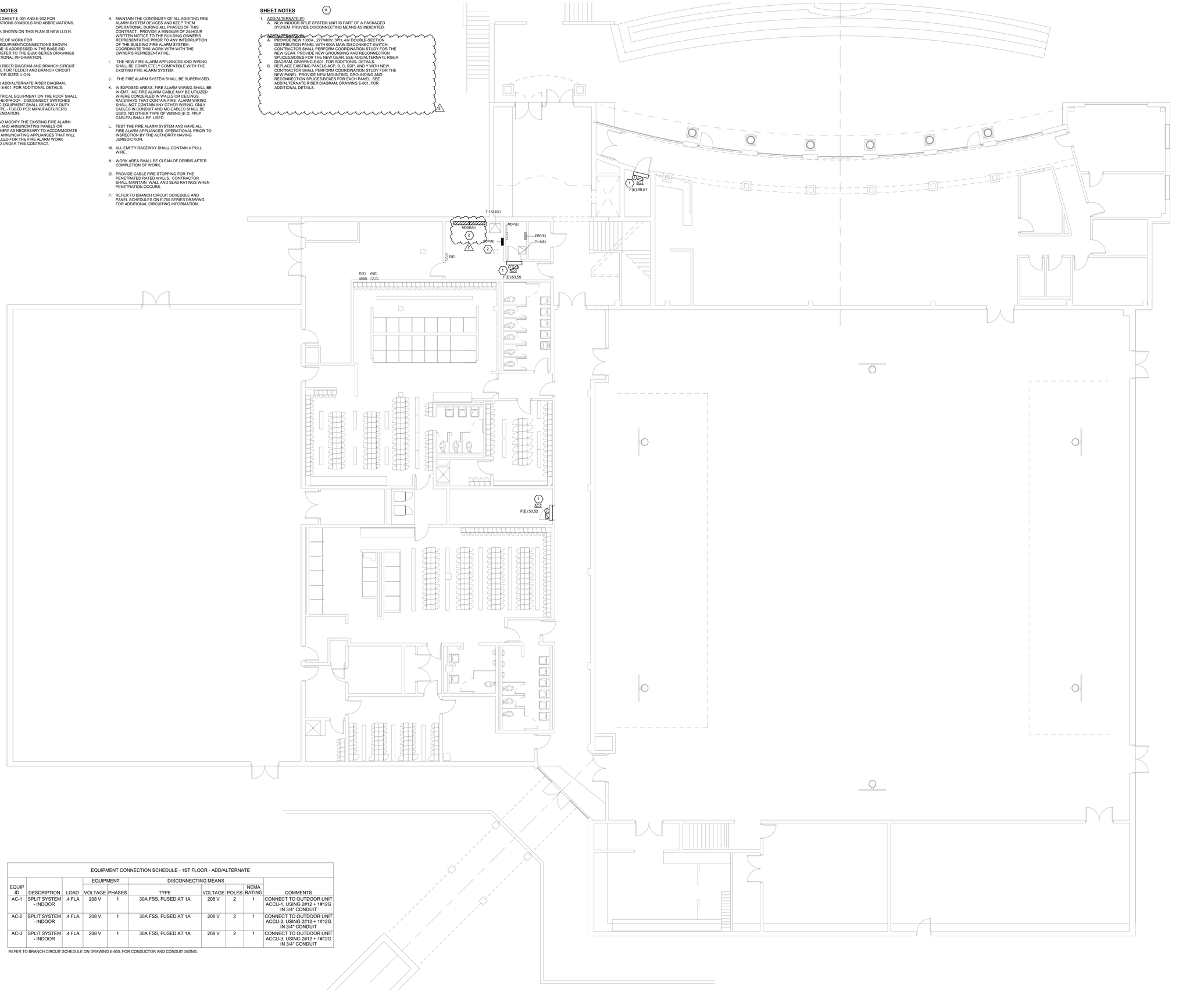
N. WORK AREA SHALL BE CLEAN OF DEBRIS AFTER COMPLETION OF WORK.

O. PROVIDE CABLE FIRE STOPPING FOR THE PENETRATED RATED WALLS. CONTRACTOR SHALL MAINTAIN WALL AND SLAB RATINGS WHEN PENETRATION OCCURS.

P. REFER TO BRANCH CIRCUIT SCHEDULE AND PANEL SCHEDULES ON E-700 SERIES DRAWING FOR ADDITIONAL CIRCUITING INFORMATION.

SHEET NOTES (#)

1. ADD/ALTERNATE #1:
   A. NEW INDOOR SPLIT SYSTEM UNIT IS PART OF A PACKAGED SYSTEM. PROVIDE DISCONNECTING MEANS AS INDICATED.
2. ADD/ALTERNATE #2:
   A. PROVIDE NEW 1000A , 277/480V, 3PH, 4W DOUBLE-SECTION DISTRIBUTION PANEL WITH 900A MAIN DISCONNECT SWITCH. CONTRACTOR SHALL PERFORM COORDINATION STUDY FOR THE NEW GEAR. PROVIDE NEW GROUNDING AND RECONNECTION SPLICES/BOXES FOR THE NEW GEAR. SEE ADD/ALTERNATE RISER DIAGRAM, DRAWING E-601, FOR ADDITIONAL DETAILS.
   B. REPLACE EXISTING PANELS ACP, B, C, SDP, AND Y WITH NEW. CONTRACTOR SHALL PERFORM COORDINATION STUDY FOR THE NEW PANEL. PROVIDE NEW MOUNTING, GROUNDING AND RECONNECTION SPLICES/BOXES FOR EACH PANEL. SEE ADD/ALTERNATE RISER DIAGRAM, DRAWING E-601, FOR ADDITIONAL DETAILS.



EQUIPMENT CONNECTION SCHEDULE - 1ST FLOOR - ADD/ALTERNATE

EQUIP ID	DESCRIPTION	LOAD	EQUIPMENT VOLTAGE	EQUIPMENT PHASES	DISCONNECTING MEANS TYPE	DISCONNECTING MEANS VOLTAGE	DISCONNECTING MEANS POLES	DISCONNECTING MEANS NEMA RATING	COMMENTS
AC-1	SPLIT SYSTEM - INDOOR	.4 FLA	208 V	1	30A FSS, FUSED AT 1A	208 V	2	1	CONNECT TO OUTDOOR UNIT ACCU-1, USING 2#12 + 1#12G IN 3/4" CONDUIT
AC-2	SPLIT SYSTEM - INDOOR	.4 FLA	208 V	1	30A FSS, FUSED AT 1A	208 V	2	1	CONNECT TO OUTDOOR UNIT ACCU-2, USING 2#12 + 1#12G IN 3/4" CONDUIT
AC-3	SPLIT SYSTEM - INDOOR	.4 FLA	208 V	1	30A FSS, FUSED AT 1A	208 V	2	1	CONNECT TO OUTDOOR UNIT ACCU-3, USING 2#12 + 1#12G IN 3/4" CONDUIT

REFER TO BRANCH CIRCUIT SCHEDULE ON DRAWING E-600, FOR CONDUCTOR AND CONDUIT SIZING.

1 POWER & SIGNAL NEW WORK PLAN - FIRST FLOOR - ADD-ALTERNATE
1/8" = 1'-0"

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646

OWNER: COLLEGE OF SOUTHERN MARYLAND

STATE PROJ. NO: Project Number

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KEY PLAN

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POWER & SIGNAL NEW WORK PLAN - FIRST FLOOR - ADD-ALT

E-401

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GENERAL NOTES

A. REFER TO SHEET E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. ALL WORK SHOWN ON THIS PLAN IS NEW U.O.N.

C. THE SCOPE OF WORK FOR DEVICES/EQUIPMENT/CONNECTIONS SHOWN HALF-TONE IS ADDRESSED IN THE BASE-BID DESIGN. REFER TO THE E-200 SERIES DRAWINGS FOR ADDITIONAL INFORMATION.

D. REFER TO RISER DIAGRAM AND BRANCH CIRCUIT SCHEDULE FOR FEEDER AND BRANCH CIRCUIT CONDUCTOR SIZES U.O.N.

E. REFER TO ADD/ALTERNATE RISER DIAGRAM, DRAWING E-601, FOR ADDITIONAL DETAILS.

F. ALL ELECTRICAL EQUIPMENT ON THE ROOF SHALL BE WEATHERPROOF. DISCONNECT SWITCHES FOR HVAC EQUIPMENT SHALL BE HEAVY DUTY FUSED TYPE - FUSED PER MANUFACTURER'S RECOMMENDATION.

G. REUSE AND MODIFY THE EXISTING FIRE ALARM CONTROL AND ANNUNCIATING PANELS OR PROVIDE NEW AS NECESSARY TO ACCOMMODATE THE NEW ANNUNCIATING APPLIANCES THAT WILL BE INSTALLED FOR THE FIRE ALARM WORK REQUIRED UNDER THIS CONTRACT.

H. MAINTAIN THE CONTINUITY OF ALL EXISTING FIRE ALARM SYSTEM DEVICES AND KEEP THEM OPERATIONAL DURING ALL PHASES OF THIS CONTRACT. PROVIDE A MINIMUM OF 24-HOUR WRITTEN NOTICE TO THE BUILDING OWNER'S REPRESENTATIVE PRIOR TO ANY INTERRUPTION OF THE BUILDING FIRE ALARM SYSTEM. COORDINATE THIS WORK WITH WITH THE OWNER'S REPRESENTATIVE.

I. THE NEW FIRE ALARM APPLIANCES AND WIRING SHALL BE COMPLETELY COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM.

J. THE FIRE ALARM SYSTEM SHALL BE SUPERVISED.

K. IN EXPOSED AREAS, FIRE ALARM WIRING SHALL BE IN EMT. MC FIRE ALARM CABLE MAY BE UTILIZED WHERE CONCEALED IN WALLS OR CEILINGS. RACEWAYS THAT CONTAIN FIRE ALARM WIRING SHALL NOT CONTAIN ANY OTHER WIRING. ONLY CABLES IN CONDUIT AND MC CABLES SHALL BE USED. NO OTHER TYPE OF WIRING (E.G. FPLP CABLES) SHALL BE USED.

L. TEST THE FIRE ALARM SYSTEM AND HAVE ALL FIRE ALARM APPLIANCES OPERATIONAL PRIOR TO INSPECTION BY THE AUTHORITY HAVING JURISDICTION.

M. ALL EMPTY RACEWAY SHALL CONTAIN A PULL WIRE.

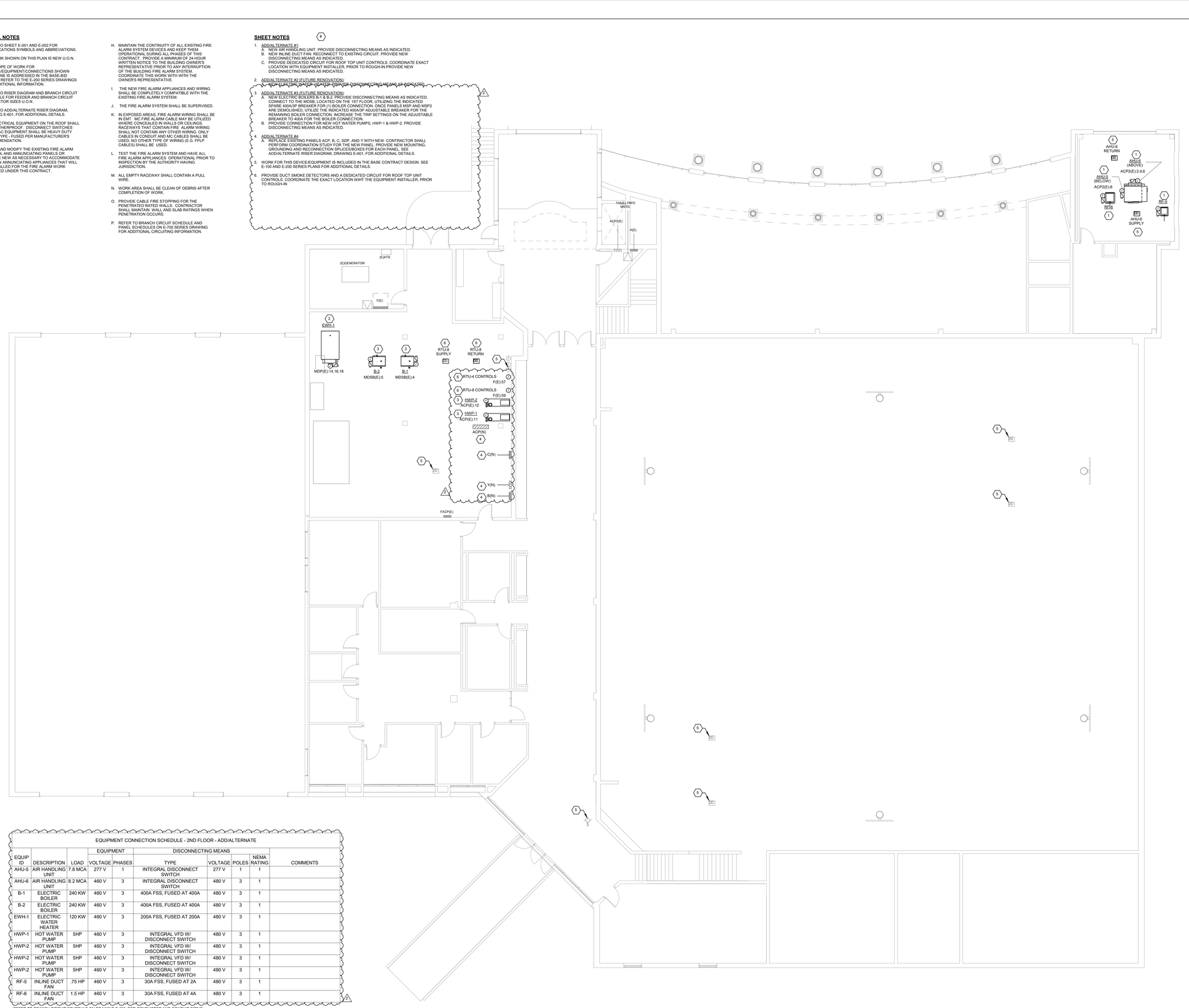
N. WORK AREA SHALL BE CLEAN OF DEBRIS AFTER COMPLETION OF WORK.

O. PROVIDE CABLE FIRE STOPPING FOR THE PENETRATED RATED WALLS. CONTRACTOR SHALL MAINTAIN WALL AND SLAB RATINGS WHEN PENETRATION OCCURS.

P. REFER TO BRANCH CIRCUIT SCHEDULE AND PANEL SCHEDULES ON E-700 SERIES DRAWING FOR ADDITIONAL CIRCUITING INFORMATION.

SHEET NOTES (#)

1. ADD/ALTERNATE #1:
   A. NEW AIR HANDLING UNIT. PROVIDE DISCONNECTING MEANS AS INDICATED.
   B. NEW INLINE DUCT FAN. RECONNECT TO EXISTING CIRCUIT. PROVIDE NEW DISCONNECTING MEANS AS INDICATED.
   C. PROVIDE DEDICATED CIRCUIT FOR ROOF TOP UNIT CONTROLS. COORDINATE EXACT LOCATION WITH EQUIPMENT INSTALLER, PRIOR TO ROUGH-IN.PROVIDE NEW DISCONNECTING MEANS AS INDICATED.
2. ADD/ALTERNATE #2 (FUTURE RENOVATION):
   A. NEW ELECTRIC WATER HEATER (SIM.)(E-DISCONNECTING MEANS AS INDICATED.
3. ADD/ALTERNATE #3 (FUTURE RENOVATION):
   A. NEW ELECTRIC BOILERS B-1 & B-2. PROVIDE DISCONNECTING MEANS AS INDICATED. CONNECT TO THE MDSB, LOCATED ON THE 1ST FLOOR, UTILIZING THE INDICATED SPARE 400A/3P BREAKER FOR (1) BOILER CONNECTION. ONCE PANELS MSP AND MSP2 ARE DEMOLISHED, UTILIZE THE INDICATED 400A/3P ADJUSTABLE BREAKER FOR THE REMAINING BOILER CONNECTION. INCREASE THE TRIP SETTINGS ON THE ADJUSTABLE BREAKER TO 400A FOR THE BOILER CONNECTION.
   B. PROVIDE CONNECTION FOR NEW HOT WATER PUMPS, HWP-1 & HWP-2. PROVIDE DISCONNECTING MEANS AS INDICATED.
4. ADD/ALTERNATE #4:
   A. REPLACE EXISTING PANELS ACP, B, C, SDP, AND Y WITH NEW. CONTRACTOR SHALL PERFORM COORDINATION STUDY FOR THE NEW PANEL. PROVIDE NEW MOUNTING, GROUNDING AND RECONNECTION SPLICES/BOXES FOR EACH PANEL. SEE ADD/ALTERNATE RISER DIAGRAM, DRAWING E-601, FOR ADDITIONAL DETAILS.
5. WORK FOR THIS DEVICE/EQUIPMENT IS INCLUDED IN THE BASE CONTRACT DESIGN. SEE E-100 AND E-200 SERIES PLANS FOR ADDITIONAL DETAILS.
6. PROVIDE DUCT SMOKE DETECTORS AND A DEDICATED CIRCUIT FOR ROOF TOP UNIT CONTROLS. COORDINATE THE EXACT LOCATION WIHT THE EQUIPMENT INSTALLER, PRIOR TO ROUGH-IN



EQUIPMENT CONNECTION SCHEDULE - 2ND FLOOR - ADD/ALTERNATE

EQUIP ID	DESCRIPTION	LOAD	EQUIPMENT VOLTAGE	EQUIPMENT PHASES	DISCONNECTING MEANS TYPE	DISCONNECTING MEANS VOLTAGE	DISCONNECTING MEANS POLES	DISCONNECTING MEANS NEMA RATING	COMMENTS
AHU-5	AIR HANDLING UNIT	7.8 MCA	277 V	1	INTEGRAL DISCONNECT SWITCH	277 V	1	1	
AHU-6	AIR HANDLING UNIT	8.2 MCA	460 V	3	INTEGRAL DISCONNECT SWITCH	480 V	3	1	
B-1	ELECTRIC BOILER	240 KW	460 V	3	400A FSS, FUSED AT 400A	480 V	3	1	
B-2	ELECTRIC BOILER	240 KW	460 V	3	400A FSS, FUSED AT 400A	480 V	3	1	
EWH-1	ELECTRIC WATER HEATER	120 KW	460 V	3	200A FSS, FUSED AT 200A	480 V	3	1	
HWP-1	HOT WATER PUMP	5HP	460 V	3	INTEGRAL VFD W/ DISCONNECT SWITCH	480 V	3	1	
HWP-2	HOT WATER PUMP	5HP	460 V	3	INTEGRAL VFD W/ DISCONNECT SWITCH	480 V	3	1	
HWP-2	HOT WATER PUMP	5HP	460 V	3	INTEGRAL VFD W/ DISCONNECT SWITCH	480 V	3	1	
HWP-2	HOT WATER PUMP	5HP	460 V	3	INTEGRAL VFD W/ DISCONNECT SWITCH	480 V	3	1	
RF-5	INLINE DUCT FAN	.75 HP	460 V	3	30A FSS, FUSED AT 2A	480 V	3	1	
RF-6	INLINE DUCT FAN	1.5 HP	460 V	3	30A FSS, FUSED AT 4A	480 V	3	1	

REFER TO BRANCH CIRCUIT SCHEDULE ON DRAWING E-600, FOR CONDUCTOR AND CONDUIT SIZING.

1 POWER & SIGNAL NEW WORK PLAN - SECOND FLOOR - ADD-ALTERNATE
1/8" = 1'-0"

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646

OWNER: COLLEGE OF SOUTHERN MARYLAND

STATE PROJ. NO: Project Number

SEAL

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POWER & SIGNAL NEW WORK PLAN - SECOND FLOOR - ADD-ALT

E-402

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GENERAL NOTES

A. REFER TO SHEET E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. ALL WORK SHOWN ON THIS PLAN IS NEW U.O.N.

C. THE SCOPE OF WORK FOR DEVICES/EQUIPMENT/CONNECTIONS SHOWN HALF-TONE IS ADDRESSED IN THE BASE-BID DESIGN. REFER TO THE E-200 SERIES DRAWINGS FOR ADDITIONAL INFORMATION.

D. REFER TO RISER DIAGRAM AND BRANCH CIRCUIT SCHEDULE FOR FEEDER AND BRANCH CIRCUIT CONDUCTOR SIZES U.O.N.

E. REFER TO ADD/ALTERNATE RISER DIAGRAM, DRAWING E-601, FOR ADDITIONAL DETAILS.

F. ALL ELECTRICAL EQUIPMENT ON THE ROOF SHALL BE WEATHERPROOF. DISCONNECT SWITCHES FOR HVAC EQUIPMENT SHALL BE HEAVY DUTY FUSED TYPE - FUSED PER MANUFACTURER'S RECOMMENDATION.

G. REUSE AND MODIFY THE EXISTING FIRE ALARM CONTROL AND ANNUNCIATING PANELS OR PROVIDE NEW AS NECESSARY TO ACCOMMODATE THE NEW ANNUNCIATING APPLIANCES THAT WILL BE INSTALLED FOR THE FIRE ALARM WORK REQUIRED UNDER THIS CONTRACT.

H. MAINTAIN THE CONTINUITY OF ALL EXISTING FIRE ALARM SYSTEM DEVICES AND KEEP THEM OPERATIONAL DURING ALL PHASES OF THIS CONTRACT. PROVIDE A MINIMUM OF 24-HOUR WRITTEN NOTICE TO THE BUILDING OWNER'S REPRESENTATIVE PRIOR TO ANY INTERRUPTION OF THE BUILDING FIRE ALARM SYSTEM. COORDINATE THIS WORK WITH WITH THE OWNER'S REPRESENTATIVE.

I. THE NEW FIRE ALARM APPLIANCES AND WIRING SHALL BE COMPLETELY COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM.

J. THE FIRE ALARM SYSTEM SHALL BE SUPERVISED.

K. IN EXPOSED AREAS, FIRE ALARM WIRING SHALL BE IN EMT. MC FIRE ALARM CABLE MAY BE UTILIZED WHERE CONCEALED IN WALLS OR CEILINGS. RACEWAYS THAT CONTAIN FIRE ALARM WIRING SHALL NOT CONTAIN ANY OTHER WIRING, ONLY CABLES IN CONDUIT AND MC CABLES SHALL BE USED. NO OTHER TYPE OF WIRING (E.G. FPLP CABLES) SHALL BE USED.

L. TEST THE FIRE ALARM SYSTEM AND HAVE ALL FIRE ALARM APPLIANCES OPERATIONAL PRIOR TO INSPECTION BY THE AUTHORITY HAVING JURISDICTION.

M. ALL EMPTY RACEWAY SHALL CONTAIN A PULL WIRE.

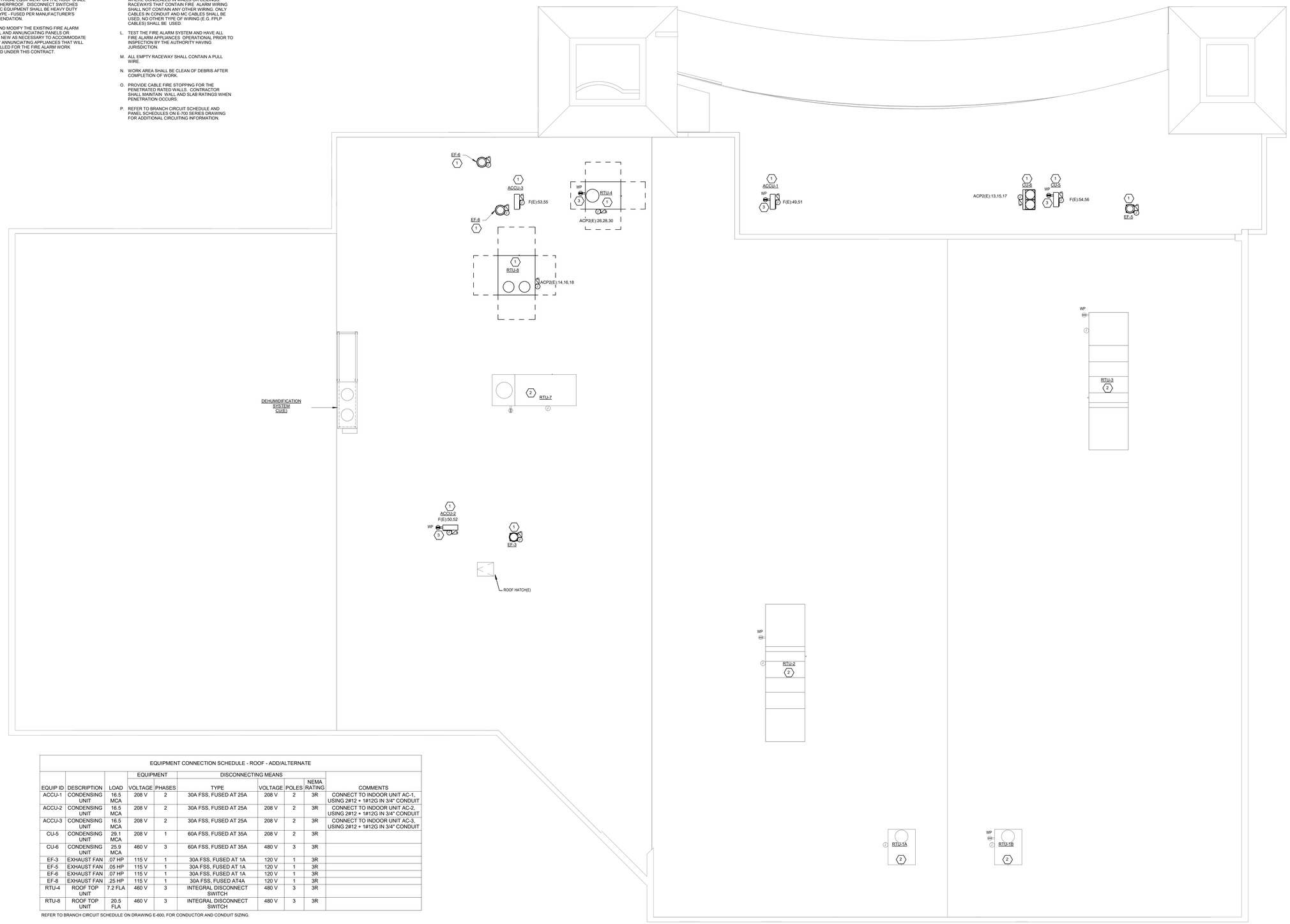
N. WORK AREA SHALL BE CLEAN OF DEBRIS AFTER COMPLETION OF WORK.

O. PROVIDE CABLE FIRE STOPPING FOR THE PENETRATED RATED WALLS. CONTRACTOR SHALL MAINTAIN WALL AND SLAB RATINGS WHEN PENETRATION OCCURS.

P. REFER TO BRANCH CIRCUIT SCHEDULE AND PANEL SCHEDULES ON E-700 SERIES DRAWING FOR ADDITIONAL CIRCUITING INFORMATION.

SHEET NOTES

1. ADD/ALTERNATE #1:
   A. NEW ROOF TOP UNIT. PROVIDE DISCONNECTING MEANS AS INDICATED.
   B. NEW EXHAUST FAN. RECONNECT TO EXISTING CIRCUIT AND REUSE EXISTING DISCONNECTING MEANS.
   C. NEW CONDENSING UNIT. PROVIDE DISCONNECTING MEANS AS SCHEDULE.
2. WORK FOR THIS UNIT IS INCLUDED IN THE BASE CONTRACT DESIGN. SEE E-100 AND E-200 SERIES FOR FOR ADDITIONAL DETAILS.
3. CONNECT NEW WP GFI RECEPTACLE TO AN EXISTING 20A/1P CIRCUIT BREAKER IN PANEL H, USING 2#10 + 1#10G IN 3/4" CONDUIT, FOR GFI'S ON THE ROOF. ENSURE CIRCUIT LOAD DOES NOT EXCEED NEC LOAD LIMITS.



EQUIPMENT CONNECTION SCHEDULE - ROOF - ADD/ALTERNATE									
			EQUIPMENT		DISCONNECTING MEANS				
EQUIP ID	DESCRIPTION	LOAD	VOLTAGE	PHASES	TYPE	VOLTAGE	POLES	NEMA RATING	COMMENTS
ACCU-1	CONDENSING UNIT	16.5 MCA	208 V	2	30A FSS, FUSED AT 25A	208 V	2	3R	CONNECT TO INDOOR UNIT AC-1, USING 2#12 + 1#12G IN 3/4" CONDUIT
ACCU-2	CONDENSING UNIT	16.5 MCA	208 V	2	30A FSS, FUSED AT 25A	208 V	2	3R	CONNECT TO INDOOR UNIT AC-2, USING 2#12 + 1#12G IN 3/4" CONDUIT
ACCU-3	CONDENSING UNIT	16.5 MCA	208 V	2	30A FSS, FUSED AT 25A	208 V	2	3R	CONNECT TO INDOOR UNIT AC-3, USING 2#12 + 1#12G IN 3/4" CONDUIT
CU-5	CONDENSING UNIT	29.1 MCA	208 V	1	60A FSS, FUSED AT 35A	208 V	2	3R	
CU-6	CONDENSING UNIT	25.9 MCA	460 V	3	60A FSS, FUSED AT 35A	480 V	3	3R	
EF-3	EXHAUST FAN	.07 HP	115 V	1	30A FSS, FUSED AT 1A	120 V	1	3R	
EF-5	EXHAUST FAN	.05 HP	115 V	1	30A FSS, FUSED AT 1A	120 V	1	3R	
EF-6	EXHAUST FAN	.07 HP	115 V	1	30A FSS, FUSED AT 1A	120 V	1	3R	
EF-8	EXHAUST FAN	.25 HP	115 V	1	30A FSS, FUSED AT4A	120 V	1	3R	
RTU-4	ROOF TOP UNIT	7.2 FLA	460 V	3	INTEGRAL DISCONNECT SWITCH	480 V	3	3R	
RTU-8	ROOF TOP UNIT	20.5 FLA	460 V	3	INTEGRAL DISCONNECT SWITCH	480 V	3	3R	

REFER TO BRANCH CIRCUIT SCHEDULE ON DRAWING E-600, FOR CONDUCTOR AND CONDUIT SIZING.

1 POWER & SIGNAL NEW WORK PLAN - ROOF - ADD-ALTERNATE
1/8" = 1'-0"

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646

OWNER: COLLEGE OF SOUTHERN MARYLAND

STATE PROJ. NO: Project Number

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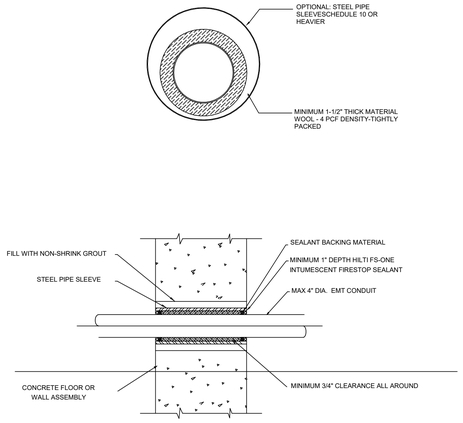
ISSUES

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POWER & SIGNAL NEW WORK PLAN - ROOF - ADD-ALT

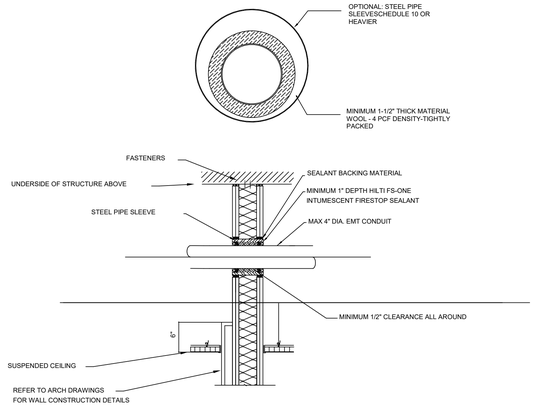
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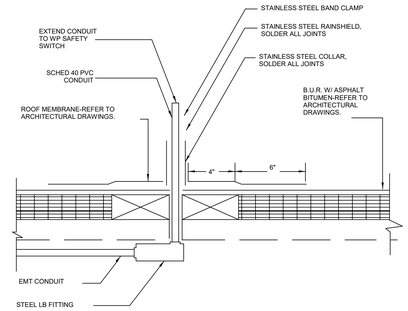
THE FIRESTOP SYSTEM OR DEVICE SHALL BE TESTED IN ACCORDANCE WITH ASTM E 814, STANDARD TEST METHOD FOR FIRE TESTS OF THROUGH PENETRATION FIRE STOPS, OR ANSI/UL 1479, STANDARD FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS, AT A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 IN. WATER COLUMN BETWEEN THE EXPOSED AND THE UNEXPOSED SURFACE OF THE TEST ASSEMBLY. FIRESTOPPING MUST FOLLOW THE LATEST EDITION OF NFPA CODE.

1 CONCRETE WALL FIRESTOPPING DETAIL
SCALE: NTS



THE FIRESTOP SYSTEM OR DEVICE SHALL BE TESTED IN ACCORDANCE WITH ASTM E 814, STANDARD TEST METHOD FOR FIRE TESTS OF THROUGH PENETRATION FIRE STOPS, OR ANSI/UL 1479, STANDARD FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS, AT A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 IN. WATER COLUMN BETWEEN THE EXPOSED AND THE UNEXPOSED SURFACE OF THE TEST ASSEMBLY. FIRESTOPPING MUST FOLLOW THE LATEST EDITION OF NFPA CODE.

2 DRYWALL FIRESTOPPING DETAIL
SCALE: NTS



3 CONDUIT ROOF PENETRATION DETAIL
NTS

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646

OWNER: COLLEGE OF SOUTHERN MARYLAND

STATE PROJ. NO: Project Number

SEAL

KEY PLAN

REVISIONS

MARK	DATE	ISSUE

ISSUES

DATE	ISSUE
02.14.2022	BID DOCUMENTS

ELECTRICAL DETAILS

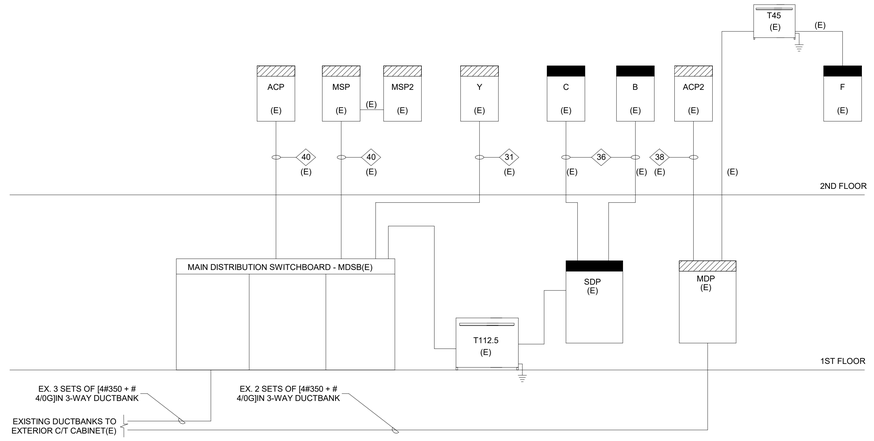
E-500

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DRY TYPE 480V - 120/208V TRANSFORMER SCHEDULE

XFMR NAME	RATING (KVA)	480V FLA (A)	480V OVP CB	480V FEEDER	120/208V FLA(A)	120/208V OVP CB	120/208V FEEDER	GROUNDING ELECTRODE
T-3	3	3.6	3P/15A	(3)#12, #12G, 3/4"C	8.3	3P/15A	(4)#12, #8G, 3/4"C	#8
T-6	6	7.2	3P/15A	(3)#12, #12G, 3/4"C	17	3P/20A	(4)#12, #8G, 3/4"C	#8
T-9	9	11	3P/15A	(3)#12, #12G, 3/4"C	25	3P/30A	(4)#10, #8G, 3/4"C	#8
T-15	15	18	3P/25A	(3)#10, #10G, 3/4"C	42	3P/60A	(4)#6, #8G, 1-1/4"C	#8
T-30	30	36	3P/45A	(3)#8, #10G, 3/4"C	83	3P/100A	(4)#2, #8G, 1-1/4"C	#8
T-45	45	54	3P/70A	(3)#4, #8G, 1-1/4"C	125	3P/150A	(4)#1/0, #6G, 2"C	#6
T-75	75	90	3P/125A	(3)#1, #6G, 1-1/2"C	208	3P/250A	(4)#250MCM, #2G, 2-1/2"C	#2
T-112	112.5	135	3P/175A	(3)#2/0, #6G, 2"C	312	3P/400A	(4)#500MCM, #1/0G, 3-1/2"C	#1/0
T-150	150	180	3P/225A	(3)#4/0, #4G, 2-1/2"C	416	3P/500A	(2)SETS - (4)#250MCM, #1/0G, 2-1/2"C	#1/0
T-225	225	271	3P/350A	(3)#500MCM, #2G, 3-1/2"C	625	3P/800A	(2)SETS - (4)#600MCM, #2/0G, 3-1/2"C	#2/0
T-300	300	361	3P/450A	(2)SETS - (3)#4/0, #1G, 2-1/2"C	833	3P/1000A	(3)SETS - (4)#400MCM, #2/0G, 3-1/2"C	#2/0
T-500	500	602	3P/800A	(2)SETS - (3)#600MCM, #1/0G, 3-1/2"C	1389	3P/1800A	(5)SETS - (4)#600MCM, #250MCMG, 3-1/2"C	#250MCM
T-750	750	903	3P/1200A	(3)SETS - (3)#600MCM, #3/0G, 3-1/2"C	2083	3P/2500A	(6)SETS - (4)#600MCM, #350MCMG, 3-1/2"C	#350MCM

NOTES:
- REFER TO FEEDER SCHEDULE FOR FEEDER CONDUCTOR AND CONDUIT SIZES.
- FEEDER AND BREAKER/FUSE/SWITCH SIZES MUST BE SIZED TO INCLUDE THE LCL ADDITION.
- TRANSFORMERS THAT ARE 45KVA AND LESS, MAY BE WALL OR CEILING MOUNTED.
- TRANSFORMERS LARGER THAN 112.5KVA SHOULD BE SPECIFIED AS COMPLETELY ENCLOSED, IF LOCATED IN NON-FIRE-RATED WALLS.
- 3" MINIMUM THICK HOUSEKEEPING PAD SHALL BE SPECIFIED FOR ALL FLOOR MOUNTED TRANSFORMERS.



1 EXISTING PARTIAL RISER DIAGRAM
NTS

TWO-WIRE FEEDER SCHEDULE

FEEDER NAME	AMPS	WIRE SIZE	GROUND WIRE SIZE	CONDUIT SIZE	208V MAX LENGTH	480V MAX LENGTH
51	20	#12	#12	3/4"	98'	227'
52	30	#10	#10	3/4"	109'	250'
53	40	#8	#10	3/4"	123'	285'
54	60	#4	#10	3/4"	128'	295'
55	70	#4	#8	1"	169'	390'
56	100	#1	#8	1-1/4"	176'	406'
57	125	#1	#6	1-1/4"	171'	394'
58	150	#1/0	#6	1-1/2"	182'	420'
59	175	#2/0	#6	1-1/2"	182'	418'
60	200	#3/0	#6	1-1/2"	192'	443'
61	225	#4/0	#4	2"	203'	468'
62	250	#250MCM	#4	2"	202'	466'
63	300	#350MCM	#4	2-1/2"	211'	487'
64	350	#400MCM	#2	2-1/2"	194'	450'
65	400	#500MCM	#2	2-1/2"	191'	442'
66	450	(2)#4/0	(2)#1	(2) 2"	203'	468'
67	500	(2)#250MCM	(2)#1	(2) 2"	202'	466'
68	600	(2)#350MCM	(2)#1	(2) 2-1/2"	210'	487'
69	700	(2)#500MCM	(2)#1/0	(2) 2-1/2"	219'	505'
70	800	(2)#600MCM	(2)#1/0	(2) 3"	207'	478'
71	1000	(3)#400MCM	(3)#2/0	(3) 2-1/2"	205'	474'
72	1200	(3)#600MCM	(3)#3/0	(3) 3"	207'	478'
73	1600	(4)#600MCM	(4)#4/0	(4) 3"	207'	478'
74	2000	(5)#600MCM	(5)#250MCM	(5) 3"	207'	478'
75	2500	(6)#600MCM	(6)#350MCM	(6) 3"	199'	459'

THREE-WIRE FEEDER SCHEDULE

FEEDER NAME	AMPS	WIRE SIZE	GROUND WIRE SIZE	CONDUIT SIZE	208V MAX LENGTH	480V MAX LENGTH
1	20	#12	#12	3/4"	98'	227'
2	30	#10	#10	3/4"	109'	250'
3	40	#8	#10	3/4"	123'	285'
4	60	#4	#10	1"	128'	295'
5	70	#4	#8	1-1/4"	169'	390'
6	100	#1	#8	1-1/4"	176'	406'
7	125	#1	#6	1-1/2"	171'	394'
8	150	#1/0	#6	2"	182'	420'
9	175	#2/0	#6	2"	182'	418'
10	200	#3/0	#6	2"	192'	443'
11	225	#4/0	#4	2-1/2"	203'	468'
12	250	#250MCM	#4	2-1/2"	202'	466'
13	300	#350MCM	#4	2-1/2"	211'	487'
14	350	#400MCM	#2	3"	194'	450'
15	400	#500MCM	#2	3-1/2"	191'	442'
16	450	(2)#4/0	(2)#1	(2) 2-1/2"	203'	468'
17	500	(2)#250MCM	(2)#1	(2) 2-1/2"	202'	466'
18	600	(2)#350MCM	(2)#1	(2) 2-1/2"	210'	487'
19	700	(2)#500MCM	(2)#1/0	(2) 3-1/2"	219'	505'
20	800	(2)#600MCM	(2)#1/0	(2) 3-1/2"	207'	478'
21	1000	(3)#400MCM	(3)#2/0	(3) 3'	205'	474'
22	1200	(3)#600MCM	(3)#3/0	(3) 3-1/2"	207'	478'
23	1600	(4)#600MCM	(4)#4/0	(4) 3-1/2"	207'	478'
24	2000	(5)#600MCM	(5)#250MCM	(5) 3-1/2"	207'	478'
25	2500	(6)#600MCM	(6)#350MCM	(6) 3-1/2"	199'	459'

FOUR-WIRE FEEDER SCHEDULE

FEEDER NAME	AMPS	WIRE SIZE	GROUND WIRE SIZE	CONDUIT SIZE	208V MAX LENGTH	480V MAX LENGTH
26	20	#12	#12	3/4"	98'	227'
27	30	#10	#10	3/4"	109'	250'
28	40	#8	#10	1"	123'	285'
29	60	#4	#10	1-1/4"	128'	295'
30	70	#4	#8	1-1/4"	169'	390'
31	100	#1	#8	1-1/4"	176'	406'
32	125	#1	#6	1-1/2"	171'	394'
33	150	#1/0	#6	2"	182'	420'
34	175	#2/0	#6	2"	182'	418'
35	200	#3/0	#6	2"	192'	443'
36	225	#4/0	#4	2-1/2"	203'	468'
37	250	#250MCM	#4	2-1/2"	202'	466'
38	300	#350MCM	#4	3"	211'	487'
39	350	#400MCM	#2	3"	194'	450'
40	400	#500MCM	#2	3-1/2"	191'	442'
41	450	(2)#4/0	(2)#1	(2) 2-1/2"	203'	468'
42	500	(2)#250MCM	(2)#1	(2) 2-1/2"	202'	466'
43	600	(2)#350MCM	(2)#1	(2) 3'	210'	487'
44	700	(2)#500MCM	(2)#1/0	(2) 3-1/2"	219'	505'
45	800	(2)#600MCM	(2)#1/0	(2) 3-1/2"	207'	478'
46	1000	(3)#400MCM	(3)#2/0	(3) 3-1/2"	205'	474'
47	1200	(3)#600MCM	(3)#3/0	(3) 3-1/2"	207'	478'
48	1600	(4)#600MCM	(4)#4/0	(4) 3-1/2"	207'	478'
49	2000	(5)#600MCM	(5)#250MCM	(5) 3-1/2"	207'	478'
50	2500	(6)#600MCM	(6)#350MCM	(6) 3-1/2"	199'	459'

GENERAL NOTES

A. REFER TO SHEET E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.
B. NEW CIRCUIT BREAKERS SHALL MATCH PANEL MANUFACTURER.
C. EXISTING PANEL LOADS ARE ESTIMATED BY THE ENGINEER.
D. REFER TO FEEDER AND BRANCH CIRCUIT SCHEDULE FOR FEEDER AND BRANCH CIRCUIT CONDUCTOR SIZES U.O.N.
E. REFER TO TRANSFORMER SCHEDULE FOR TRANSFORMER PRIMARY AND SECONDARY FEEDER SIZES.
F. PROVIDE NEW UPDATED TYPED CIRCUIT DIRECTORY TO REFLECT MODIFICATIONS UNDER THIS CONTRACT FOR ANY EXISTING PANEL THAT HAS HAD CIRCUIT ADDITIONS OR MODIFICATIONS. ALL CIRCUIT DIRECTORIES SHALL IDENTIFY CIRCUIT NUMBER, AREA NUMBER AND ASSOCIATED LOAD DESCRIPTION.
   a. "*" DENOTES NEW SHUNT TRIP CIRCUIT BREAKER.
   b. "*" DENOTES NEW GFCI CIRCUIT BREAKER.

SHEET NOTES (#)

1. NOT USED.

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646
OWNER: COLLEGE OF SOUTHERN MARYLAND
STATE PROJ. NO: Project Number

SEAL

KEY PLAN

REVISIONS

MARK	DATE	ISSUE

ISSUES

DATE	ISSUE
02.14.2022	BID DOCUMENTS

ELECTRICAL PARTIAL RISER DIAGRAM & SCHEDULES

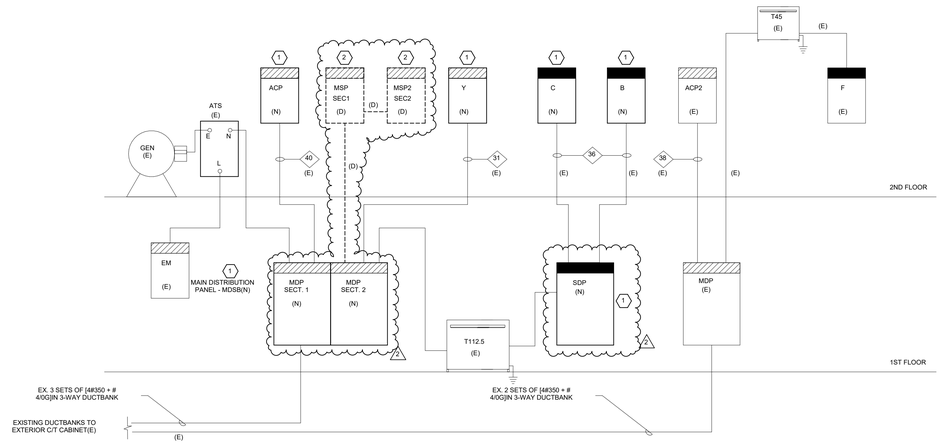
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DRY TYPE 480V - 120/208V TRANSFORMER SCHEDULE

XFMR NAME	RATING (KVA)	480V FLA (A)	480V OVP CB	480V FEEDER	120/208V FLA(A)	120/208V OVP CB	120/208V FEEDER	GROUNDING ELECTRODE
T-3	3	3.6	3P/15A	(3)#12, #12G, 3/4"C	8.3	3P/15A	(4)#12, #8G, 3/4"C	#8
T-6	6	7.2	3P/15A	(3)#12, #12G, 3/4"C	17	3P/20A	(4)#12, #8G, 3/4"C	#8
T-9	9	11	3P/15A	(3)#12, #12G, 3/4"C	25	3P/30A	(4)#10, #8G, 3/4"C	#8
T-15	15	18	3P/25A	(3)#10, #10G, 3/4"C	42	3P/60A	(4)#6, #8G, 1-1/4"C	#8
T-30	30	36	3P/45A	(3)#8, #10G, 3/4"C	83	3P/100A	(4)#2, #8G, 1-1/4"C	#8
T-45	45	54	3P/70A	(3)#4, #8G, 1-1/4"C	125	3P/150A	(4)#1/0, #6G, 2"C	#6
T-75	75	90	3P/125A	(3)#1, #6G, 1-1/2"C	208	3P/250A	(4)#250MCM, #2G, 2-1/2"C	#2
T-112	112.5	135	3P/175A	(3)#2/0, #6G, 2"C	312	3P/400A	(4)#500MCM, #1/0G, 3-1/2"C	#1/0
T-150	150	180	3P/225A	(3)#4/0, #4G, 2-1/2"C	416	3P/500A	(2)SETS - (4)#250MCM, #1/0G, 2-1/2"C	#1/0
T-225	225	271	3P/350A	(3)#500MCM, #2G, 3-1/2"C	625	3P/800A	(2)SETS - (4)#600MCM, #2/0G, 3-1/2"C	#2/0
T-300	300	361	3P/450A	(2)SETS - (3)#4/0, #1G, 2-1/2"C	833	3P/1000A	(3)SETS - (4)#400MCM, #2/0G, 3-1/2"C	#2/0
T-500	500	602	3P/800A	(2)SETS - (3)#600MCM, #1/0G, 3-1/2"C	1389	3P/1800A	(5)SETS - (4)#600MCM, #250MCMG, 3-1/2"C	#250MCM
T-750	750	903	3P/1200A	(3)SETS - (3)#600MCM, #3/0G, 3-1/2"C	2083	3P/2500A	(6)SETS - (4)#600MCM, #350MCMG, 3-1/2"C	#350MCM

NOTES:
- REFER TO FEEDER SCHEDULE FOR FEEDER CONDUCTOR AND CONDUIT SIZES.
- FEEDER AND BREAKER/FUSE/SWITCH SIZES MUST BE SIZED TO INCLUDE THE LCL ADDITION.
- TRANSFORMERS THAT ARE 45KVA AND LESS, MAY BE WALL OR CEILING MOUNTED.
- TRANSFORMERS LARGER THAN 112.5KVA SHOULD BE SPECIFIED AS COMPLETELY ENCLOSED, IF LOCATED IN NON-FIRE-RATED WALLS.
- 3" MINIMUM THICK HOUSEKEEPING PAD SHALL BE SPECIFIED FOR ALL FLOOR MOUNTED TRANSFORMERS.



1 ADD/ALTERNATE PARTIAL RISER DIAGRAM
NTS

TWO-WIRE FEEDER SCHEDULE

FEEDER NAME	AMPS	WIRE SIZE	GROUND WIRE SIZE	CONDUIT SIZE	208V MAX LENGTH	480V MAX LENGTH
51	20	#12	#12	3/4"	98'	227'
52	30	#10	#10	3/4"	109'	250'
53	40	#8	#10	3/4"	123'	285'
54	60	#4	#10	3/4"	128'	295'
55	70	#4	#8	1"	169'	390'
56	100	#1	#8	1-1/4"	176'	406'
57	125	#1	#6	1-1/4"	171'	394'
58	150	#1/0	#6	1-1/2"	182'	420'
59	175	#2/0	#6	1-1/2"	182'	418'
60	200	#3/0	#6	1-1/2"	192'	443'
61	225	#4/0	#4	2"	203'	468'
62	250	#250MCM	#4	2"	202'	466'
63	300	#350MCM	#4	2-1/2"	211'	487'
64	350	#400MCM	#2	2-1/2"	194'	450'
65	400	#500MCM	#2	2-1/2"	191'	442'
66	450	(2)#4/0	(2)#1	(2) 2"	203'	468'
67	500	(2)#250MCM	(2)#1	(2) 2"	202'	466'
68	600	(2)#350MCM	(2)#1	(2) 2-1/2"	210'	487'
69	700	(2)#500MCM	(2)#1/0	(2) 2-1/2"	219'	505'
70	800	(2)#600MCM	(2)#1/0	(2) 3"	207'	478'
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72	1200	(3)#600MCM	(3)#3/0	(3) 3"	207'	478'
73	1600	(4)#600MCM	(4)#4/0	(4) 3"	207'	478'
74	2000	(5)#600MCM	(5)#250MCM	(5) 3"	207'	478'
75	2500	(6)#600MCM	(6)#350MCM	(6) 3"	199'	459'

THREE-WIRE FEEDER SCHEDULE

FEEDER NAME	AMPS	WIRE SIZE	GROUND WIRE SIZE	CONDUIT SIZE	208V MAX LENGTH	480V MAX LENGTH
1	20	#12	#12	3/4"	98'	227'
2	30	#10	#10	3/4"	109'	250'
3	40	#8	#10	3/4"	123'	285'
4	60	#4	#10	1"	128'	295'
5	70	#4	#8	1-1/4"	169'	390'
6	100	#1	#8	1-1/4"	176'	406'
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9	175	#2/0	#6	2"	182'	418'
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11	225	#4/0	#4	2-1/2"	203'	468'
12	250	#250MCM	#4	2-1/2"	202'	466'
13	300	#350MCM	#4	2-1/2"	211'	487'
14	350	#400MCM	#2	3"	194'	450'
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16	450	(2)#4/0	(2)#1	(2) 2-1/2"	203'	468'
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18	600	(2)#350MCM	(2)#1	(2) 2-1/2"	210'	487'
19	700	(2)#500MCM	(2)#1/0	(2) 3-1/2"	219'	505'
20	800	(2)#600MCM	(2)#1/0	(2) 3-1/2"	207'	478'
21	1000	(3)#400MCM	(3)#2/0	(3) 3"	205'	474'
22	1200	(3)#600MCM	(3)#3/0	(3) 3-1/2"	207'	478'
23	1600	(4)#600MCM	(4)#4/0	(4) 3-1/2"	207'	478'
24	2000	(5)#600MCM	(5)#250MCM	(5) 3-1/2"	207'	478'
25	2500	(6)#600MCM	(6)#350MCM	(6) 3-1/2"	199'	459'

FOUR-WIRE FEEDER SCHEDULE

FEEDER NAME	AMPS	WIRE SIZE	GROUND WIRE SIZE	CONDUIT SIZE	208V MAX LENGTH	480V MAX LENGTH
26	20	#12	#12	3/4"	98'	227'
27	30	#10	#10	3/4"	109'	250'
28	40	#8	#10	1"	123'	285'
29	60	#4	#10	1-1/4"	128'	295'
30	70	#4	#8	1-1/4"	169'	390'
31	100	#1	#8	1-1/4"	176'	406'
32	125	#1	#6	1-1/2"	171'	394'
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35	200	#3/0	#6	2"	192'	443'
36	225	#4/0	#4	2-1/2"	203'	468'
37	250	#250MCM	#4	2-1/2"	202'	466'
38	300	#350MCM	#4	3"	211'	487'
39	350	#400MCM	#2	3"	194'	450'
40	400	#500MCM	#2	3-1/2"	191'	442'
41	450	(2)#4/0	(2)#1	(2) 2-1/2"	203'	468'
42	500	(2)#250MCM	(2)#1	(2) 2-1/2"	202'	466'
43	600	(2)#350MCM	(2)#1	(2) 3'	210'	487'
44	700	(2)#500MCM	(2)#1/0	(2) 3-1/2"	219'	505'
45	800	(2)#600MCM	(2)#1/0	(2) 3-1/2"	207'	478'
46	1000	(3)#400MCM	(3)#2/0	(3) 3-1/2"	205'	474'
47	1200	(3)#600MCM	(3)#3/0	(3) 3-1/2"	207'	478'
48	1600	(4)#600MCM	(4)#4/0	(4) 3-1/2"	207'	478'
49	2000	(5)#600MCM	(5)#250MCM	(5) 3-1/2"	207'	478'
50	2500	(6)#600MCM	(6)#350MCM	(6) 3-1/2"	199'	459'

GENERAL NOTES

A. REFER TO SHEET E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.
B. NEW CIRCUIT BREAKERS SHALL MATCH PANEL MANUFACTURER.
C. EXISTING PANEL LOADS ARE ESTIMATED BY THE ENGINEER.
D. REFER TO FEEDER AND BRANCH CIRCUIT SCHEDULE FOR FEEDER AND BRANCH CIRCUIT CONDUCTOR SIZES U.O.N.
E. REFER TO TRANSFORMER SCHEDULE FOR TRANSFORMER PRIMARY AND SECONDARY FEEDER SIZES.
F. PROVIDE NEW UPDATED TYPED CIRCUIT DIRECTORY TO REFLECT MODIFICATIONS UNDER THIS CONTRACT FOR ANY EXISTING PANEL THAT HAS HAD CIRCUIT ADDITIONS OR MODIFICATIONS. ALL CIRCUIT DIRECTORIES SHALL IDENTIFY CIRCUIT NUMBER, AREA NUMBER AND ASSOCIATED LOAD DESCRIPTION.
   a. "*" DENOTES NEW SHUNT TRIP CIRCUIT BREAKER.
   b. "**" DENOTES NEW GFCI CIRCUIT BREAKER.

SHEET NOTES

1. ADD/ALTERNATE #4:
   A. REPLACE EXISTING SWITCHBOARD WITH NEW SERVICE ENTRANCE RATED 1000A, 277/480V, 3PH, 4W, 2-SECTION DISTIBUTION PANEL, WITH 900A MAIN CIRCUIT BREAKER. PROVIDE COORDINATION STUDY FOR THE NEW GEAR, PER SPECIFICATIONS. CONTRACTOR SHALL CONNECT THE NEW SWITCHBOARD TO THE EXISTING BUILDING GROUNDING, PER NEC. DISCONNECT AND RECONNECT EXISTING FEEDERS ONCE THE NEW SWITCHBOARD IS INSTALLED. ALL WORK FOR DISCONNECTING AND RECONNECT THE INCOMING SERVICE SHALL BE PERFORMED BY THE UTILITY COMPANY. COORDINATE ALL UTILITY WORK WITH SMECO. SEE PANEL SCHEDULES, DRAWING E-700, FOR ADDITIONAL INFORMATION. COORDINATE OUTAGES WITH THE UTILITY AND BUILDING ENGINEER PRIOR TO DEMOLITION.
   B. REPLACE EXISTING PANELS ACP, B, C, SDP AND Y WITH NEW. PROVIDE NEW COORDINATION STUDY, PER SPECIFICATIONS, AND RECONNECTION SPLICES/BOXES, AS REQUIRED. DISCONNECT AND RECONNECT EXISTING FEEDER AND BRANCH CIRCUITS ONCE THE NEW PANEL IS INSTALLED. NEW PANELBOARDS SHALL MATCH THE ELECTRICAL CHARACTERISTICS OF THE EXISTING PANELS, INCLUDING FRAME SIZE, VOLTAGE, AND CIRCUIT BREAKER AMPERAGE/QUANTITIES.COORDINATE OUTAGES WITH THE BUILDING ENGINEER PRIOR TO DEMOLITION.
2. ADD/ALTERNATE #3 (FUTURE RENOVATION):
   A. DEMOLISH EXISTING PANELS MSP AND MSP2, AND ASSOCIATED FEEDERS BACK TO THE SOURCE.

HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646
OWNER: COLLEGE OF SOUTHERN MARYLAND
STATE PROJ. NO: Project Number

SEAL

KEY PLAN

REVISIONS

MARK	DATE	ISSUE
2	6/24/2022	IFC Electrical Changes

ISSUES

DATE	ISSUE
02.14.2022	BID DOCUMENTS

ELECTRICAL PARTIAL RISER DIAGRAM & SCHEDULES - ADD/ALT

E-601

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SWITCHBOARD AND WIRING SCHEDULE

SWITCHBOARD: MDSB(N) 2 | **MAINS TYPE:** 900 A MCB | **kAIC VALUE:** EXISTING
VOLTAGE: 480Y/277V,3P,4W | **SPD:** | **kAIC RATING:** 42000
AMPERES: 1000 A | **MOUNTING:** WALL | **LOCATION:** ELEC 121
SUPPLY FROM:

CKT	CIRCUIT DESCRIPTION	POLES	FRAME	TRIP	Load	REMARKS
1	PANEL E(E) [EMERGENCY]	3	100 A	100 A	0.0	
2	PANEL ACP(E)	3	400 A	400 A	236.0	
3	PANEL SDP(E) VIA XFMR	3	200 A	175 A	78.4	
4	PANEL MSP(E) , MSP2(E)	3	400 A	225 A	240.0	
5	SPACE	3	400 A	0 A	240.0	
6	EX. PANEL W	3	100 A	100 A	0.0	
7	EX. PANEL Y	3	100 A	100 A	12.0	
8	SPACE	3	--	--	--	
9	SURGE PROTECTION DEVICE	3	30 A	30 A	0.0	
10	SPACE	3	--	--	--	
11	SPACE FOR EXISTING FEEDER CONNECTIONS	3	--	--	--	
12	SPACE FOR EXISTING FEEDER CONNECTIONS	3	--	--	--	
13	SPACE FOR EXISTING FEEDER CONNECTIONS	3	--	--	--	
14	SPACE FOR EXISTING FEEDER CONNECTIONS	3	--	--	--	
15	SPACE FOR EXISTING FEEDER CONNECTIONS	3	--	--	--	
16	SPACE FOR EXISTING FEEDER CONNECTIONS	3	--	--	--	
17	SPACE FOR EXISTING FEEDER CONNECTIONS	3	--	--	--	
18	SPACE FOR EXISTING FEEDER CONNECTIONS	3	--	--	--	
19	SPACE FOR EXISTING FEEDER CONNECTIONS	3	--	--	--	
20	SPACE FOR EXISTING FEEDER CONNECTIONS	3	--	--	--	

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EQUIP	46931 VA	100.00%	46931 VA	TOTAL CONN. LOAD: 806 kVA
HVAC	82609 VA	100.00%	82609 VA	TOTAL EST. DEMAND: 662981 VA
REC	18940 VA	76.40%	14470 VA	TOTAL CONN. CURRENT: 970 A
Lighting	29000 VA	100.00%	29000 VA	TOTAL EST. DEMAND CURRENT: 797 A
Heating	485500 VA	100.00%	485500 VA	
Cooling	143400 VA	100.00%	143400 VA	

NOTES:

SWITCHBOARD AND WIRING SCHEDULE

SWITCHBOARD: MSP(E) | **MAINS TYPE:** MLO | **kAIC VALUE:** EXISTING
VOLTAGE: 480Y/277V,3P,4W | **SPD:** | **kAIC RATING:** 14000
AMPERES: 225 A | **MOUNTING:** SURFACE | **LOCATION:** MECHANICAL 203
SUPPLY FROM:

CKT	CIRCUIT DESCRIPTION	POLES	FRAME	TRIP	LOAD (kVA)	REMARKS
1	SPACE	3	--	--	--	
2	SPACE	3	--	--	--	
3	SPACE	3	--	--	--	
4	SPACE	3	--	--	--	
5	SPACE	3	--	--	--	
6	SPACE	3	--	--	--	
7	SPACE	3	--	--	--	
8	SPARE	3	100 A	15 A	0.0	
9						
10						
11	SPARE	3	100 A	60 A	0.0	
12	SPARE	3	100 A	60 A	0.0	
13						
14						
15						
16						
17						
18						
19						
20						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EQUIP	6800 VA	100.00%	6800 VA	TOTAL CONN. LOAD: 7 kVA
				TOTAL EST. DEMAND: 7 kVA
				TOTAL CONN. CURRENT: 8 A
				TOTAL EST. DEMAND CURRENT: 8 A

NOTES:

SWITCHBOARD AND WIRING SCHEDULE

SWITCHBOARD: ACP(N) | **MAINS TYPE:** MLO | **kAIC VALUE:** EXISTING
VOLTAGE: 480Y/277V,3P,4W | **SPD:** | **kAIC RATING:** 14000
AMPERES: 400 A | **MOUNTING:** SURFACE | **LOCATION:** MECHANICAL 203
SUPPLY FROM: MDSB(E)

CKT	CIRCUIT DESCRIPTION	POLES	FRAME	TRIP	LOAD (kVA)	REMARKS
1	**RTU-2**	3	200 A	150 A	102.3	
2	**RTU-3**	3	200 A	150 A	102.3	
3	EX. RTU	3	30 A	15 A	3.0	
4	EX. AIR COMP.	3	30 A	15 A	3.0	
5	**SPARE**	3	60 A	60 A	0.0	
6	**SPARE**	3	30 A	30 A	0.0	
7	EX. DEHUMIDIFICATION	3	200 A	125 A	0.0	
8	**SPARE**	3	30 A	30 A	0.0	
9	**RTU-1A**	3	30 A	15 A	4.2	
10	**RTU-1B**	3	30 A	15 A	8.6	
11	**HWP-1**	3	30 A	15 A	6.3	
12	**HWP-2**	3	30 A	15 A	6.3	

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EQUIP	12631 VA	100.00%	12631 VA	TOTAL CONN. LOAD: 236 kVA
HVAC	82359 VA	100.00%	82359 VA	TOTAL EST. DEMAND: 235991 VA
Cooling	141000 VA	100.00%	141000 VA	TOTAL CONN. CURRENT: 284 A
				TOTAL EST. DEMAND CURRENT: 284 A

NOTES:

PANELBOARD AND WIRING SCHEDULE

PANEL: F(E) | **MAINS TYPE:** 150 A MCB | **AVAILABLE FAULT CURRENT:** EXISTING
VOLTAGE: 208Y/120V,3P,4W | **SPD:** | **PANEL INTERRUPTING RATING:** 10000
AMPERES: 400 A | **MOUNTING:** SURFACE | **LOCATION:** GENERATOR 204
SUPPLY FROM: 45KVA

CIRCUIT DESCRIPTION	OCP	P	CKT	A		B		C		CKT	P	OCP	CIRCUIT DESCRIPTION
EX. CIRCUIT	20	1	1	0.3	0.3					2	1	20	EQUIP
EX. CIRCUIT	20	1	3			0.3	0.3			4	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	5					0.3	0.3	6	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	7	0.3	0.3					8	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	9			0.3	0.3			10	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	11					0.3	0.3	12	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	13	0.3	0.3					14	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	15			0.3	0.3			16	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	17					0.3	0.3	18	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	19	0.3	0.3					20	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	21			0.3	0.3			22	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	23					0.3	0.3	24	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	25	0.3	0.3					26	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	27			0.3	0.3			28	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	29					0.3	0.3	30	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	31	0.3	0.3					32	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	33			0.3	0.3			34	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	35					0.3	0.3	36	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	37	0.3	0.3					38	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	39			0.3	0.3			40	1	20	EX. CIRCUIT
EX. CIRCUIT	20	1	41					0.3	0.3	42	1	20	EX. CIRCUIT
EX. CIRCUIT	30	2	43	0.1	0.1					44			
			45			0.1	0.1			46	3	30	EX. CIRCUIT
RTU-7 CONTROLS	**20**	**1**	**47**					0.1	0.1	48			
AC-1/ACCU-1	**25**	**2**	**49**	**2.0**	**2.0**					**50**	**2**	**25**	**AC-2/ACCU-2**
			51			**2.0**	**2.0**			**52**			
AC-3/ACCU-3	**25**	**2**	**53**					**2.0**	**2.0**	**54**	**2**	**35**	**CU-5**
			55	**2.0**	**2.0**					**56**			
RTU-4 CONTROLS	**20**	**1**	**57**			**0.5**	0.1			58	1	20	RTU-3 CONTROLS
RTU-8 CONTROLS	**20**	**1**	**59**					**0.5**	0.1	60	1	20	RTU-2 CONTROLS
				11.6 kVA		8.2 kVA		8.2 kVA					
				97 A		69 A		69 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EQUIP	2800 VA	100.00%	2800 VA	TOTAL CONNECTED LOAD: 28096 VA
HVAC	14296 VA	100.00%	14296 VA	TOTAL ESTIMATED DEMAND: 28096 VA
REC	11000 VA	95.45%	10500 VA	TOTAL CONNECTED CURRENT: 78 A
				TOTAL ESTIMATED DEMAND CURRENT: 78 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

SWITCHBOARD AND WIRING SCHEDULE

SWITCHBOARD: MSP2(E) | **MAINS TYPE:** MLO | **kAIC VALUE:** EXISTING
VOLTAGE: 480Y/277V,3P,4W | **SPD:** | **kAIC RATING:** 14000
AMPERES: 225 A | **MOUNTING:** SURFACE | **LOCATION:** MECHANICAL 203
SUPPLY FROM: MSP(E)

CKT	CIRCUIT DESCRIPTION	POLES	FRAME	TRIP	LOAD (kVA)	REMARKS
1	**SPARE**	1	100 A	30 A	0.0	
2	**SPARE**	1	100 A	30 A	0.0	
3	P-1(E)	3	100 A	20 A	4.0	
4	P-2(E)	3	100 A	20 A	2.8	
5	**SPARE**	3	100 A	15 A	0.0	
6	**SPARE**	3	100 A	15 A	0.0	
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EQUIP	6800 VA	100.00%	6800 VA	TOTAL CONN. LOAD: 7 kVA
				TOTAL EST. DEMAND: 7 kVA
				TOTAL CONN. CURRENT: 8 A
				TOTAL EST. DEMAND CURRENT: 8 A

NOTES:

PANELBOARD AND WIRING SCHEDULE

PANEL: ACP2(E) | **MAINS TYPE:** MLO | **AVAILABLE FAULT CURRENT:** EXISTING
VOLTAGE: 480Y/277V,3P,4W | **SPD:** | **PANEL INTERRUPTING RATING:** 14000
AMPERES: 400 A | **MOUNTING:** SURFACE | **LOCATION:** STORAGE 201A
SUPPLY FROM: MDP(E)

CIRCUIT DESCRIPTION	OCP	P	CKT	A		B		C		CKT	P	OCP	CIRCUIT DESCRIPTION
			1	0.0	**0.2**					2			
SPARE	15	3	3			0.0	**0.2**			4	**3**	15	**AHU-6**
			5					0.0	**0.2**	6			
			7	0.0	**0.5**					8	**1**	15	**AHU-5**
SPARE	15	3	9			0.0	**--**			10	**1**	**--**	**SPACE**
			11					0.0	**--**	12	**1**	**--**	**SPACE**
			13	**7.2**	**5.7**					14			
CU-6	**40**	**3**	**15**			**7.2**	**5.7**			16	**3**	**30**	**RTU-8**
			17					**7.2**	**5.7**	18			
			19	0.0	0.0					20			
SPARE	15	3	21			0.0	0.0			22	3	15	SPARE
			23					0.0	0.0	24			
			25	1.0	**2.0**					**26**			
EX. HVAC CIRCUIT	15	3	27			1.0	**2.0**			**28**	**3**	**15**	**RTU-4**
			29					1.0	**2.0**	30			
			31	1.0	**0.0**					32			
EX. HVAC CIRCUIT	15	3	33			1.0	**0.0**			**34**	**3**	**40**	**SPARE**
			35					1.0	**0.0**	**36**			
			37	**14.7**	3.3					38			
RTU-7	**70**	**3**	**39**			**14.7**	3.3			40	3	90	EX. PANEL H
			41					**14.7**	3.3	42			
				35.5 kVA		35.0 kVA		35.0 kVA					
				128 A		126 A		126 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EQUIP	17000 VA	100.00%	17000 VA	TOTAL CONNECTED LOAD: 105585 VA
HVAC	88585 VA	100.00%	88585 VA	TOTAL ESTIMATED DEMAND: 105585 VA
				TOTAL CONNECTED CURRENT: 127 A
				TOTAL ESTIMATED DEMAND CURRENT: 127 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

BRANCH CIRCUIT SCHEDULE CHART

CIRCUIT TYPE	CIRCUIT BREAKER	CONDUCTORS (COPPER)	CONDUIT
1 POLE - 1 PHASE 2 WIRE + GROUND	20A-1P	2 #12 + 1 #12 GROUND	3/4"
	30A-1P	2 #10 + 1 #10 GROUND	3/4"
	40A-1P	2 #8 + 1 #10 GROUND	3/4"
	50A-1P	2 #6 + 1 #10 GROUND	3/4"
	60A-1P	2 #4 + 1 #10 GROUND	1 1/4"
2 POLE - 1 PHASE 2 WIRE + GROUND	20A-2P	2 #12 + 1 #12 GROUND	3/4"
	30A-2P	2 #10 + 1 #10 GROUND	3/4"
	40A-2P	2 #8 + 1 #10 GROUND	3/4"
	50A-2P	2 #6 + 1 #10 GROUND	3/4"
	60A-2P	2 #4 + 1 #10 GROUND	1 1/4"
2 POLE - 1 PHASE 3 WIRE + GROUND	20A-2P	3 #12 + 1 #12 GROUND	3/4"
	30A-2P	3 #10 + 1 #10 GROUND	3/4"
	40A-2P	3 #8 + 1 #10 GROUND	3/4"
	50A-2P	3 #6 + 1 #10 GROUND	3/4"
	60A-2P	3 #4 + 1 #10 GROUND	1 1/4"
3 POLE - 3 PHASE 3 WIRE + GROUND	20A-3P	3 #12 + 1 #12 GROUND	3/4"
	30A-3P	3 #10 + 1 #10 GROUND	3/4"
	40A-3P	3 #8 + 1 #10 GROUND	3/4"
	50A-3P	3 #6 + 1 #10 GROUND	3/4"
	60A-3P	3 #4 + 1 #10 GROUND	1 1/4"
3 POLE - 3 PHASE 4 WIRE + GROUND	20A-3P	4 #12 + 1 #12 GROUND	3/4"
	30A-3P	4 #10 + 1 #10 GROUND	3/4"
	40A-3P	4 #8 + 1 #10 GROUND	3/4"
	50A-3P	4 #6 + 1 #10 GROUND	1"
	60A-3P	4 #4 + 1 #10 GROUND	1 1/4"

GENERAL NOTES

A. REFER TO SHEET E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. NEW CIRCUIT BREAKERS SHALL MATCH PANEL MANUFACTURER AND BE COMPATIBLE WITH THE EXISTING GEAR.

C. EXISTING PANEL LOADS ARE ESTIMATED BY THE ENGINEER.

D. REFER TO FEEDER AND BRANCH CIRCUIT SCHEDULE FOR FEEDER AND BRANCH CIRCUIT CONDUCTOR SIZES U.O.N.

E. REFER TO TRANSFORMER SCHEDULE FOR TRANSFORMER PRIMARY AND SECONDARY FEEDER SIZES.

F. CIRCUIT BREAKERS SHOWN BOLD IN PANELSCHEDULES HAVE BEEN MODIFIED UNDER THIS SCOPE OF WORK. EXISTING CIRCUIT BREAKER SHALL REMAIN. UNLESS OTHERWISE NOTED.

G. PROVIDE NEW UPDATED TYPED CIRCUIT DIRECTORY TO REFLECT MODIFICATIONS UNDER THIS CONTRACT FOR ANY EXISTING PANEL THAT HAS HAD CIRCUIT ADDITIONS OR MODIFICATIONS. ALL CIRCUIT DIRECTORIES SHALL IDENTIFY CIRCUIT NUMBER, AREA NUMBER AND ASSOCIATED LOAD DESCRIPTION.
a. "*" DENOTES NEW SHUNT TRIP CIRCUIT BREAKER.
b. "**" DENOTES NEW GFCI CIRCUIT BREAKER.

SHEET NOTES (#)

1. REPLACE EXISTING CIRCUIT BREAKER WITH THE CIRCUIT BREAKER(S) INDICATED OR PROVIDE NEW CIRCUIT BREAKER.
2. UTILIZE EXISTING CIRCUIT BREAKER FOR NEW EQUIPMENT CONNECTION.
3. ADD/ALTERNATE #1
   A. NEW CONNECTION FOR NEW HVAC CONECTION.
4. NOT USED.
5. ADD/ALTERNATE #3 (FUTURE RENOVATION):
   A. DEMOLISH EXISTING MOTOR STARTER PANELS, MSP AND MSP2. EXISTING PUMP CONNECTIONS SHALL BE DEMOLISHED WHEN THE EXISTING BOILERS ARE REMOVED.
   B. NEW BOILER CONNECTION.
   C. NEW HOT WATER PUMP CONNECTION.
6. ADD/ALTERNATE #4
   A. NEW DISTRIBUTION PANEL. PROVIDE COORDINATION STUDY FOR THE GEAR, PRIOR TO PURCHASING.
   B. NEW PANELBOARD SHALL MATCH THE EXISTING SIZE, VOLTAGE, AND CIRCUIT BREAKER SIZES/QUANTITIES OF THE EXISTING GEAR. CONTRACTOR SHALL VERIFY ALL CIRCUIT BREAKERS IN THE FIELD AND PROVIDE COORDINATION STUDY FOR THE SWITCHGEAR, PRIOR TO PURCHASING. RECONNECT EXISTING EQUIPMENT TO THE NEW PANEL, ONCE INSTALLED.
7. PROVIDE 400A/3P ADJUSTABLE TRIP CIRCUIT BREAKER AS PART OF ADD/ALTERNATE #4. PRIOR TO ADD/ALTERNATE #3 BEING ACCEPTED, SET TRIP SETTINGS TO 225A FOR THE EXISTING PANEL MSP/MSP2 CONNECTION. UPON ACCEPTANCE OF ADD/ALTERNATE #3, DISCONNECT THE EXISTING FEEDER AND RESET THE TRIP SETTING TO 400A FOR THE NEW BOILER CONNECTION. BOILER LOAD FOR ADD/ALTERNATE #3 IS CURRENTLY INDICATED ON THE PANEL SCHEDULE. LOAD FOR PANELS MSP/MSP2 CONNECTION IS APPROXIMATELY 12KVA.
8. PROVIDE 400A SPACE AS PART OF ADD/ALTERNATE #4. UPON ACCEPTANCE OF ADD/ALTERNATE #3, PROVIDE A 400AF/400AT 3P CIRCUIT BREAKER FOR THE NEW BOILER CONNECTION. BOILER LOAD FOR ADD/ALTERNATE #3 IS CURRENTLY INDICATED ON THE PANEL SCHEDULE. LOAD PRIOR TO ADD/ALTERNATE #3 BEING ACCEPTED IS 9KVA.
9. BASE CONTRACT DESIGN.

HG HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646
OWNER: COLLEGE OF SOUTHERN MARYLAND
STATE PROJ. NO: Project Number

SEAL

KEY PLAN

REVISIONS

MARK	DATE	ISSUE
1	02/24/2022	Addendum #01
2	6/24/2022	IFC Electrical Changes

ISSUES

DATE	ISSUE
02.14.2022	BID DOCUMENTS

ELECTRICAL PANEL SCHEDULES

E-700

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PANELBOARD AND WIRING SCHEDULE

PANEL: B(N) (6) **AVAILABLE FAULT CURRENT:** EXISTING
VOLTAGE: 208Y/120V,3P,4W **MAINS TYPE:** MLO **PANEL INTERRUPTING RATING:** 10000
AMPERES: 225 A **SPD:** **LOCATION:** MECHANICAL 203
MOUNTING: SURFACE **SUPPLY FROM:** SDP(E)

CIRCUIT DESCRIPTION	OCP	P	CKT	A		B		C		CKT	P	OCP	CIRCUIT DESCRIPTION
EX. MASTER CLOCK	20	1	1	0.4	0.4					2	1	20	EX. RECP ROOMS 220 & 211
EX. RECP ROOM 218	20	1	3			0.4	0.4			4	1	20	EX. RECP ROOMS 215 & 216
EX. RECP ROOM 611	20	1	5					0.4	0.4	6	1	20	EX. RECP ROOMS 209 & 210
EX. HALL RECP	20	1	7	0.4	0.4					8	1	20	EX. HALL RECP
EX. CLOCK SOCKER OUTLET	20	1	9			0.4	0.4			10	1	20	EX. COKE BOT
EX. COKE BOT	20	1	11					0.4	0.4	12	1	20	EX. COKE BOT
SPARE	20	1	13	0.0	0.7					14			
SPARE	20	1	15			0.0	0.7			16	3	20	EX. HEATER
EX. HALL HEATER	20	1	17					1.0	0.7	18			
EX. BOILER RM LIGHTS	20	1	19	1.0	0.4					20	1	20	HALL RECP
EX. ROOF RECP & MECH RM EXHAUST	20	1	21			1.0	1.0			22	1	20	EX. GYM LIGHTS
EX. SHOWCASE	20	1	23					1.0	1.0	24	1	20	EX. GYM LIGHTS
EX. FOYER LIGHTS	20	1	25	0.4	0.4					26	1	20	EX. HALL RECP
EX. BACK STOP	20	1	27			0.5	0.5			28	1	20	EX. BACK STOP
EX. BACK STOP	20	1	29					0.5	0.5	30	1	20	EX. BACK STOP
EX. BACK STOP	20	1	31	0.5	0.5					32	1	20	EX. BACK STOP
EX. FIRE ALARM SUPER	20	1	33			0.7	1.0			34	1	20	EX. 206 HOT WATER PUMPS & FAN AT J.C.
EX. JOIST RECP	20	1	35					0.7	0.4	36	1	20	EX. RECEPT CKT
EX. SCOREBOARD CKT	20	1	37	0.3	0.2					38	1	20	EX. CONTROL PANEL
EX. SCOREBOARD CKT	30	1	39			0.3	0.3			40	2	20	EX. AIR COMP.
EX. FIRE ALARM CKT	20	1	41					0.3	0.3	42			
				5.5 kVA		5.5 kVA		7.1 kVA					
				47 A		63 A		66 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EQUIP	7900 VA	100.00%	7900 VA	**TOTAL CONNECTED LOAD:** 20660 VA
REC	5760 VA	100.00%	5760 VA	**TOTAL ESTIMATED DEMAND:** 20660 VA
Lighting	5000 VA	100.00%	5000 VA	**TOTAL CONNECTED CURRENT:** 57 A
Heating	2000 VA	100.00%	2000 VA	**TOTAL ESTIMATED DEMAND CURRENT:** 57 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: C(N) (6) **AVAILABLE FAULT CURRENT:** EXISTING
VOLTAGE: 208Y/120V,3P,4W **MAINS TYPE:** MLO **PANEL INTERRUPTING RATING:** 10000
AMPERES: 225 A **SPD:** **LOCATION:** MECHANICAL 203
MOUNTING: SURFACE **SUPPLY FROM:** SDP(E)

CIRCUIT DESCRIPTION	OCP	P	CKT	A		B		C		CKT	P	OCP	CIRCUIT DESCRIPTION
MOTORIZED DAMPER	**20**	**1**	1	**0.3**	2.4					2	1	20	EX. BOILER FAN
SPARE	20	1	3			0.0	0.0			4	1	20	SPARE
SPARE	20	1	5					0.0	0.4	6	1	20	EX. BOILER RM OUTLET
EX. POOL HPS LIGHT	20	1	7	1.0	0.0					8	2	20	SPARE
SPARE	20	1	9			0.0	0.0			10			
SPARE	20	2	11					0.0	0.0	12	2	20	SPARE
			13	0.0	0.0					14			
SPARE	20	2	15			0.0	0.0			16			
			17					0.0	0.0	18	2	20	SPARE
SPARE	20	1	19	0.0	0.2					20			
SPARE	20	1	21			0.0	0.2			22	3	15	EX. PRV-1 POOL ROOF
SPARE	20	1	23					0.0	0.2	24			
			25	0.0	0.0					26			
EX. BOILER #1	20	3	27			0.0	0.0			28	3	20	EX. BOILER #2
			29					0.0	0.0	30			
SPARE	20	1	31	0.0	0.0					32	2	20	SPARE
SPARE	15	2	33			0.0	0.0			34			
			35					0.0	0.0	36	2	20	SPARE
			37	0.2	0.0					38			
EX. PRV-2 POOL ROOF	15	3	39			0.2	0.0			40	2	50	SPARE IN GEN ROOM
			41					0.2	0.0	42			
				4.4 kVA		5.5 kVA		0.8 kVA					
				35 A		4 A		7 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EQUIP	1400 VA	100.00%	1400 VA	**TOTAL CONNECTED LOAD:** 5410 VA
HVAC	250 VA	100.00%	250 VA	**TOTAL ESTIMATED DEMAND:** 5410 VA
REC	1360 VA	100.00%	1360 VA	**TOTAL CONNECTED CURRENT:** 15 A
Heating	0 VA	0.00%	0 VA	**TOTAL ESTIMATED DEMAND CURRENT:** 15 A
Cooling	2400 VA	100.00%	2400 VA	

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: Y(N) (6) **AVAILABLE FAULT CURRENT:** EXISTING
VOLTAGE: 480Y/277V,3P,4W **MAINS TYPE:** MLO **PANEL INTERRUPTING RATING:** 14000
AMPERES: 100 A **SPD:** **LOCATION:** MECHANICAL 203
MOUNTING: SURFACE **SUPPLY FROM:** MDSB(E)

CIRCUIT DESCRIPTION	OCP	P	CKT	A		B		C		CKT	P	OCP	CIRCUIT DESCRIPTION
EX. OFFICE LIGHTS	20	1	1	1.0	1.0					2	1	20	EX. HALL LIGHTS
EX. OFFICE LIGHTS	20	1	3			1.0	1.0			4	1	20	EX. GYM LIGHTS
EX. GYM LIGHTS	20	1	5					1.0	1.0	6	1	20	EX. RM 203 & MENS WOMENS LIGHTS
EX. GYM LIGHTS	20	1	7	1.0	1.0					8	1	20	EX. RM 203 & MENS WOMENS LIGHTS
EX. GYM LIGHTS	20	1	9			1.0	1.0			10	1	20	EX. GYM LIGHTS
EX. AHU RM LIGHTS	20	1	11					1.0	1.0	12	1	20	EX. AUX GYM LIGHTS
			13							14			
			15							16			
SPARE	20	1	17					0.0		18			
SPARE	20	1	19	0.0	--					20	1	--	SPACE
SPARE	20	1	21			0.0	--			22	1	--	SPACE
SPARE	20	1	23					0.0	--	24	1	--	SPACE
SPACE	--	1	25	--	--					26	1	--	SPACE
SPACE	--	1	27			--	--			28	1	--	SPACE
			29							30			
			31							32			
			33							34			
			35							36			
			37							38			
			39							40			
			41							42			
				4.0 kVA		4.0 kVA		4.0 kVA					
				14 A		14 A		14 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
Lighting	12000 VA	100.00%	12000 VA	**TOTAL CONNECTED LOAD:** 12000 VA
				TOTAL ESTIMATED DEMAND: 12000 VA
				TOTAL CONNECTED CURRENT: 14 A
				TOTAL ESTIMATED DEMAND CURRENT: 14 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: MDP(E) **AVAILABLE FAULT CURRENT:** EXISTING
VOLTAGE: 480Y/277V,3P,4W **MAINS TYPE:** 400 A MCB **PANEL INTERRUPTING RATING:** EXISTING
AMPERES: 400 A **SPD:** **LOCATION:** ELEC 120A
MOUNTING: SURFACE **SUPPLY FROM:** T-112.5(E)

CIRCUIT DESCRIPTION	OCP	P	CKT	A		B		C		CKT	P	OCP	CIRCUIT DESCRIPTION
			1	0.0	10.0					2			
EX. TPS UNIT	30	3	3			0.0	10.0			4	3	60	EX. DRYER
			5					0.0	10.0	6			
			7	11.6	9.1					8			
PANEL F VIA XFMR	90	3	9			8.2	9.1			10	3	70	EX. ELEVATOR
			11					8.2	9.1	12			
			13	0.0	**40.0**					**14**			
SPARE	100	3	15			0.0	**40.0**			**16**	**3**	**200**	**EWH-1**
			17					0.0	**40.0**	**18**			
			19							20			
			21							22			
			23							24			
			25	35.5	--					26			
EX. ACP2(E)	300	3	27			35.0	--			28	3	--	SPACE
			29					35.0	--	30			
				106.2 kVA		102.4 kVA		102.4 kVA					
				384 A		370 A		370 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EQUIP	139800 VA	100.00%	139800 VA	**TOTAL CONNECTED LOAD:** 310981 VA
HVAC	102881 VA	100.00%	102881 VA	**TOTAL ESTIMATED DEMAND:** 310981 VA
REC	11000 VA	95.45%	10500 VA	**TOTAL CONNECTED CURRENT:** 374 A
DRYER	30000 VA	100.00%	30000 VA	**TOTAL ESTIMATED DEMAND CURRENT:** 374 A

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

PANELBOARD AND WIRING SCHEDULE

PANEL: SDP(N) (6) **AVAILABLE FAULT CURRENT:** EXISTING
VOLTAGE: 208Y/120V,3P,4W **MAINS TYPE:** 400 A MCB **PANEL INTERRUPTING RATING:** 10000
AMPERES: 400 A **SPD:** **LOCATION:** ELEC 121
MOUNTING: SURFACE **SUPPLY FROM:** T-112.5(E)

CIRCUIT DESCRIPTION	OCP	P	CKT	A		B		C		CKT	P	OCP	CIRCUIT DESCRIPTION
			1	5.7	6.4					2			
PANEL B(E)	225	3	3			7.3	5.4			4	3	100	PANEL A(E)
			5					7.7	4.4	6			
			7	4.1	--					8	1	--	SPACE
C(E)	225	3	9			0.5	--			10	1	--	SPACE
			11					0.8	--	12	1	--	SPACE
TENNIS COURT RECEPT (E)	20	1	13	0.5	4.0					14			
TENNIS COURT RECEPT (E)	20	1	15			0.5	4.0			16	3	50	OUTSIDE TRACK PANEL (E)
TENNIS COURT RECEPT (E)	20	1	17					0.5	4.0	18			
			19	0.0	6.5					20			
SPARE	20	3	21			0.0	6.5			22	3	70	PANEL D (E)
			23					0.0	5.0	24			
			25	3.0	0.0					26	1	20	SPARE
PANEL G(E)	100	3	27			1.5	0.0			28	1	20	SPARE
			29					0.0	0.0	30	1	20	SPARE
				30.2 kVA		25.7 kVA		22.4 kVA					
				256 A		218 A		187 A					

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS
EQUIP	34300 VA	100.00%	34300 VA	**TOTAL CONNECTED LOAD:** 78390 VA
HVAC	250 VA	100.00%	250 VA	**TOTAL ESTIMATED DEMAND:** 75990 VA
REC	18940 VA	76.40%	14470 VA	**TOTAL CONNECTED CURRENT:** 218 A
Lighting	17000 VA	100.00%	17000 VA	**TOTAL ESTIMATED DEMAND CURRENT:** 211 A
Heating	5500 VA	100.00%	5500 VA	
Cooling	2400 VA	100.00%	2400 VA	

NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.

BRANCH CIRCUIT SCHEDULE CHART

CIRCUIT TYPE	CIRCUIT BREAKER	CONDUCTORS (COPPER)	CONDUIT
1 POLE - 1 PHASE 2 WIRE + GROUND	20A-1P	2 #12 + 1 #12 GROUND	3/4"
	30A-1P	2 #10 + 1 #10 GROUND	3/4"
	40A-1P	2 #8 + 1 #10 GROUND	3/4"
	50A-1P	2 #6 + 1 #10 GROUND	3/4"
	60A-1P	2 #4 + 1 #10 GROUND	1 1/4"
2 POLE - 1 PHASE 2 WIRE + GROUND	20A-2P	2 #12 + 1 #12 GROUND	3/4"
	30A-2P	2 #10 + 1 #10 GROUND	3/4"
	40A-2P	2 #8 + 1 #10 GROUND	3/4"
	50A-2P	2 #6 + 1 #10 GROUND	3/4"
	60A-2P	2 #4 + 1 #10 GROUND	1 1/4"
2 POLE - 1 PHASE 3 WIRE + GROUND	20A-2P	3 #12 + 1 #12 GROUND	3/4"
	30A-2P	3 #10 + 1 #10 GROUND	3/4"
	40A-2P	3 #8 + 1 #10 GROUND	3/4"
	50A-2P	3 #6 + 1 #10 GROUND	3/4"
	60A-2P	3 #4 + 1 #10 GROUND	1 1/4"
3 POLE - 3 PHASE 3 WIRE + GROUND	20A-3P	3 #12 + 1 #12 GROUND	3/4"
	30A-3P	3 #10 + 1 #10 GROUND	3/4"
	40A-3P	3 #8 + 1 #10 GROUND	3/4"
	50A-3P	3 #6 + 1 #10 GROUND	3/4"
	60A-3P	3 #4 + 1 #10 GROUND	1 1/4"
3 POLE - 3 PHASE 4 WIRE + GROUND	20A-3P	4 #12 + 1 #12 GROUND	3/4"
	30A-3P	4 #10 + 1 #10 GROUND	3/4"
	40A-3P	4 #8 + 1 #10 GROUND	3/4"
	50A-3P	4 #6 + 1 #10 GROUND	1"
	60A-3P	4 #4 + 1 #10 GROUND	1 1/4"

GENERAL NOTES

A. REFER TO SHEET E-001 AND E-002 FOR SPECIFICATIONS SYMBOLS AND ABBREVIATIONS.

B. NEW CIRCUIT BREAKERS SHALL MATCH PANEL MANUFACTURER AND BE COMPATIBLE WITH THE EXISTING GEAR.

C. EXISTING PANEL LOADS ARE ESTIMATED BY THE ENGINEER.

D. REFER TO FEEDER AND BRANCH CIRCUIT SCHEDULE FOR FEEDER AND BRANCH CIRCUIT CONDUCTOR SIZES U.O.N.

E. REFER TO TRANSFORMER SCHEDULE FOR TRANSFORMER PRIMARY AND SECONDARY FEEDER SIZES.

F. CIRCUIT BREAKERS SHOWN BOLD IN PANELSCHEDULES HAVE BEEN MODIFIED UNDER THIS SCOPE OF WORK. EXISTING CIRCUIT BREAKER SHALL REMAIN, UNLESS OTHERWISE NOTED.

G. PROVIDE NEW UPDATED TYPED CIRCUIT DIRECTORY TO REFLECT MODIFICATIONS UNDER THIS CONTRACT FOR ANY EXISTING PANEL THAT HAS HAD CIRCUIT ADDITIONS OR MODIFICATIONS. ALL CIRCUIT DIRECTORIES SHALL IDENTIFY CIRCUIT NUMBER, AREA NUMBER AND ASSOCIATED LOAD DESCRIPTION.
   a. "*" DENOTES NEW SHUNT TRIP CIRCUIT BREAKER.
   b. "**" DENOTES NEW GFCI CIRCUIT BREAKER.

SHEET NOTES (#)

1. REPLACE EXISTING CIRCUIT BREAKER WITH THE CIRCUIT BREAKER(S) INDICATED OR PROVIDE NEW CIRCUIT BREAKER.
2. UTILIZE EXISTING CIRCUIT BREAKER FOR NEW EQUIPMENT CONNECTION.
3. NOT USED.
4. ADD/ALTERNATE #2 (FUTURE RENOVATION):
   A. PROVIDE NEW CIRCUIT BREAKER FOR NEW ELECTRIC WATER HEATER.
5. NOT USED.
6. ADD/ALTERNATE #4
   A. NEW PANELBOARD SHALL MATCH THE EXISTING SIZE, VOLTAGE, AND CIRCUIT BREAKER SIZES/QUANTITIES OF THE EXISTING GEAR. CONTRACTOR SHALL VERIFY ALL CIRCUIT BREAKERS IN THE FIELD AND PROVIDE COORDINATION STUDY FOR THE SWITCHGEAR, PRIOR TO PURCHASING. RECONNECT EXISTING EQUIPMENT TO THE NEW PANEL, ONCE INSTALLED.
7. NOT USED.
8. NOT USED.
9. BASE CONTRACT DESIGN.

HG HUGHES GROUP ARCHITECTS
22630 DAVIS DRIVE, SUITE 175
STERLING, VIRGINIA 20164
703.437.6600

CSM PE BUILDING REFURBISHMENT

PROJECT ADDRESS: COLLEGE OF SOUTHERN MARYLAND WELLNESS CENTER LA PLATA, MD 20646
OWNER: COLLEGE OF SOUTHERN MARYLAND
STATE PROJ. NO. Project Number

SEAL

KEY PLAN

REVISIONS

MARK	DATE	ISSUE
2	6/24/2022	IFC Electrical Changes

ISSUES

DATE	ISSUE
02.14.2022	BID DOCUMENTS

ELECTRICAL PANEL SCHEDULES

E-701

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