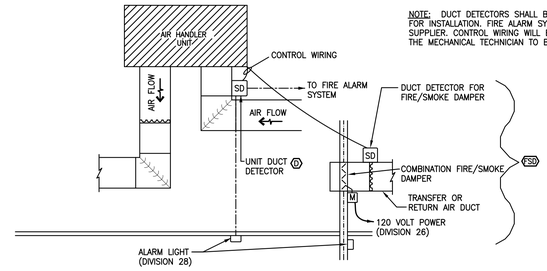
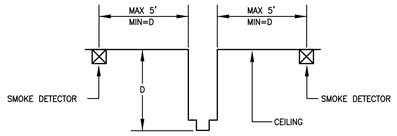
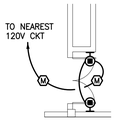


NOTE: DUCT DETECTORS SHALL BE TURNED OVER TO A CERTIFIED MECHANICAL TECHNICIAN FOR INSTALLATION. FIRE ALARM SYSTEM WIRING SHALL BE BY THE FIRE ALARM SYSTEM SUPPLIER. CONTROL WIRING WILL BE INSTALLED BY THE MECHANICAL TECHNICIAN. COST OF THE MECHANICAL TECHNICIAN TO BE INCLUDED IN THE BASE BID.

(7) HVAC AUTOMATIC FAN SHUT DOWN
NOT TO SCALE



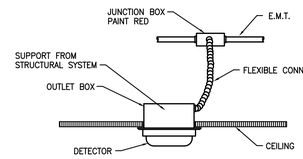
DETAIL-SMOKE DETECTOR AT RATED DOORS



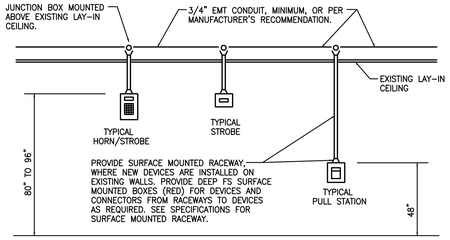
WIRE 120V CIRCUIT FOR ELECTROMAGNETIC DOOR HOLDERS THRU RELAY BASE OR REMOTE RELAY MODULE AS REQUIRED TO RELEASE DOOR HOLDERS UPON ACTIVATION OF EITHER SMOKE DETECTOR OR BUILDING FIRE ALARM SYSTEM.

TYPICAL WIRING-SMOKE DETECTORS AT RATED DOORS

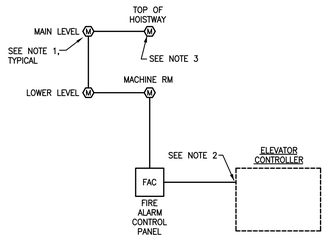
(4) SMOKE DETECTORS AT RATED DOORS DETAIL
NOT TO SCALE



(5) SMOKE DETECTORINSTALLATION DETAIL
NOT TO SCALE



(6) TYPICAL ELEVATIONS-LAY-IN CEILING
NOT TO SCALE

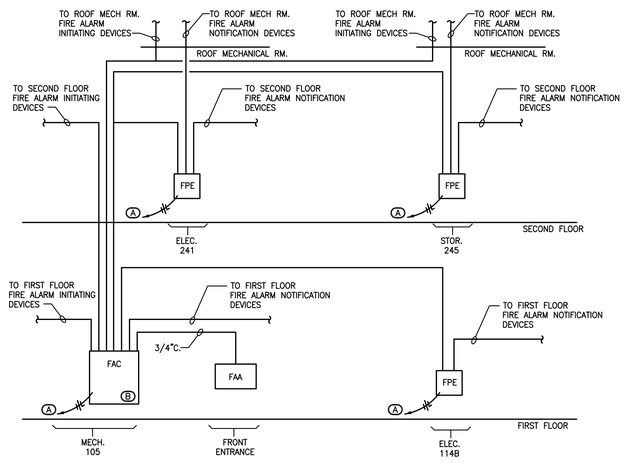


ELEVATOR NOTES

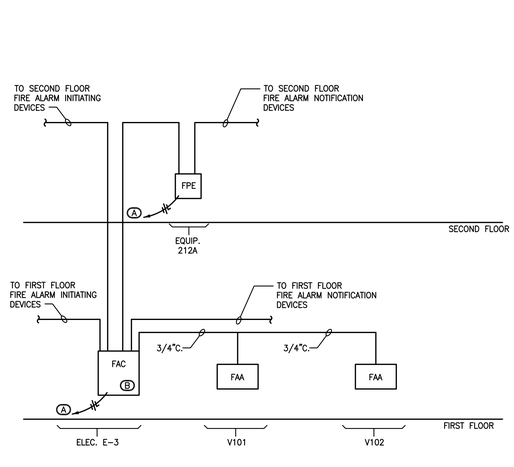
1. LOCATE SMOKE DETECTORS IN LOBBIES AND MACHINE ROOM ON CEILING NEAR CENTER OF ROOM, 36" FROM ANY AIR VENT.
2. TIE IN FAC PANEL TO ELEVATOR CONTROLLER PER THE MFR's RECOMMENDATIONS SO THAT ELEVATOR RECALL OCCURS UPON ACTIVATION OF THE LOBBY OR MACHINE ROOM DETECTORS. PROVIDE ALL RELAYS & CONTROL MODULES NECESSARY TO SEND THE ELEVATOR RECALL SIGNALS REQ'D BY ASME 17.1. COORDINATE WITH ELEVATOR SUPPLIER PRIOR TO STARTING WORK TO AVOID CONFLICTS.
3. HOISTWAY SMOKE DETECTOR TO BE ELIMINATED IF NOT SPECIFICALLY REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) AND/OR THE ELEVATOR SUPPLIER.
4. REFER TO FIRE ALARM PLAN FOR ACTUAL WIRING OF DETECTORS.

TO ORDERING MATERIALS. ADJUST BKR, DISCONNECT AND WIRING ACCORDINGLY.

(3) ELEVATOR RISER DIAGRAM (Non-Sprinkled Building)
NOT TO SCALE



(1) FIRE ALARM RISER DIAGRAM - PENLAND BUILDING
NOT TO SCALE



(2) FIRE ALARM RISER DIAGRAM - H AND SS BUILDING
NOT TO SCALE

FIRE ALARM RISER KEYNOTES:

(A) CONNECT WITH (2) #12 AWG + #12 GROUND TO A 20A 1P CIRCUIT BREAKER IN NEAREST 120V PANEL BOARD, PROVIDE 20A 1P CIRCUIT BREAKER IN EXISTING SPACE IF NO SPARE 20A 1P CIRCUIT BREAKER EXIST IN NEARBY PANELS. PROVIDE LOCK-OUT HASP FOR BREAKER AND PAINT CIRCUIT BREAKER HANDLE RED.

(B) PROVIDE DACT AT CONTROL PANEL. PROVIDE TWO RJ-31X TELEPHONE JACKS AT FAC FOR REMOTE REPORTING CONNECTED TO TWO OWNER PROVIDED TELEPHONE LINES (ONE PRIMARY, ONE BACKUP). COORDINATE WITH OWNER FOR TELEPHONE WORK AND REPORTING REQUIREMENTS.

FIRE ALARM RISER GENERAL NOTES:

1. ALL RISER CONDUIT SHALL BE MINIMUM 1" OR LARGER AS REQUIRED UNLESS NOTED OTHERWISE.
2. ALL DEVICE CIRCUIT CONDUIT RUNS SHALL BE 3/4" MINIMUM.
3. PROVIDE QUANTITY OF FPE PANELS AS REQUIRED FOR ACTUAL LOADS.

SCOPE OF WORK

THE WORK OF THIS SECTION SHALL PROVIDE NEW FIRE ALARM SYSTEMS FOR THREE (3) BUILDINGS AT THE CAMPUS OF THE UNIVERSITY OF SOUTH CAROLINA AIKEN, WHICH SHALL INCLUDE THE PROVIDING OF ALL CONDUCTORS, RACEWAYS, FITTINGS, CIRCUIT PROTECTIVE DEVICES, BOXES, SUPPORTS, AND ALL ASSOCIATED APPURTENANCES AND MISCELLANEOUS EQUIPMENT NECESSARY, ALL OF WHICH SHALL BE COMPLETELY CONNECTED, TESTED, ADJUSTED AND LEFT IN PROPER OPERATING CONDITION. THE FIRE ALARM SYSTEMS TO BE PROVIDED SHALL NETWORK CARDS FOR FUTURE USE BY THE OWNER.

GENERAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE 2008 NATIONAL ELECTRICAL CODE (NEC), THE 2012 INTERNATIONAL BUILDING CODE (IBC), AND ANY LOCAL CODES, LAWS AND ORDINANCES WHICH MAY APPLY. WHERE DIFFERENCES EXIST BETWEEN THE CODES, THE STRICTER CODE SHALL APPLY.
2. THE CONTRACTOR FOR THE WORK UNDER THIS SECTION SHALL PROCURE AND PAY FOR ALL PERMITS, FEES, AND LICENSES REQUIRED FOR THE EXECUTION OF THIS WORK.
3. TYPE MC CABLE MAY NOT BE USED ON THIS PROJECT.
4. UNLESS OTHERWISE NOTED FOR 120-VOLT, 20-AMP CKTS:
   #10 AWG SHALL BE USED FOR HOMERUNS LONGER THAN 75 FEET
   #12 AWG SHALL BE USED FOR HOMERUNS 75 FEET OR SHORTER
5. ELECTRICAL METALLIC TUBING AND RIGID GALVANIZED STEEL CONDUIT SHALL BE THE ONLY TYPES OF CONDUIT INSTALLED WITHIN THE BUILDING. PVC IS PERMITTED UNDER- GROUND.
6. BRANCH CIRCUITS SHALL BE RUN CONCEALED WHERE PRACTICAL. BRANCH CIRCUITS RUN EXPOSED TO WEATHER ON EXTERIOR WALLS OR ON ROOFS SHALL BE RUN IN GRC OR IMC WITH SCREWED FITTINGS. BRANCH CIRCUITS RUN CONCEALED IN WALLS OR CEILINGS SHALL BE RUN IN EMT, GRC, OR IMC. BRANCH CIRCUITS RUN EXPOSED IN DRY, FINISHED SPACES SHALL BE RUN IN WIREMOLD SURFACE METAL RACEWAY. BRANCH CIRCUITS RUN EXPOSED IN DAMP LOCATIONS, UNFINISHED SPACES (ATTICS), AND UNOCCUPIED SPACES (STORAGE ROOM, EQUIPMENT ROOMS, JANITOR'S CLOSET, ETC.) MAY BE RUN IN EMT IN LIEU OF WIREMOLD.
7. ALL EXISTING WALLS SHALL E ASSUMED TO BE 1-HOUR WALLS AND SHALL RECEIVE A 1-HOUR PENETRATION SEAL AROUND ALL PENETRATIONS THRU EXISTING WALLS.
8. CONCEAL ALL CONDUITS AND FITTINGS EXCEPT WHERE THE ENGINEER GRANTS SPECIFIC PERMISSION. FISH EXISTING WALLS WHERE POSSIBLE TO INSTALL NEW FIRE ALARM WIRING AND CONDUIT. WHERE EXISTING WALLS CANNOT BE FISHED, RUN WIREMOLD 500 SURFACE METAL RACEWAY, EXCEPT THAT EMT MAY BE RUN EXPOSED IN STORAGE ROOMS, JANITOR'S CLOSETS, ELECTRICAL ROOMS, MECHANICAL ROOMS ETC. USE RED WIREMOLD BOXES WHERE SURFACE MOUNTING IS REQUIRED. EMT CONDUIT MAY BE RUN EXPOSED IN THE SCIENCE BUILDING IN ALL ROOMS THAT HAS EXPOSED CEILING. USE SURFACE WIREMOLD IN AREAS THAT HAS LAY-IN CEILINGS. ALL EXPOSED METAL RACEWAY SHALL BE PAINTED TO MATCH SURROUNDING AREAS.
9. ALL WORK AND MATERIALS SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF ACCEPTANCE.
10. PROVIDE ONE COMPLETE SET OF ELECTRICAL DRAWINGS MARKED UP FOR RECORD DRAWINGS. SHOW ALL LOCATIONS OF EQUIPMENT AND MATERIALS.
11. INSTALL ALL MATERIALS PER MANUFACTURER'S INSTRUCTIONS.
12. IDENTIFY MAJOR EQUIPMENT INSTALLED WITH LAMICOR LABELS.
13. NOT USED.
14. ALL RACEWAYS, FIXTURES, WIRING, DEVICES, AND EQUIPMENT RENDERED USELESS BY THIS WORK SHALL BE REMOVED AND DELIVERED TO THE OWNER'S STORAGE FACILITY AS DIRECTED. ANY MATERIAL NOT WANTED BY THE OWNER SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.
15. ELECTRICAL CONTRACTOR SHALL DO ALL CUTTING, PATCHING AND PAINTING AS REQUIRED TO INSTALL HIS WORK, INCLUDING FINISH PATCHING AND PAINTING AS REQUIRED.
16. WHERE DISAGREEMENTS EXISTS ON THE DESIGN DOCUMENTS, THE ITEM OR ARRANGEMENTS OF BETTER QUALITY, GREATER QUANTITY, OR HIGHER COST SHALL BE INCLUDED IN THE BASE BID. ANY DISCREPANCIES BETWEEN THE DRAWINGS, SPECIFICATIONS, AND FIELD CONDITIONS SHALL BE RESOLVED WITH THE ENGINEER PRIOR TO COMMENCING WORK. ALL AGREEMENTS SHALL BE VERIFIED IN WRITING.

FIRE ALARM DEMOLITION NOTES

FD1. THE EXISTING FIRE ALARM SYSTEM SHALL BE DEMOLISHED COMPLETELY AND A REPLACEMENT SYSTEM INSTALLED. THE EXISTING FIRE ALARM SYSTEM MUST REMAIN COMPLETE AND OPERATIONAL DURING THE INSTALLATION OF THE REPLACEMENT FIRE ALARM SYSTEM. ONCE NEW SYSTEM HAS BEEN INSTALLED, THE EXISTING SYSTEM CAN BE DEMOLISHED.

FD2. IN ALL AREAS WHERE EXISTING FIRE ALARM DEVICES ARE BEING REMOVED, AND WHERE OTHER DEMOLITION WORK IS OCCURRING, REMOVE ALL EXISTING FIRE ALARM DEVICES AND OTHER RELATED EQUIPMENT NO LONGER IN USE, AND ALL WIRING AND CONDUIT NOT BEING REUSED. EXISTING CONDUIT RUN CONCEALED IN EXISTING WALLS NOT BEING REMOVED AND/OR REPLACED MAY BE ABANDONED. WHERE EXISTING DEVICES ARE SURFACE MOUNTED, THE EXISTING DEVICE, BOX, CONDUIT AND WIRE MUST BE REMOVED.

FD3. WHERE EXISTING COMBINATION SMOKE DETECTOR/DOOR CLOSURE/DOOR RELEASE DEVICE IS REPLACE BY MAGNETIC DOOR HOLDERS AND SYSTEM SMOKE DETECTORS FOR RELEASE, COORDINATE WITH OWNER FOR DISCONNECTION OF EXISTING SMOKE DETECTOR PORTION SUCH THAT CLOSURE DEVICE STILL OPERATES.

WORK/CLASS INSTRUCTION COORDINATION NOTE

THE OWNER'S OFFICIAL CONSTRUCTION WORK HOUR REQUIREMENTS SHALL BE FOLLOWED. ADDITIONALLY, USE OF POWER TOOLS OR HAND TOOLS THAT RESULT IN SOUNDS OF VOLUMES THAT ARE EXCESSIVE ENOUGH TO DISRUPT SCHEDULED CLASS ACTIVITIES SHALL BE COORDINATED SUCH THAT THEY ARE OPERATED OUTSIDE OF CLASS SCHEDULES. THIS MAY INCLUDE THE POSSIBILITY THAT THIS PORTION OF THE CONSTRUCTION BE PERFORMED AT NIGHT. THE CONTRACTOR SHALL NOT PERFORM WORK IN ROOMS DURING REGULAR SCHEDULED CLASS TIMES. COORDINATE WITH OWNER FOR ADDITIONAL SCHEDULING REQUIREMENTS.

ELECTRICAL SHEET LIST

FIRE ALARM SYSTEM NOTES

1. ALL FIRE ALARM SYSTEM WIRING SHALL BE RUN ABOVE GRADE IN WALLS AND ABOVE CEILING IN METAL RACEWAYS. RACEWAYS SHALL BE RUN CONCEALED WHERE PRACTICAL. FIRE ALARM WIRING MAY NOT BE RUN UNDERGROUND OR IN SLAB UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
2. VERIFY WIRING REQUIREMENTS WITH EQUIPMENT MFR PRIOR TO ROUGH-IN AND INSTALL ACCORDINGLY. NOTIFICATION APPLIANCE CIRCUITS SHALL BE RUN AS REQ'D TO PROVIDE A 3-PULSE TEMPORAL AUDIBLE SIGNAL FOLLOWED BY VOICE MESSAGING WITHOUT COMPROMISING THE OPERATION OF THE STROBES.
3. PROVIDE SYNCHRONIZATION OF ALL STROBE LIGHTS.
4. FIRE ALARM SYSTEM TO BE CLASS B SUPERVISED SYSTEM (STYLE B INITIATING DEVICE CIRCUITS, STYLE 4 SIGNALING LINE CIRCUITS, CLASS B NOTIFICATION APPLIANCE CIRCUITS). FURNISH & INSTALL END-OF-LINE RESISTORS WHERE REQ'D.
5. EQUIPMENT SUPPLIER SHALL SUBMIT SHOP DRAWINGS INDICATING EXACT ROUTING OF RACEWAYS AND NUMBER AND SIZE OF CONDUCTORS IN RACEWAYS FOR THE FIRE ALARM SYSTEM. THE ELECTRICAL CONTRACTOR SHALL USE THE REVIEWED DRAWING FOR ROUGH-IN OF FIRE ALARM SYSTEM RACEWAYS AND OUTLET BOXES.
6. MULTI SENSOR DETECTORS FOR AREA DETECTION SHALL BE LOCATED AS NEAR THE CENTER OF THE ROOM AS PRACTICAL. DO NOT LOCATE ANY DETECTOR WITHIN 3-FT. OF AN HVAC SUPPLY OR RETURN GRILLE. PROVIDE AUXILIARY CONTACT ON MULTI CRITERIA DETECTORS LOCATED IN CORRIDORS AT SMOKE DOORS. WIRE MAGNETIC DOOR HOLDERS THRU AUXILIARY CONTACT TO RELEASE DOOR WHEN THOSE DETECTORS ARE ACTUATED.
7. DUCT SMOKE DETECTORS WHERE REQUIRED SHALL BE FURNISHED BY THE FIRE ALARM SYSTEM SUPPLIER AND INSTALLED BY A QUALIFIED HVAC TECHNICIAN UNDER DIVISION 28. FIRE ALARM SYSTEM WIRING SHALL BE PROVIDED BY THE FIRE ALARM SYSTEM SUPPLIER UNDER DIVISION 28. COORDINATE IN FIELD WITH EXISTING CONTROL WIRING AND PROVIDE ALL CONDUIT, WIRING, MODULES, HARDWARE, SOFTWARE AND PROGRAMMING FOR A FULLY OPERATIONAL SYSTEM.

   DUCT SMOKE DETECTORS TO BE LOCATED AND INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. COORDINATE THE LOCATION OF EACH DUCT DETECTOR IN THE FIELD WITH THE MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN TO INSURE COMPLIANCE WITH THE MANUFACTURER'S REQUIREMENTS.

   PROVIDE DOCUMENTATION OF DUCT SMOKE DETECTOR TESTING PER NFPA 72 TABLE 14.4.2.2-14(G)(6). AIR DUCT DETECTORS SHALL BE TESTED/INSPECTED TO ENSURE THAT THE DEVICE WILL SAMPLE THE AIRSTREAM. THE TEST SHALL BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS.
8. LOCATE MANUAL PULL STATIONS WITHIN 5'-0" OF THE EXIT DOOR PER NFPA AND IBC REQUIREMENTS. PROVIDE ANY SPECIAL ADAPTER PLATES OR COVER PLATES REQ'D TO MOUNT PULL STATIONS IN DOOR MULLIONS WHERE APPLICABLE AMD PAINT EXPOSED SURFACES TO MATCH MULLION.
9. EACH HORN/STROBE LOCATED AT THE END OF A CORRIDOR MUST BE WITHIN 15'-0" OF THE END WALL PER NFPA 72. HORN/STROBES IN CLASSROOMS AND OFFICES MUST BE LOCATED TO COMPLY WITH TABLE 7.5.4.3.1(a) & TABLE 7.5.4.3.1(b) OF NFPA 72. DO NOT ADJUST LOCATIONS OF HORN/STROBES WITHOUT CONSULTING WITH THE ENGINEER AND OBTAINING WRITTEN PERMISSION.
10. FIELD VERIFY LOCATION OF FIRE ALARM PANEL "FAC" WITH OWNER AND AUTHORITY HAVING JURISDICTION PRIOR TO ROUGH-IN.
11. IN ADDITION TO MULTI SENSOR DETECTORS SHOWN, CONTRACTOR WILL BE REQUIRED TO FURNISH & INSTALL MULTI CRITERIA DETECTORS IN ALL ROOMS WITH FIRE ALARM POWER SUPPLIES AND POWER BOOSTERS. IN ADDITION TO 120V CIRCUITS SHOWN, CONTRACTOR SHALL BE REQUIRED TO FURNISH & INSTALL ANY 120V CIRCUITS NECESSARY TO PROVIDE A COMPLETE AND OPERABLE FIRE ALARM SYSTEM.
12. FURNISH & INSTALL STI STOPPER II PROTECTIVE GUARD COVERS WITH BUILT-IN AUDIBLE ALARM FOR ALL PULL STATIONS.
13. ADDITIONAL FIRE ALARM DEVICES: THE ELECTRICAL CONTRACTOR AND FIRE ALARM SYSTEM INSTALLER SHALL FURNISH AND INSTALL ADDITIONAL FIRE ALARM DEVICES AT THE DISCRETION OF THE ARCHITECT/ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION IN THE FOLLOWING QUANTITIES:
    - (6) HORN/STROBE LIGHTS
    - (2) STROBE LIGHTS
    - (2) DUCT MOUNTED SMOKE DETECTORS
    - (3) MANUAL PULL STATIONS
    - (3) CEILING MOUNTED MULTI SENSOR OR HEAT DETECTORS

   INCLUDE COMPLETE COSTS TO FURNISH AND INSTALL THE ABOVE ADDITIONAL DEVICES IN BASE BID, INCLUDING ALL CONDUIT, OUTLET BOXES, 120V POWER, WIRING, AND SYSTEM PROGRAMMING. ANY DEVICES NOT USED SHALL BE TURNED OVER TO THE OWNER AS SPARE DEVICES AT THE END OF THE PROJECT.
15. USE OWNER'S ACTUAL PLACARDED ROOM NAMES FOR FINAL PROGRAMMING OF THE FIRE ALARM SYSTEM. INDICATE ANY DISCREPANCIES WITH DRAWING ROOM NAMES OR NUMBERS ON AS-BUILT MARK-UPS.
16. THE CONTRACTOR SHALL PROVIDE THE REQUIRED NUMBER OF POWER EXTENDER PANELS TO SUPPORT NOTIFICATION DEVICES. EXTENDER PANELS MAY BE STACKED A MAXIMUM OF TWO PANELS VERTICALLY.
17. BACKBOXES FOR ALL CEILING FIRE ALARM DEVICES SHALL BE FLUSH MOUNTED WHERE CONDUIT IS ROUTED ABOVE FINISHED CEILING. WHERE SURFACE MOUNTING OF DEVICES IS NECESSARY, PROVIDE THE SHALLOWEST SURFACE STYLE BOXES ALLOWED BY MANUFACTURER.
18. WHERE CEILINGS ARE EXISTING, THE CONTRACTOR SHALL REMOVE AND REPLACE ALL CEILING TILES NECESSARY FOR INSTALLATION OF FIRE ALARM DEVICES. THE CONTRACTOR SHALL REPLACE ANY CEILING TILES DAMAGED AS A RESULT OF THIS WORK AT THE CONTRACTOR'S EXPENSE.
19. WHERE SURFACE MOUNTING OF RACEWAY IS REQUIRED, WIREMOLD MAY BE USED. MINIMUM WIREMOLD SIZE SHALL BE V200. PROVIDE LARGER WIREMOLD SIZES AS NECESSARY TO MAINTAIN NO MORE THAN 40% FILL. PAINT WIREMOLD TO MATCH EXISTING FINISHES.
20. BACKBOXES FOR SURFACE DEVICES SHALL BE PER FIRE ALARM EQUIPMENT MANUFACTURER AND INSTALLED SUCH THAT DEVICE APRON IS FLUSH TO WALL SURFACE.
21. CONDUIT ROUTING SHALL BE SUCH THAT IT DOES NOT IMPEDE ROUTINE MAINTENANCE OF OTHER SYSTEMS (LTG, HVAC, PLB, ETC.)
22. EXISTING NAC PANELS SHALL NOT BE REUSED. EXISTING FIRE ALARM SIGNAL AND NOTIFICATION WIRING SHALL NOT BE REUSED. EXISTING 120V POWER CONDUCTORS MAY BE REUSED PROVIDED THEY MEET THE REQUIREMENTS OF THE N.E.C.
23. PENETRATIONS AT RATED WALLS SHALL BE SEALED WITH A U.L. LISTED SEALANT AND METHOD. PROVIDE DOCUMENTATION FOR EACH PENETRATION METHOD USED.
24. INTERFACES WITH MECHANICAL SYSTEM (DUCT SMOKE DETECTION, FIRE DAMPERS, ETC.) WERE OBTAINED FROM RECORD DRAWINGS AND FIELD OBSERVATIONS. IF, DURING THE COURSE OF THIS WORK, ADDITIONAL MECHANICAL INTERFACE REQUIREMENTS ARE DISCOVERED, THEY SHALL BE INTEGRATED INTO THE FIRE ALARM SYSTEM FOR A COMPLETE, FULLY FUNCTIONAL FIRE ALARM SYSTEM. PROVIDE ALL DEVICES, HARDWARE, CONDUIT, CONDUCTORS, SOFTWARE AND PROGRAMMING REQUIRED.
25. EXISTING CONTROL WIRING FOR MECHANICAL INTERFACES MAY BE REUSED PROVIDED IT IS SIZED PER THE N.E.C. AND IS IN GOOD CONDITION. FRAYED, DAMAGED, SPLICED OR NON-INSULATED WIRING IS NOT ACCEPTABLE.

FIRE ALARM SYMBOLS

FAC	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM REMOTE ANNUNCIATOR
FPE	FIRE ALARM POWER EXTENDER PANEL
F	FIRE ALARM MANUAL PULL STATION. 48" AFF.
M	FIRE ALARM WALL MOUNTED HORN WITH STROBE LIGHT, CANDELA RATING AS NOTED. MOUNT BETWEEN 80" AND 96" AFF PER NFPA 72 AND ADA REQUIREMENTS.
S	FIRE ALARM WALL MOUNTED HORN. MOUNT BETWEEN 80"AND 96" AFF PER NFPA 72 AND ADA REQUIREMENTS.
CM	CEILING MOUNTED FIRE ALARM HORN WITH STROBE LIGHT.
C	CEILING MOUNTED FIRE ALARM HORN.
CS	FIRE ALARM WALL MOUNTED STROBE LIGHT, CANDELA RATING AS NOTED. MOUNT BETWEEN 80" AND 96" AFF PER NFPA 72 AND ADA REQUIREMENTS.
CS	CEILING MOUNTED FIRE ALARM STROBE LIGHT, CANDELA RATING AS NOTED.
M	MULTI CRITERIA (PHOTOELECTRIC, THERMAL) DETECTOR. CEILING MOUNTED, UNLESS NOTED.
H	HEAT DETECTOR. CEILING MOUNTED, UNLESS NOTED OTHERWISE.
R	REFLECTED BEAM SMOKE DETECTOR. INSTALL ACCORDING TO MANUFACTURER'S DIRECTIONS.
D	DUCT SMOKE DETECTOR DETECTOR. COORDINATE WITH DUCT WIDTHS.
A	DUCT SMOKE DETECTOR REMOTE ALARM INDICATOR WITH INTEGRATED KEYED TEST SWITCH.
H	WALL MOUNTED MAGNETIC DOOR HOLDER, 120V. 76" AFF, UNLESS NOTED – FIELD VERIFY WITH ARCHITECT. WIRE TO NEAREST AVAILABLE 120V CIRCUIT.
MM	FIRE ALARM MONITORING MODULE.
CM	FIRE ALARM CONTROL MODULE.
WP	WEATHERPROOF DEVICE. PROVIDE BACKBOX AND COVER U.L. LISTED AS WEATHERPROOF.

FIRE ALARM SYMBOL SCHEDULE NOTES:
1. WALL MOUNTED NOTIFICATION DEVICES SHALL BE LOCATED AT UNIFORM HEIGHT ABOVE FINISHED FLOOR WHERE CEILING HEIGHTS ALLOW.

NO.	REVISION	DATE	BY

sims group
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BID DOCUMENTS

SOUTH CAROLINA SIMS GROUP ENGINEERS, INC. No. C03104 CERTIFICATE OF AUTHORIZATION

REGISTERED PROFESSIONAL ENGINEER No. 18744 CHRIS PARTRICH 01/28/2014

USCA PENLAND AND H&SS BUILDING
FIRE ALARM UPGRADES
SC STATE PROJECT #: CP00367346 DM12

FIRE ALARM DETAILS, RISER DIAGRAM, AND NOTES

DRAWN: RAC
CHECKED: CLP
JOB No.: C13047
DATE: JAN 28, 2015

E-001

DRAWING No. 1 OF 5

1 PENLAND BUILDING FIRST FLOOR FIRE ALARM PLAN
SCALE: 1/8" = 1'-0"

DRAWING E101 FIRE ALARM KEYED NOTES:

1. RATED DOOR LOCATION. PROVIDE MULTI CRITERIA DETECTORS LOCATED PER DETAIL 3 ON DRAWING E001, MAGNETIC DOOR HOLDERS AND CONTROL MODULE OR RELAY FOR DOOR RELEASE UPON ACTIVATION OF ASSOCIATED MULTI CRITERIA DETECTORS. FOR RATED DOORS AT STAIRS, ACTIVATION OF ANY ASSOCIATED MULTI CRITERIA DETECTOR SHALL CAUSE ALL DOOR HOLDERS AT STAIR TO RELEASE.
2. PROVIDE DUCT SMOKE DETECTOR AND REMOTE INDICATOR WITH KEYED TEST SWITCH. PROVIDE CONTROL MODULE PROGRAMMED FOR UNIT SHUT DOWN BASED ON ACTIVATION OF ASSOCIATED DUCT SMOKE DETECTOR. COORDINATE WITH HVAC CONTROLS AND PROVIDE ALL APPURTENANCES FOR A COMPLETE, OPERATIONAL SYSTEM.

NO.	REVISION	DATE	BY

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No. C03104
CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 18744
CHRIS PARTRICH
01/28/2014

USCA PENLAND AND H&SS BUILDING FIRE ALARM UPGRADES

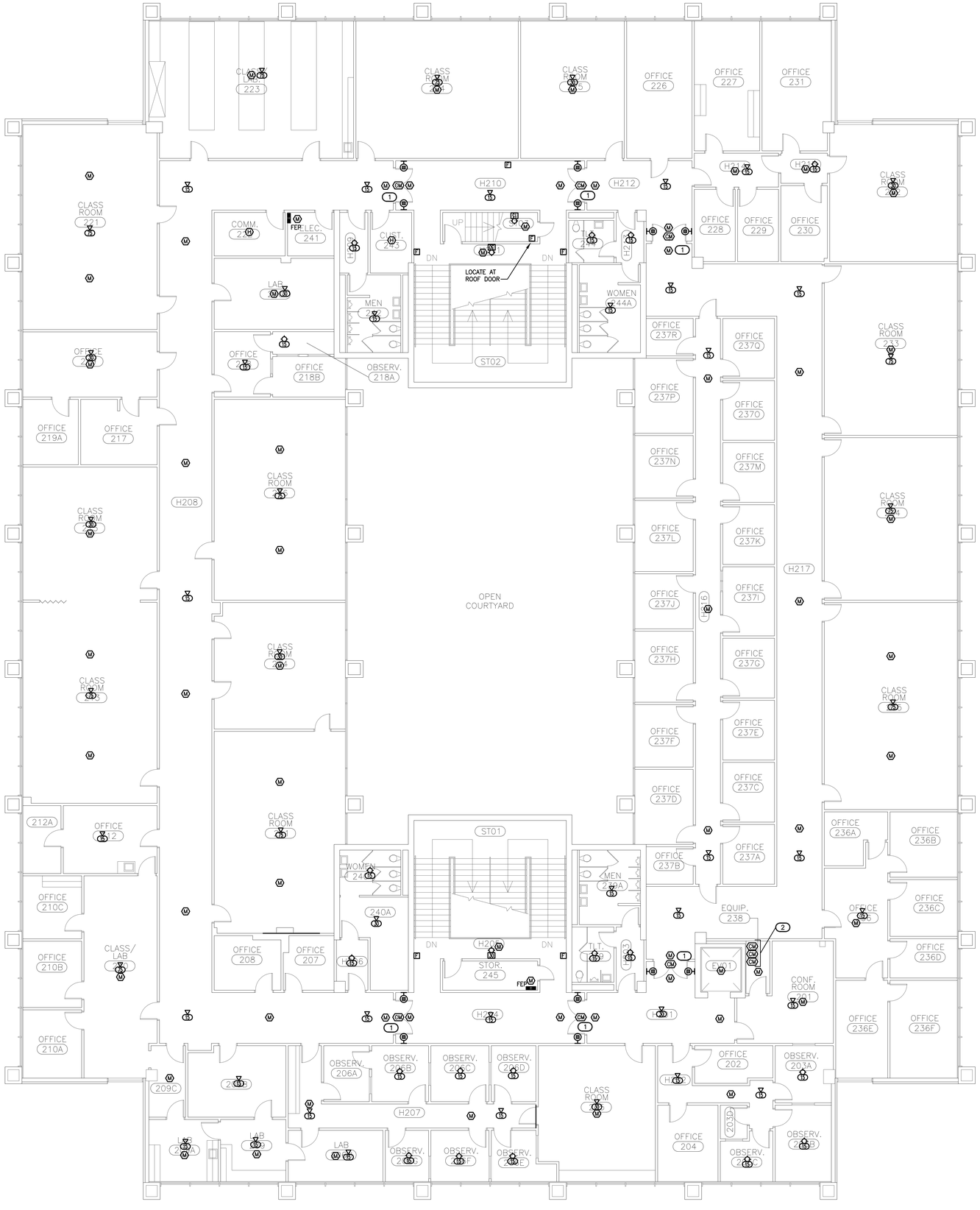
SC STATE PROJECT #: CP00367346 DM12

FIRST FLOOR F/A PLAN (PENLAND ADMIN. BLDG.)

DRAWN	RAC
CHECKED	CLP
JOB No.	C13047
DATE	JAN 28, 2015

E-101

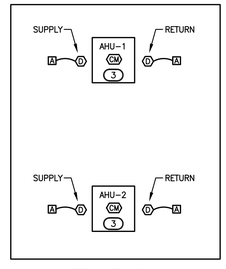
DRAWING No. 2 OF 5



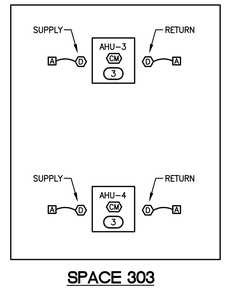
1 PENLAND BUILDING SECOND FLOOR FIRE ALARM PLAN
SCALE: 1/8" = 1'-0"

DRAWING E102 FIRE ALARM KEYED NOTES:

1. RATED DOOR LOCATION. PROVIDE MULTI CRITERIA DETECTORS LOCATED PER DETAIL 3 ON DRAWING E001, MAGNETIC DOOR HOLDERS AND CONTROL MODULE OR RELAY FOR DOOR RELEASE UPON ACTIVATION OF ASSOCIATED MULTI CRITERIA DETECTORS. FOR RATED DOORS AT STAIRS, ACTIVATION OF ANY ASSOCIATED MULTI CRITERIA DETECTOR SHALL CAUSE ALL DOOR HOLDERS AT STAIR TO RELEASE.
2. CONTROL MODULES FOR ELEVATOR PHASE 1 RECALL. PROGRAM CONTROL MODULES FOR ELEVATOR FUNCTIONS PER NFPA-72 AND COORDINATE WITH OWNER'S ELEVATOR CONTRACTOR FOR INTERFACE CONNECTION TO ELEVATOR CONTROL PANEL FOR A FULLY OPERATIONAL SYSTEM.
3. PROVIDE DUCT SMOKE DETECTOR AND REMOTE INDICATOR WITH KEYED TEST SWITCH. PROVIDE CONTROL MODULE PROGRAMMED FOR UNIT SHUT DOWN BASED ON ACTIVATION OF ASSOCIATED SUPPLY OR RETURN DUCT SMOKE DETECTOR. COORDINATE WITH HVAC CONTROLS AND PROVIDE ALL APPURTENANCES FOR A COMPLETE, OPERATIONAL SYSTEM.



SPACE 302



SPACE 303

2 PENLAND BUILDING ROOF MECHANICAL ROOMS FIRE ALARM PLANS
SCALE: 1/8" = 1'-0"

NO.	REVISION	DATE	BY

sims group
SIMS GROUP ENGINEERS, INC.
800 Columbiana Drive, Suite 208
Lexington, South Carolina 29072
Phone: (803) 765-1007 Fax: (803) 765-1030
www.simsgroupsss.com

BID DOCUMENTS

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION
SIMS GROUP ENGINEERS, INC.
No. C03104

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
No. 18744
CHRIS PATRICH
01/28/2014

USCA PENLAND AND H&SS BUILDING FIRE ALARM UPGRADES

SC STATE PROJECT #: CP00367346 DM12

SECOND FLOOR F/A PLAN (PENLAND ADMIN. BLDG.)

DRAWN	RAC
CHECKED	CLP
JOB No.	C13047
DATE	JAN 28, 2015

E-102

DRAWING No. 3 OF 5

DRAWING E201 FIRE ALARM KEYED NOTES:

(1) RATED DOOR LOCATION. PROVIDE MULTI CRITERIA DETECTORS LOCATED PER DETAIL 3 ON DRAWING E001, MAGNETIC DOOR HOLDERS AND CONTROL MODULE OR RELAY FOR DOOR RELEASE UPON ACTIVATION OF ASSOCIATED MULTI CRITERIA DETECTORS. FOR RATED DOORS AT STAIRS, ACTIVATION OF ANY ASSOCIATED MULTI CRITERIA DETECTOR SHALL CAUSE ALL DOOR HOLDERS AT STAIR TO RELEASE.

(2) CONTROL MODULES FOR ELEVATOR PHASE 1 RECALL. PROGRAM CONTROL MODULES FOR ELEVATOR FUNCTIONS PER NFPA-72 AND COORDINATE WITH OWNER'S ELEVATOR CONTRACTOR FOR INTERFACE CONNECTION TO ELEVATOR CONTROL PANEL FOR A FULLY OPERATIONAL SYSTEM.

(3) PROVIDE DUCT SMOKE DETECTOR AND REMOTE INDICATOR WITH KEYED TEST SWITCH. PROVIDE CONTROL MODULE PROGRAMMED FOR UNIT SHUT DOWN BASED ON ACTIVATION OF ASSOCIATED DUCT SMOKE DETECTOR. COORDINATE WITH HVAC CONTROLS AND PROVIDE ALL APPURTENANCES FOR A COMPLETE, OPERATIONAL SYSTEM.

1 H AND SS BUILDING FIRST FLOOR FIRE ALARM PLAN
SCALE: 1/8" = 1'-0"

NO.	REVISION	DATE	BY

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SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 16744
CHRIS PARTRICH
01/28/2014

USCA PENLAND AND H&SS BUILDING FIRE ALARM UPGRADES

SC STATE PROJECT #: CP00367346 DM12

FIRST FLOOR F/A PLAN (H&SS BLDG.)

DRAWN	RAC
CHECKED	CLP
JOB No.	C13047
DATE	JAN 28, 2015

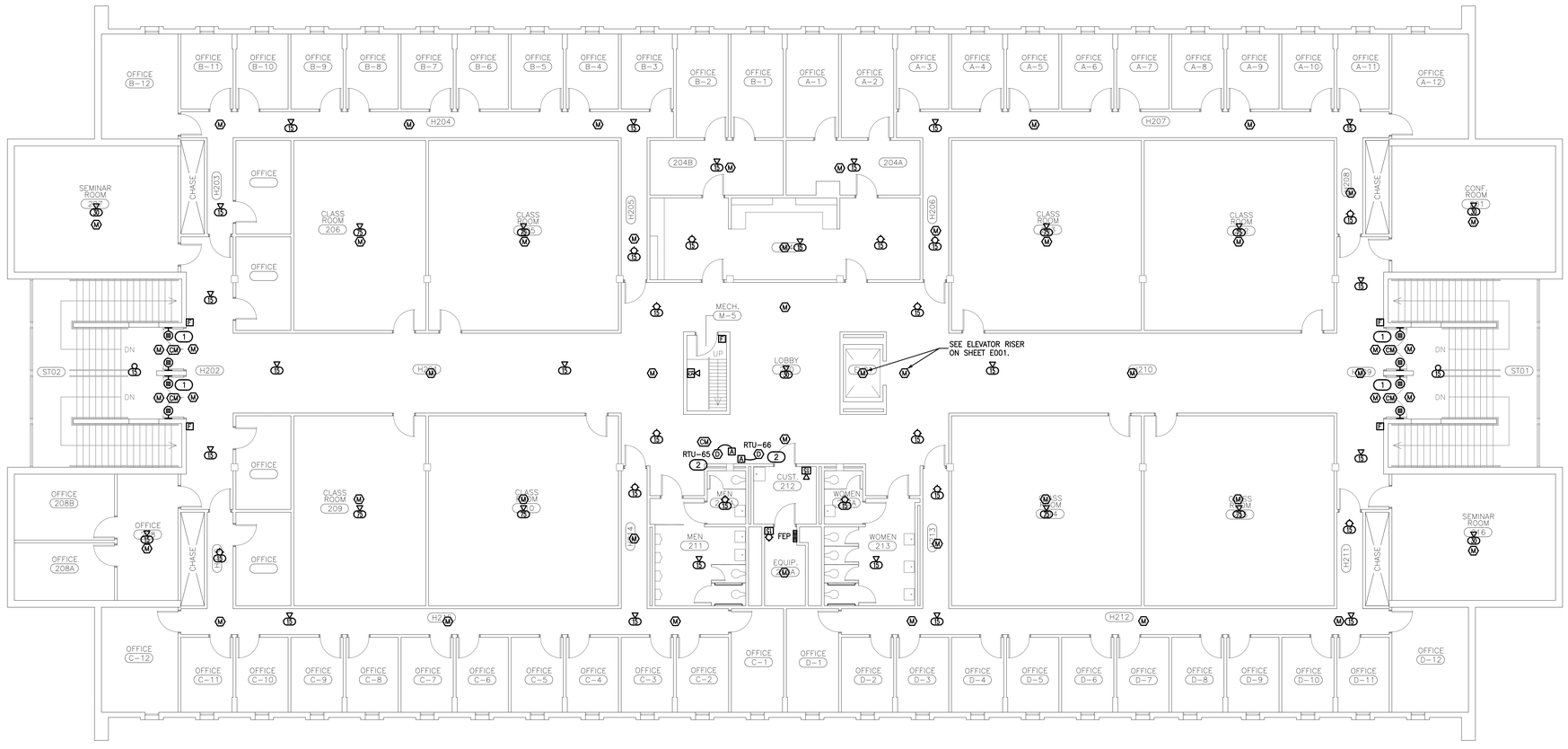
E-201

DRAWING No. 4 OF 5

DRAWING E202 FIRE ALARM KEYED NOTES:

(1) RATED DOOR LOCATION. PROVIDE MULTI CRITERIA DETECTORS LOCATED PER DETAIL 3 ON DRAWING E001, MAGNETIC DOOR HOLDERS AND CONTROL MODULE OR RELAY FOR DOOR RELEASE UPON ACTIVATION OF ASSOCIATED MULTI CRITERIA DETECTORS. FOR RATED DOORS AT STAIRS, ACTIVATION OF ANY ASSOCIATED MULTI CRITERIA DETECTOR SHALL CAUSE ALL DOOR HOLDERS AT STAIR TO RELEASE.

(2) PROVIDE DUCT SMOKE DETECTOR AND REMOTE INDICATOR WITH KEYED TEST SWITCH. PROVIDE CONTROL MODULE PROGRAMMED FOR UNIT SHUT DOWN BASED ON ACTIVATION OF ASSOCIATED DUCT SMOKE DETECTOR. COORDINATE WITH HVAC CONTROLS AND PROVIDE ALL APPURTENANCES FOR A COMPLETE, OPERATIONAL SYSTEM.



1 H AND SS BUILDING SECOND FLOOR FIRE ALARM PLAN
SCALE: 1/8" = 1'-0"

NO.	REVISION	DATE	BY

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SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
No. 19744
CHRIS PARTRICH
01/28/2014

USCA PENLAND AND H&SS BUILDING FIRE ALARM UPGRADES

SC STATE PROJECT #: CP00367346 DM12

SECOND FLOOR F/A PLAN (H&SS BLDG.)

DRAWN	RAC
CHECKED	CLP
JOB No.	C13047
DATE	JAN 28, 2015

E-202

DRAWING No. 5 OF 5