

fire alarm riser diagram
 SCALE: NONE

EXISTING FIRE ALARM SYSTEM IS BEING SHOWN FOR REFERENCE ONLY. NO NEW FIRE ALARM EQUIPMENT IS BEING ADDED. ONLY FIRE ALARM ADDRESSABLE RELAYS FOR NEW MOTORIZED DAMPERS ARE BEING ADDED TO SYSTEM.

ELECTRICAL SPECIFICATIONS

- 16010 BASIC ELECTRICAL REQUIREMENTS
- A. All work and equipment under this Division shall be in strict compliance with the codes, standards and practices listed herein, and their respective dates are furnished as the minimum latest requirements.
- Building Code: Florida Building Code 2009 (with latest amendments)
 - Life Safety Code - NFPA 101 (2006 Edition)
 - National Electrical Code - NFPA 70 (2008 Edition)
 - National Fire Alarm Code - NFPA 72 (2002 Edition)
- B. Scope of Work: The work provided under this Division shall include all labor, materials, permits, inspections and reinspection fees, tools, equipment, transportation, insurance, temporary protection, supervision and incidental items essential for proper installation and operation, even though not specifically mentioned or indicated but which are usually provided or are essential for proper installation and operation of all electrical systems as indicated in contract documents.
- C. Notices: Give all notices, file all plans, pay all fees, obtain all permits and approvals from authorities having jurisdiction. Include all fees in the Bid Price.
- D. Interpretation of Drawings:
- The Drawings are diagrammatic and are not intended to show exact locations of conduit runs, outlet boxes, junction boxes, pull boxes, etc. The locations of equipment, appliances, fixtures, conduits, outlets, boxes and similar devices shown on the Drawings are approximate only. Exact locations shall be as accepted by the Engineer during construction. Obtain in the field all information relevant to the placing of electrical work and in case of interference with other work, proceed as directed by the Engineer and provide all labor and materials necessary to complete the work in an acceptable manner.
 - Discrepancies: Notify Architect/Engineer of any discrepancies found during construction of the project and do not proceed with that portion of the project, until a written definitive statement is received providing clear direction. If a conflict exists between the contract documents and any applicable code of standard, the most stringent requirement shall be included for this project. The Engineer shall make the decision regarding questionable areas of conflict.
- E. All materials shall be new, free from defects and shall be either U.L. labeled, U.L. listed or bear the seal of a nationally recognized electrical testing laboratory.
- F. All equipment shall be firmly mounted using approved hangers attached to structural portions of the building. Supporting with tie wire is prohibited. Light fixtures recessed in ceilings shall be supported from the building structure independent of the ceiling system.
- G. Systems Guarantee: Provide a one-year guarantee. This guarantee shall be by the Contractor to the Owner for any defective workmanship or material which has been provided under this Contract at no cost to the Owner for a period of one year from the date of Substantial Completion of the System.
- H. Shop Drawings: Shop drawings are required for all materials equipment.
- 16020 TESTS AND PERFORMANCE VERIFICATION
- Equipment and applications shall be per NEMA standards.
 - Cables, grounds, shall be thoroughly tested.
 - Provide fire alarm testing required by NFPA 72 applicable to scope of this project.
- 16030 ELECTRICAL IDENTIFICATION
- Language all identification shall be in English.
 - Cable and conductor identification will match existing system identification standards.
 - Conduit system markers shall be adhesive or pre-tensioned snap on color coded system marking materials.
 - Apply bands 10 feet on center along the raceway system and at each side of walls or floors, and at branches from mains.
- 16110 RACEWAYS AND CONDUITS
- Raceways and Fittings:
 - All wiring shall be installed in appropriate raceway systems of rigid galvanized conduit, electric metallic tubing, and/or flexible steel conduit as conditions and codes dictate. EMT shall be joined with compression-type fittings.
 - All conduit shall have an insulated copper equipment grounding conductor throughout the entire length of the circuit within the conduit.
- 16120 WIRES AND CABLES
- All branch circuits shall be copper with THHN or THWN insulation unless noted otherwise. Minimum size #12 AWG.
 - Color coding shall comply with NFPA 70. Phase conductors of each voltage system must be of a different color. Neutrals shall be white for 120/208 and grey for 277/480. Equipment grounding conductors shall be green insulated.
- 16130 OUTLET BOXES
- Outlet Boxes: Outlet boxes shall be one piece or projection welded, galvanized stamped steel for gang sizes required. Sectional boxes are not acceptable. Boxes shall be 4" square and 1-1/2" deep generally. Larger boxes shall be used as required by code.
- 16720 FIRE ALARM SYSTEM
- Electrically supervised, fully addressable, 24V DC fire alarm system
 - Approved Manufacturers: Match existing system manufacturer for new devices.
 - Provide new programming and testing as required.

ELECTRICAL SYMBOL LEGEND	
SYMBOL	DESCRIPTION
BASIC MATERIALS	
	MANUAL MOTOR RATED SWITCH WITH OVERLOAD HEATERS
	JUNCTION BOX
	BRANCH CIRCUIT RISER CONDUIT (SEE SPECIFIC CONDUIT SYMBOL FOR LOCATION OF CONDUIT ROUTING)
	CONDUIT CONCEALED IN WALL OR ABOVE CEILING
	CONDUIT CONCEALED IN SLAB OR UNDERGROUND
	CONDUIT EXPOSED
	CONDUIT CONTINUED
FIRE ALARM/DETECTION SYSTEM	
	EXISTING DUCT DETECTOR
	ADDRESSABLE FIRE ALARM RELAY
	EXISTING FIRE ALARM CONTROL PANEL
	EXISTING FIRE ALARM TERMINAL CABINET
PROVIDE MINIMUM 3/4" CONDUIT & WIRING BETWEEN EACH FIRE ALARM DEVICE AND FROM LAST DEVICE TO FAC UNLESS OTHERWISE NOTED.	
FIRE ALARM WIRING NOTES:	
1. LOW VOLTAGE CONDUCTORS; PROVIDE CONDUCTORS IN ACCORDANCE WITH NFPA 70 AND NFPA 72 AND AS RECOMMENDED BY THE FIRE ALARM SYSTEM MANUFACTURER. CONDUCTORS SHALL BE COPPER, MINIMUM NO. 14 AWG, TWISTED SHIELDED PAIR.	
2. SURVIVABILITY: A 2-HOUR RATED CABLE ASSEMBLY SHALL BE PROVIDED FOR NOTIFICATION APPLIANCE CIRCUITS AND ANY OTHER CIRCUITS NECESSARY FOR THE OPERATION OF THE NOTIFICATION APPLIANCE CIRCUITS FROM THE POINT AT WHICH THEY EXIT THE CONTROL UNIT UNTIL THE POINT THAT THEY ENTER THE NOTIFICATION ZONE THAT THEY SERVE.	
3. CONDUIT: ALL FIRE ALARM CABLE SHALL BE INSTALLED IN CONDUIT.	
4. ACCEPTABLE MANUFACTURER: FOR TWO-HOUR RATED CABLE ASSEMBLIES: TYCO THERMAL CONTROLS PYROTEMAX CIG 2-HOUR FIRE RATED CABLE ASSEMBLY, MINIMUM #14 AWG, IN 3/4" MINIMUM EMT CONDUIT, OR APPROVED EQUAL. FOR ALL OTHER FIRE ALARM CABLES: BELDEN, WEST PENN, ATLAS, OR APPROVED EQUAL.	

GENERAL NOTES	
1.	EQUIPMENT SHALL BE ON MATERIALS SUITABLE FOR THE ENVIRONMENT IN WHICH IT IS INSTALLED WITH THE APPROPRIATE NEMA ENCLOSURE RATING.
2.	WORKING CLEARANCES FOR ALL EQUIPMENT WITH ELECTRICAL CONNECTIONS SHALL BE IN COMPLIANCE WITH NEC.
3.	WHEN ELECTRICAL BOXES ARE LOCATED IN VERTICAL FIRE RESISTIVE ASSEMBLIES (CLASSIFIED AS FIRE-SMOKE AND SMOKE PARTITIONS), THEY SHALL BE INSTALLED WITHOUT AFFECTING THE FIRE CLASSIFICATION. ALL OF THE FOLLOWING CONDITIONS SHALL BE MET: <ol style="list-style-type: none"> ALL ELECTRICAL BOXES SHALL BE METALLIC. BOX OPENING SHALL OCCUR ONLY ON ONE SIDE OF FRAMING SPACE. BOX OPENING SHALL NOT EXCEED 16 SQUARE INCHES. ALL CLEARANCES BETWEEN OUTLET BOX AND COPPING BOARD SHALL BE COMPLETELY FILLED WITH JOINT COMPOUND OR OTHER APPROVED MATERIAL. PROVIDE A WALL AROUND OUTLETS LARGER THAN 16 SQUARE INCHES. THE INTEGRITY OF THE WALL RATING SHALL BE MAINTAINED. THE TOTAL AGGREGATE SURFACE AREA OF THE BOXES SHALL NOT EXCEED 100 SQUARE INCHES PER 100 SQUARE FEET. OUTLET BOXES LOCATED ON OPPOSITE SIDES OF FIRE RESISTIVE ASSEMBLIES SHALL BE SEPARATED BY A MINIMUM HORIZONTAL DISTANCE OF 24 INCHES. OUTLET BOXES SHALL BE SECURELY FASTENED TO WALL FRAMING MEMBERS. THE OPENING IN THE COPPING BOARD FACING SHALL BE CUT NOT TO EXCEED 1/8 INCH BETWEEN THE EDGES OF THE OUTLET BOX AND THE EDGES OF THE OPENING.
4.	LOCATIONS OF EQUIPMENT INDICATED ON ELECTRICAL DRAWINGS ARE APPROXIMATE. COORDINATE EXACT LOCATIONS IN FIELD PRIOR TO ROUGHING IN AND ROUTING CONDUIT.
5.	THE FIRE ALARM SYSTEMS AND INFORMATION SHOWN WITHIN THESE DRAWINGS REPRESENT THE DESIGN INTENT OF THE ENGINEER OF RECORD. THESE DRAWINGS AND SPECIFICATIONS ARE IN COMPLIANCE WITH STATE RULE 61G15-33.009 FOR DESIGN OF ALARM SYSTEMS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT COMPLETE SHOP DRAWINGS TO THE AUTHORITY HAVING JURISDICTION FOR PERMITTING AND REVIEW. THE SHOP DRAWINGS SHALL BE IN COMPLIANCE WITH STATE RULE 61G15-33.006 AND NFPA 72 SYSTEM DESIGN.

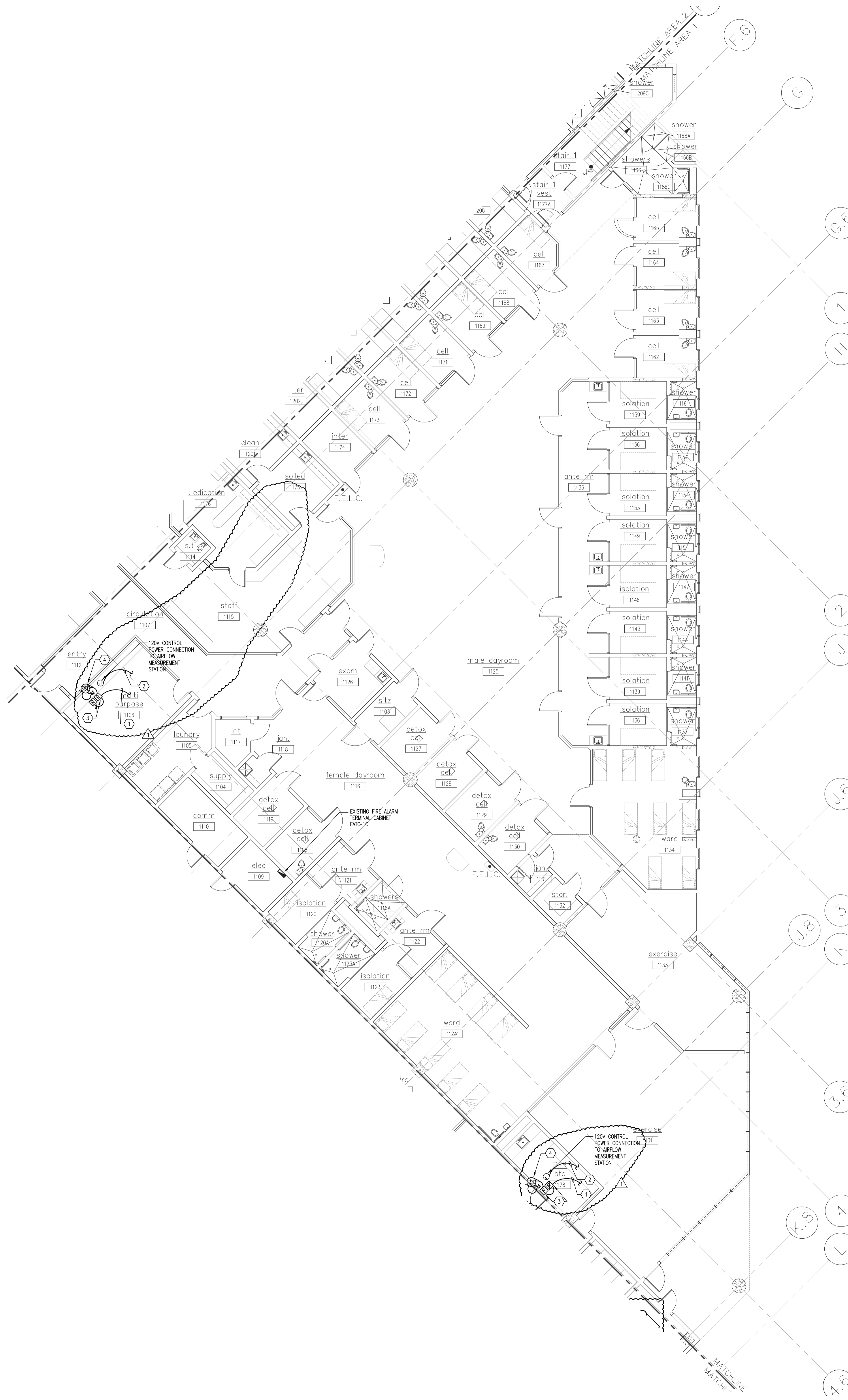
ELECTRICAL DRAWING INDEX	
DRAWING NO.	TITLE
E0.01	SYMBOL LEGEND, DRAWING INDEX, NOTES, SPECIFICATIONS
E3.11C	FIRST FLOOR AREA 1 PHASE C - ELECTRICAL
E3.13C	FIRST FLOOR AREA 3 PHASE C - ELECTRICAL
E3.14C	FIRST FLOOR AREA 4 PHASE C - ELECTRICAL
E3.21B	SECOND FLOOR AREA 1 PHASE B - ELECTRICAL
E3.22B	SECOND FLOOR AREA 2 PHASE B - ELECTRICAL
E3.31A	THIRD FLOOR AREA 1 PHASE A - ELECTRICAL
E3.32A	THIRD FLOOR AREA 2 PHASE A - ELECTRICAL
E3.41A	FOURTH FLOOR AREA 1 PHASE A - ELECTRICAL
E3.42A	FOURTH FLOOR AREA 2 PHASE A - ELECTRICAL

Key Plan:

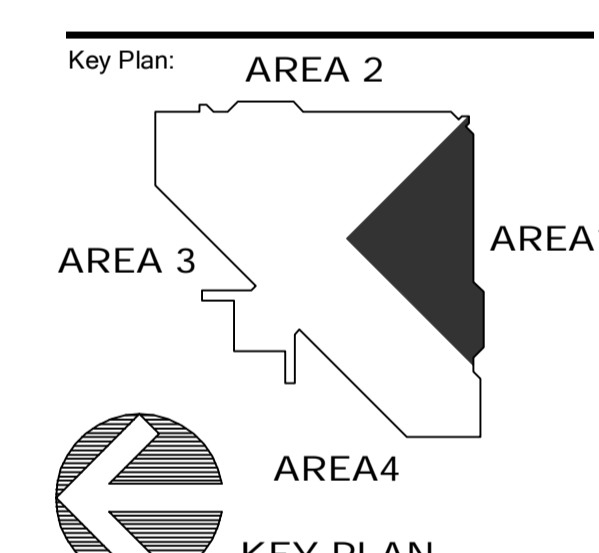
Revisions:	
No.	Description
06/15/12	CD'S & BID SET
07/26/12	ADDENDUM NO. 1

Seal: Wayne Edward Allred, P.E. Florida License #45800

Project No:	111011
Issue Date:	06/15/2012
Drawn By:	LMW
Approved By:	WEA
Scale:	NTS
Drawing Title:	SYMBOL LEGEND, NOTES, DRAWING INDEX, SPECIFICATIONS
Drawing No.:	E0.01



- PLAN NOTES:**
- 1 NEW FIRE ALARM CIRCUIT WIRING & CONDUIT TO EXISTING F.A.C.-12 IN ELEC ROOM 1109. PROVIDE NEW PROGRAMMING IN EXISTING FIRE ALARM SYSTEM.
 - 2 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR MOTORIZED DAMPERS IS 8P-E1C-24. PROVIDE 2#12, 1#12 GND, 3/4" C. FROM NEW MOTORIZED DAMPER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
 - 3 PROVIDE (2) ADDRESSABLE FIRE ALARM RELAYS AT FIRE/SMOKE DAMPER FOR ENGINEERED SMOKE CONTROL SYSTEM FOR MONITORING OF OPEN & CLOSED STATUS, TE INTO AUXILIARY CONTACTS ON DAMPER.
 - 4 DISCONNECT 120V CONTROL POWER CIRCUIT FROM EXISTING DAMPER TO BE REMOVED AND RECONNECT TO NEW DAMPER.



Revisions:

No.	Date	Description
06/15/12		CDPS & BID SET
07/26/12		ADDENDUM NO. 1

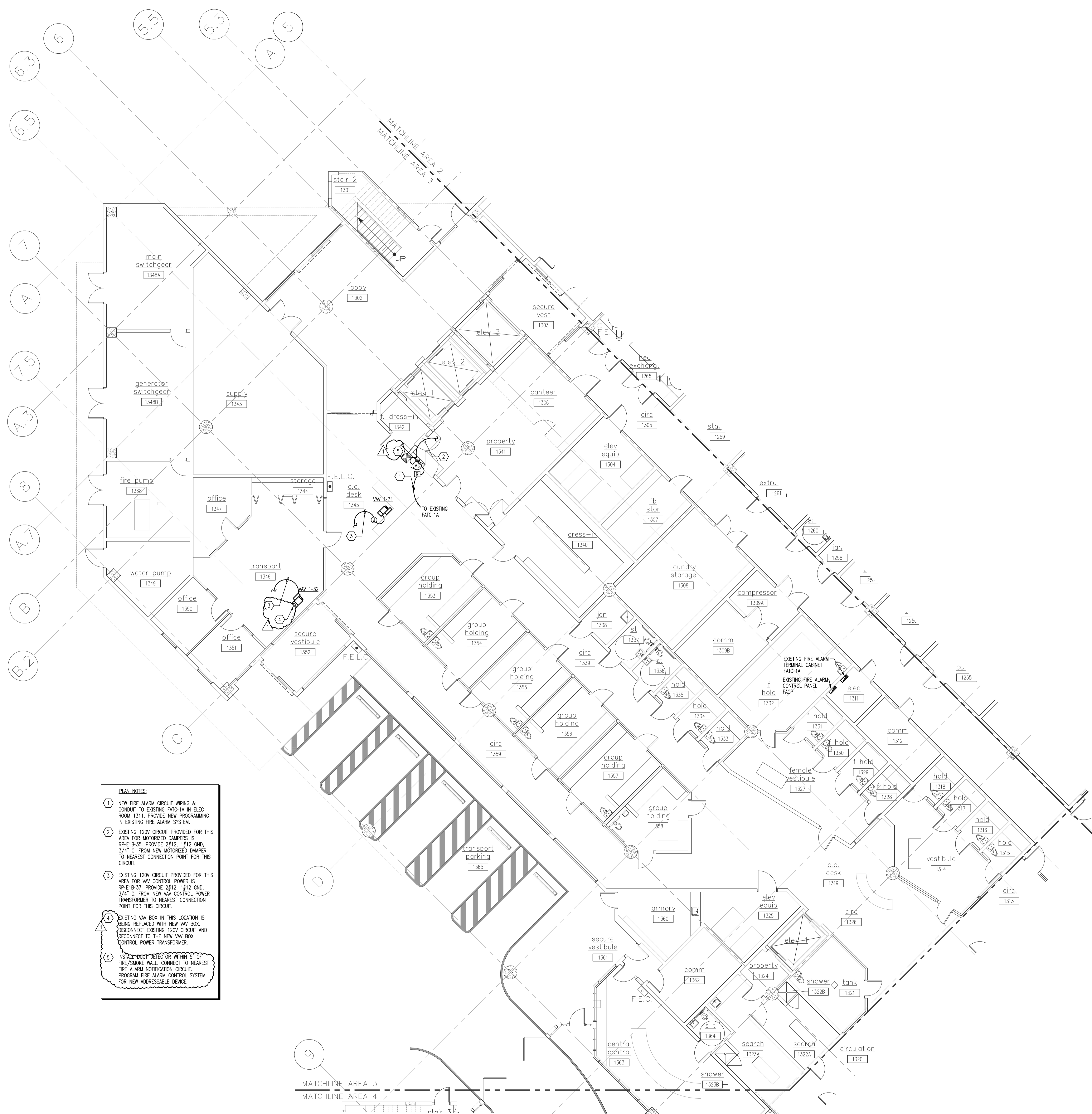
Wayne Edward Allred, P.E.
 Florida License #45800

Project No.: 111011
 Issue Date: 06/15/2012
 Drawn By: LMW
 Approved By: WEA
 Scale: 1/8"=1'-0"

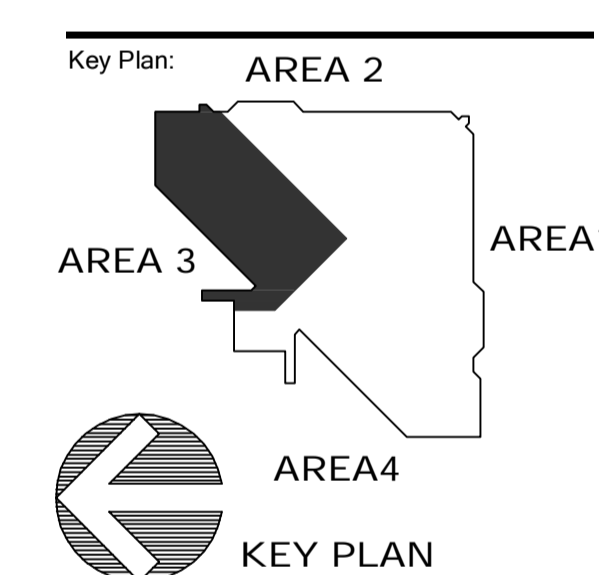
Drawing Title:
FIRST FLOOR AREA 1 - PHASE C ELECTRICAL

Drawing No.: **E3.11C**

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- PLAN NOTES:**
- 1 NEW FIRE ALARM CIRCUIT WIRING & CONDUIT TO EXISTING FATC-1A IN ELEC ROOM 1311. PROVIDE NEW PROGRAMMING IN EXISTING FIRE ALARM SYSTEM.
 - 2 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR MOTORIZED DAMPERS IS RP-E1B-35. PROVIDE 2#12, 1#12 GND, 3/4" C. FROM NEW MOTORIZED DAMPER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
 - 3 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR VAV CONTROL POWER IS RP-E1B-37. PROVIDE 2#12, 1#12 GND, 3/4" C. FROM NEW VAV CONTROL POWER TRANSFORMER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
 - 4 EXISTING VAV BOX IN THIS LOCATION IS BEING REPLACED WITH NEW VAV BOX. DISCONNECT EXISTING 120V CIRCUIT AND RECONNECT TO THE NEW VAV BOX CONTROL POWER TRANSFORMER.
 - 5 WIRELESS DETECTOR WITHIN 5' OF FIRE/SMOKE WALL. CONNECT TO NEAREST FIRE ALARM NOTIFICATION CIRCUIT. PROGRAM FIRE ALARM CONTROL SYSTEM FOR NEW ADDRESSABLE DEVICE.



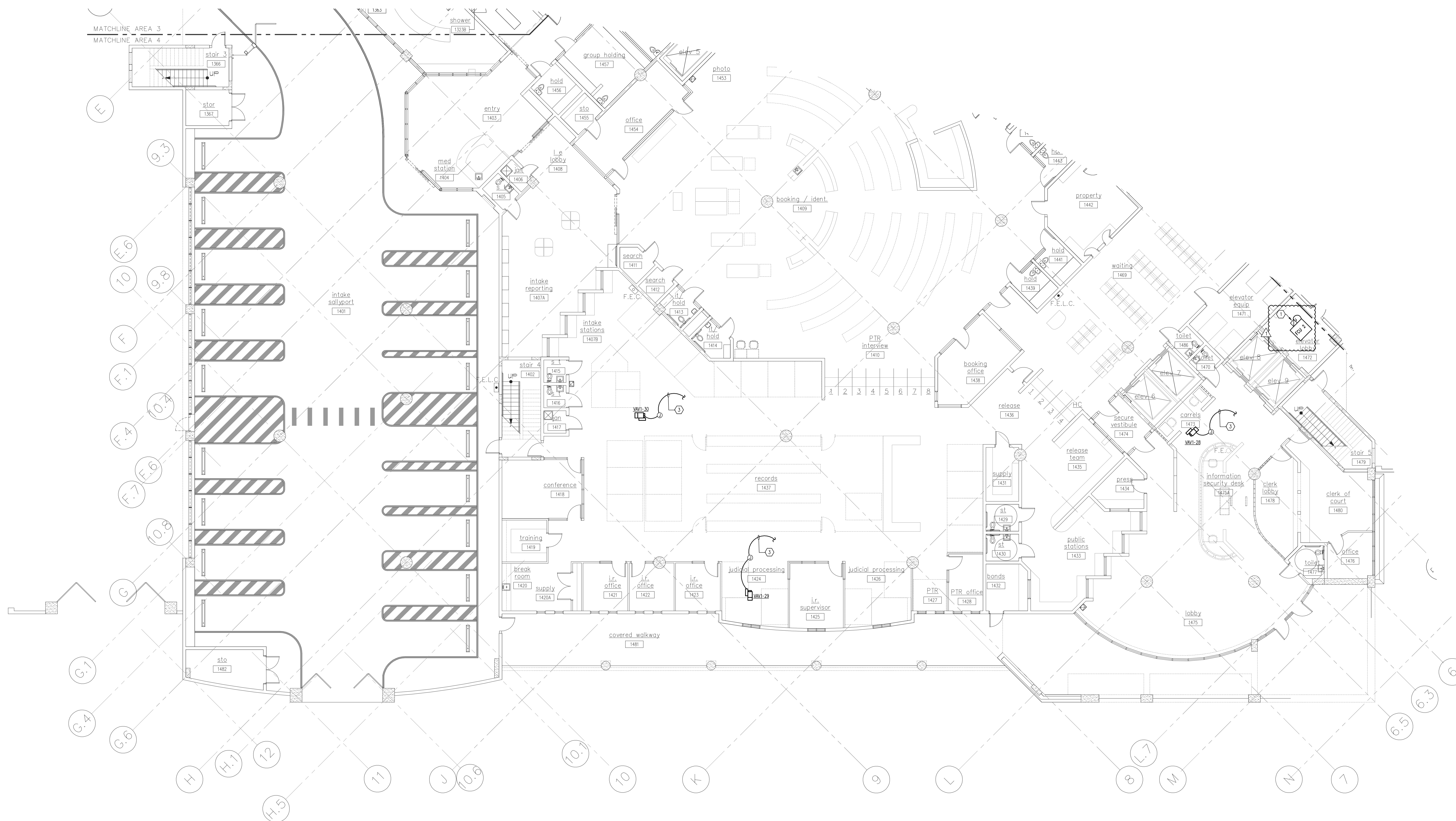
Revisions:

No.	Date	Description
06/15/12		CDS & BID SET
07/26/12		ADDENDUM NO. 1

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 Florida License #45800

Project No.: 111011
 Issue Date: 06/15/2012
 Drawn By: LMW
 Approved By: WEA
 Scale: 1/8"=1'-0"
 Drawing Title:
FIRST FLOOR AREA 3 - PHASE C ELECTRICAL

Drawing No.: **E3.13C**

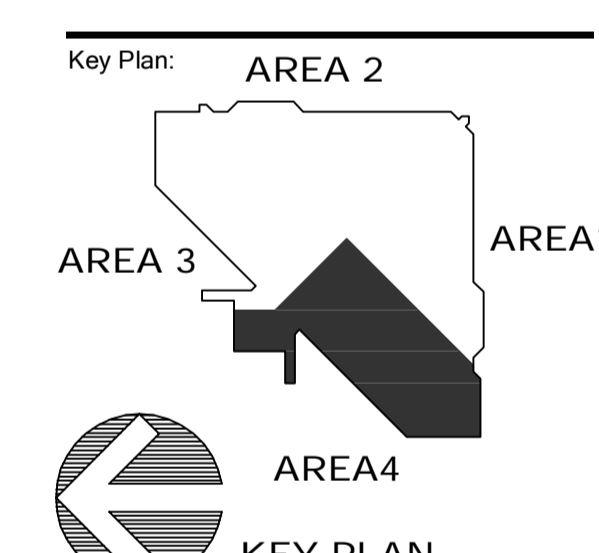


PLAN NOTES

1 DISCONNECT EXISTING ELECTRICAL FROM EXISTING FAN COIL UNIT AND RECONNECT TO NEW FAN COIL UNIT WITH SAME LOAD. COORDINATE MAKEUP OVERCURRENT PROTECTIVE (MOCP) DEVICE WITH SUBMITTED SHOP DRAWINGS AND REPLACE EXISTING MOCP WITH NEW MOCP IF RATING OR TYPE REQUIRED IS DIFFERENT.

2 NOT USED.

3 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR VAV CONTROL POWER IS RP-ET-24. PROVIDE 2#12, 1#12 GND, 3/4" C. FROM NEW VAV CONTROL POWER TRANSFORMER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.

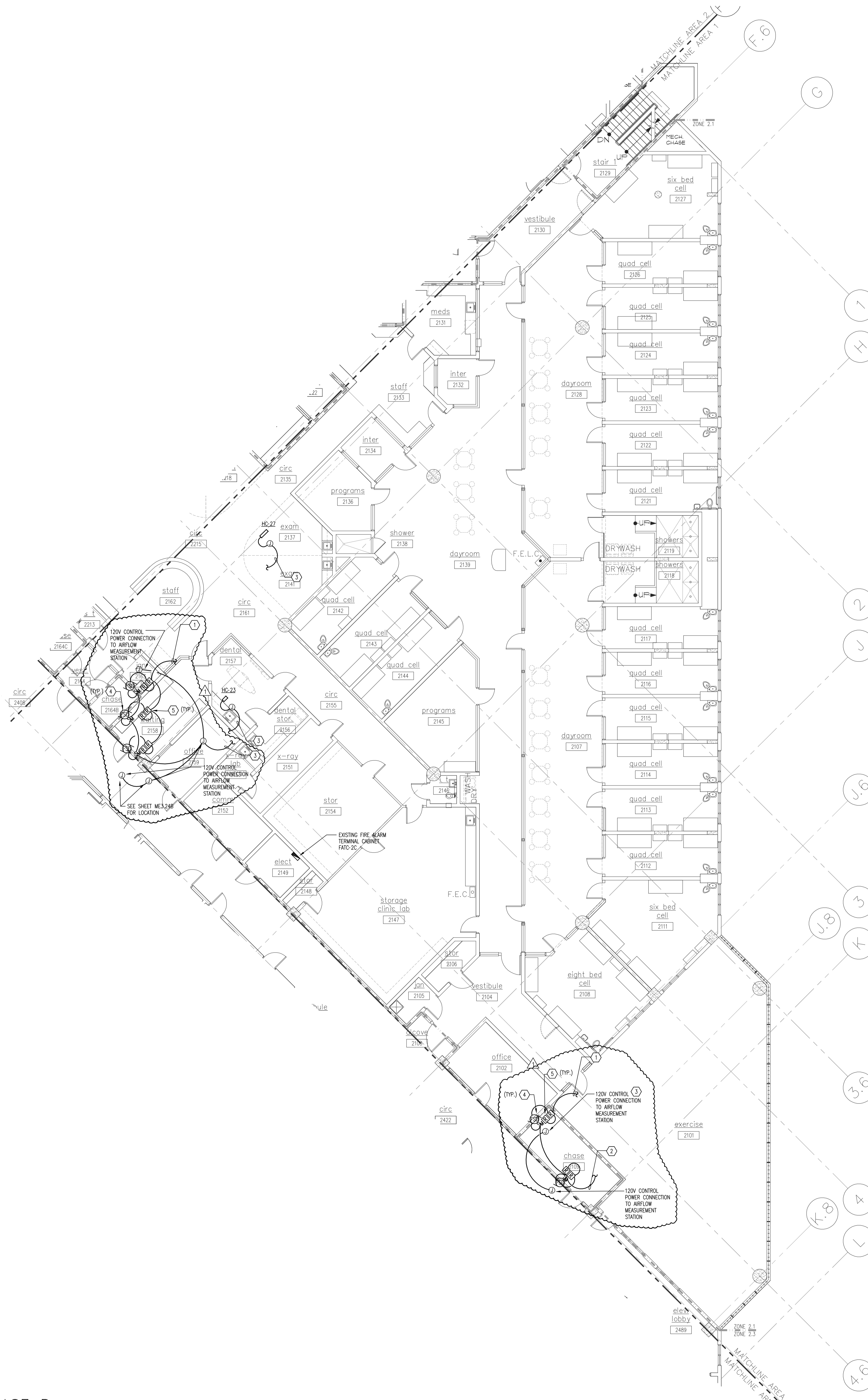


Revisions:

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07/26/12		ADDENDUM NO. 1

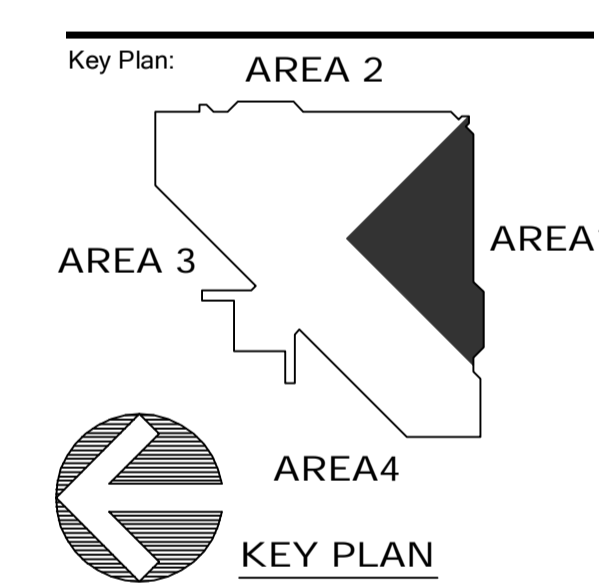
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ORANGE COUNTY CORRECTIONS
BOOKING AND RELEASE CENTER 1ST, 2ND, 3RD, AND 4TH FLOORS
HVAC, BUILDING AUTOMATION SYSTEM AND FIRE ALARM SYSTEM RETROFIT
FOR
 ORANGE COUNTY BOOKING AND RELEASE CENTER
 3855 SOUTH JOHN YOUNG PARKWAY
 ORLANDO, FLORIDA 32839



PLAN NOTES:

- 1 NEW FIRE ALARM CIRCUIT WIRING & CONDUIT TO EXISTING F.A.C. IN ELEC. ROOM 2148. PROVIDE NEW PROGRAMMING IN EXISTING FIRE ALARM SYSTEM.
- 2 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR MOTORIZED DAMPERS IS RP-EXCS-20. PROVIDE 2#12, 1#12 GND, 3/4" C. FROM NEW 700' BOA CONTROL POWER TRANSFORMER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
- 3 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR VAV CONTROL. POWER IS RP-EXCS-22. PROVIDE 2#12, 1#12 GND, 3/4" C. FROM NEW 700' BOA CONTROL POWER TRANSFORMER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
- 4 PROVIDE 120V CONTROL POWER CONNECTION TO NEW FIRE/SMOKE DAMPER ACTUATOR.
- 5 PROVIDE (2) ADDRESSABLE FIRE ALARM RELAYS AT FIRE/SMOKE DAMPER FOR ENGINEERED SMOKE CONTROL SYSTEM FOR MONITORING OF OPEN & CLOSED STATUS. TIE INTO AUXILIARY CONTACTS ON DAMPER.



Revisions:

No.	Date	Description
06/15/12		CPS & BID SET
07/26/12		ADDENDUM NO. 1

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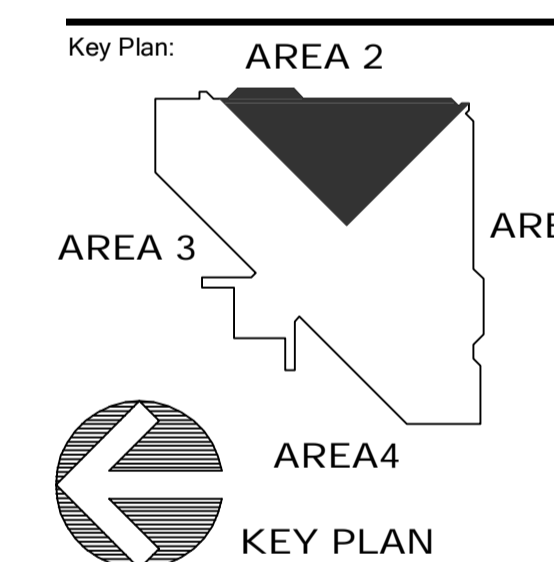
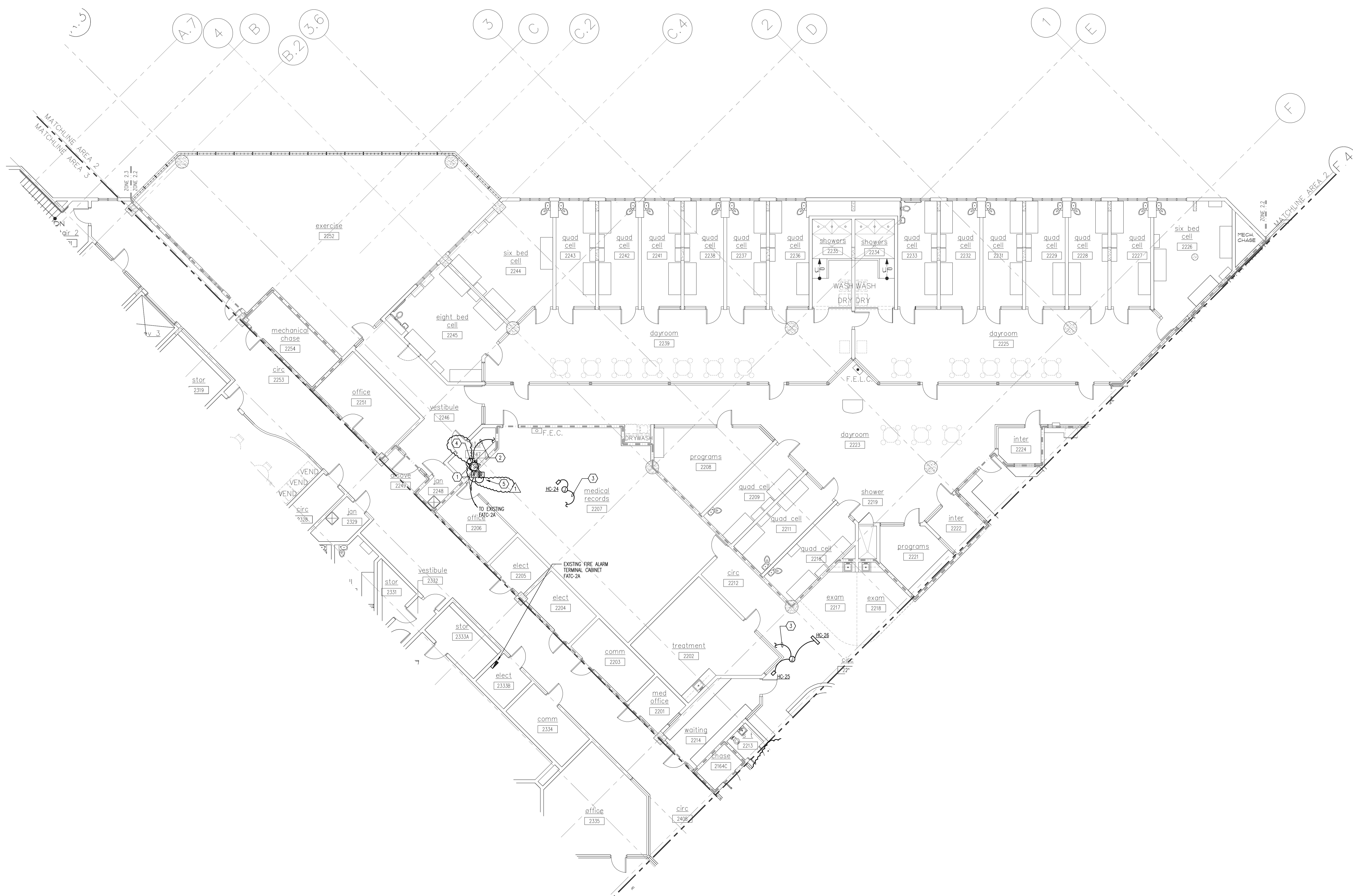
Project No.: 111011
 Issue Date: 06/15/2012
 Drawn By: LMW
 Approved By: WEA
 Scale: 1/8"=1'-0"

Drawing Title:
SECOND FLOOR
AREA 1 - PHASE B
ELECTRICAL

Drawing No.:
E3.21B

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- PLAN NOTES:**
- 1 NEW FIRE ALARM CIRCUIT WIRING & CONDUIT TO EXISTING FATC-2A IN ELEC ROOM 2335B. PROVIDE NEW PROGRAMMING IN EXISTING FIRE ALARM SYSTEM.
 - 2 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR MOTORIZED DAMPERS IS RP-C265-D. PROVIDE 24" x 14" x 2 GND, 3/4" C. FROM NEW MOTORIZED DAMPER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
 - 3 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR WV CONTROL POWER IS RP-C265-D. PROVIDE 24" x 14" x 2 GND, 3/4" C. FROM NEW 1/2" BOX CONTROL POWER TRANSFORMER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
 - 4 PROVIDE 120V CONTROL POWER CONNECTION TO NEW FIRE/SMOKE DAMPER ACTUATOR.
 - 5 PROVIDE (2) ADDRESSABLE FIRE ALARM RELAYS AT FIRE/SMOKE DAMPER FOR ENGINEERED SMOKE CONTROL SYSTEM FOR MONITORING OF OPEN & CLOSED STATUS. TIE INTO AUXILIARY CONTACTS ON DAMPER.



KEY PLAN

Revisions:

No.	Date	Description
06/15/12		CPS & BID SET
07/26/12		ADDENDUM NO. 1

Seal
 Wayne Edward Alred, P.E.
 Florida License #45800

Project No.: 111011

Issue Date: 06/15/2012

Drawn By: LMW

Approved By: WEA

Scale: 1/8"=1'-0"

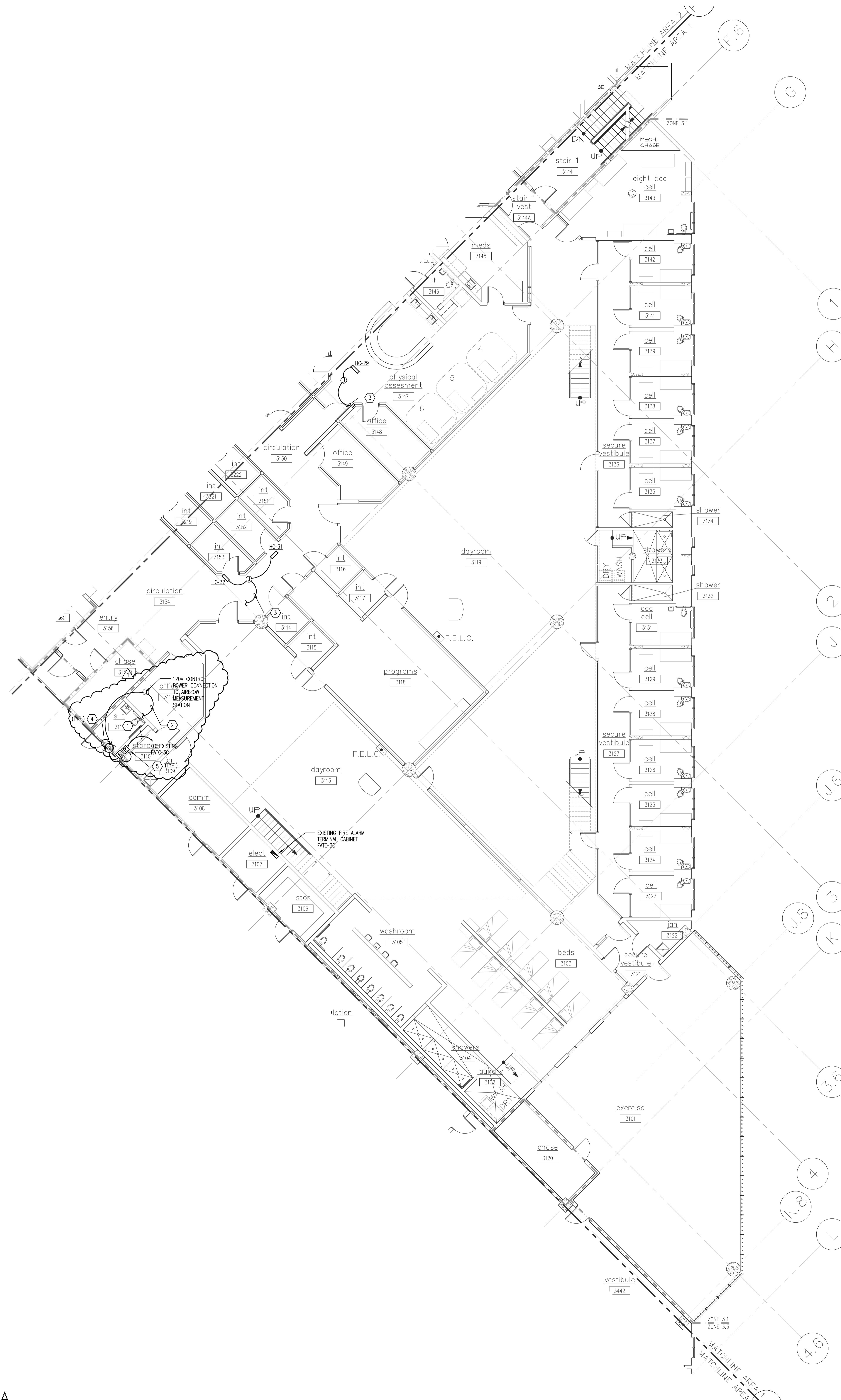
Drawing Title:

SECOND FLOOR
AREA 2 - PHASE B
ELECTRICAL

Drawing No.:

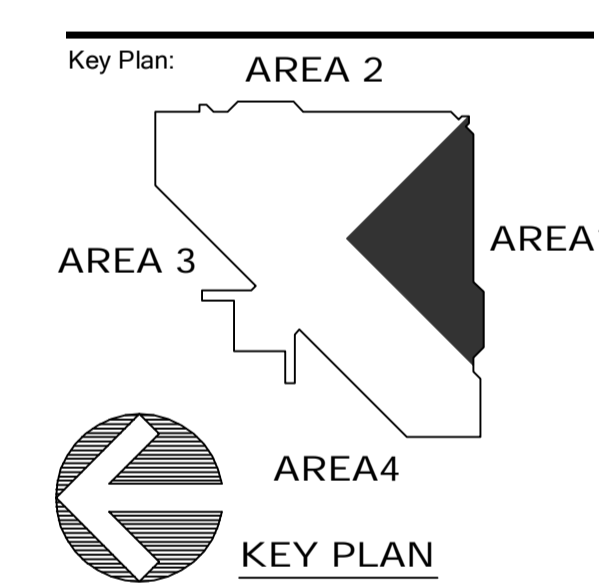
E3.22B

SECOND FLOOR AREA 2 - PHASE B
 SCALE: 1/8" = 1'-0"



PLAN NOTES:

- 1 NEW FIRE ALARM CIRCUIT WIRING & CONDUIT TO EXISTING F.A.C. IN ELEC ROOM 3107. PROVIDE NEW PROGRAMMING IN EXISTING FIRE ALARM SYSTEM.
- 2 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR MOTORIZED DAMPERS IS 0P15C25-16. PROVIDE 2# 12, 1412 GND, 3/4" C. FROM NEW MOTORIZED DAMPER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
- 3 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR W/C CONTROL. POWER IS 0P15C25-20. PROVIDE 2# 12, 1412 GND, 3/4" C. FROM NEW "H" BOX CONTROL POWER TRANSFORMER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
- 4 PROVIDE 120V CONTROL POWER CONNECTION TO NEW FIRE/SMOKE DAMPER ACTUATOR.
- 5 PROVIDE (2) ADDRESSABLE FIRE ALARM RELAYS AT FIRE/SMOKE DAMPER FOR ENGINEERED SMOKE CONTROL SYSTEM FOR MONITORING OF OPEN & CLOSED STATUS. BE WITH AUXILIARY CONTACTS ON DAMPER.



Revisions:

No.	Date	Description
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07/26/12		ADDENDUM NO. 1

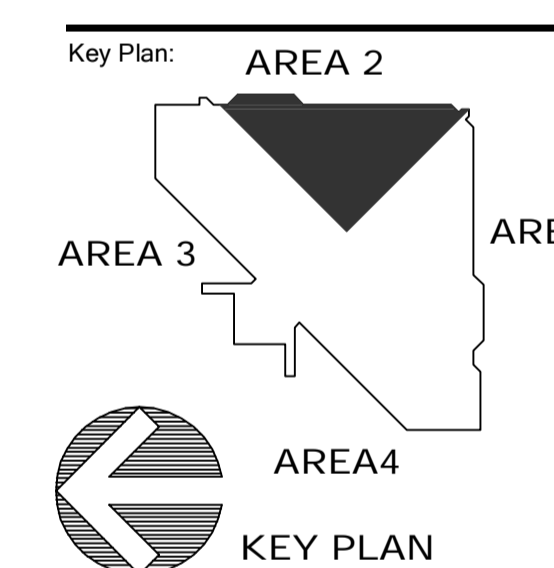
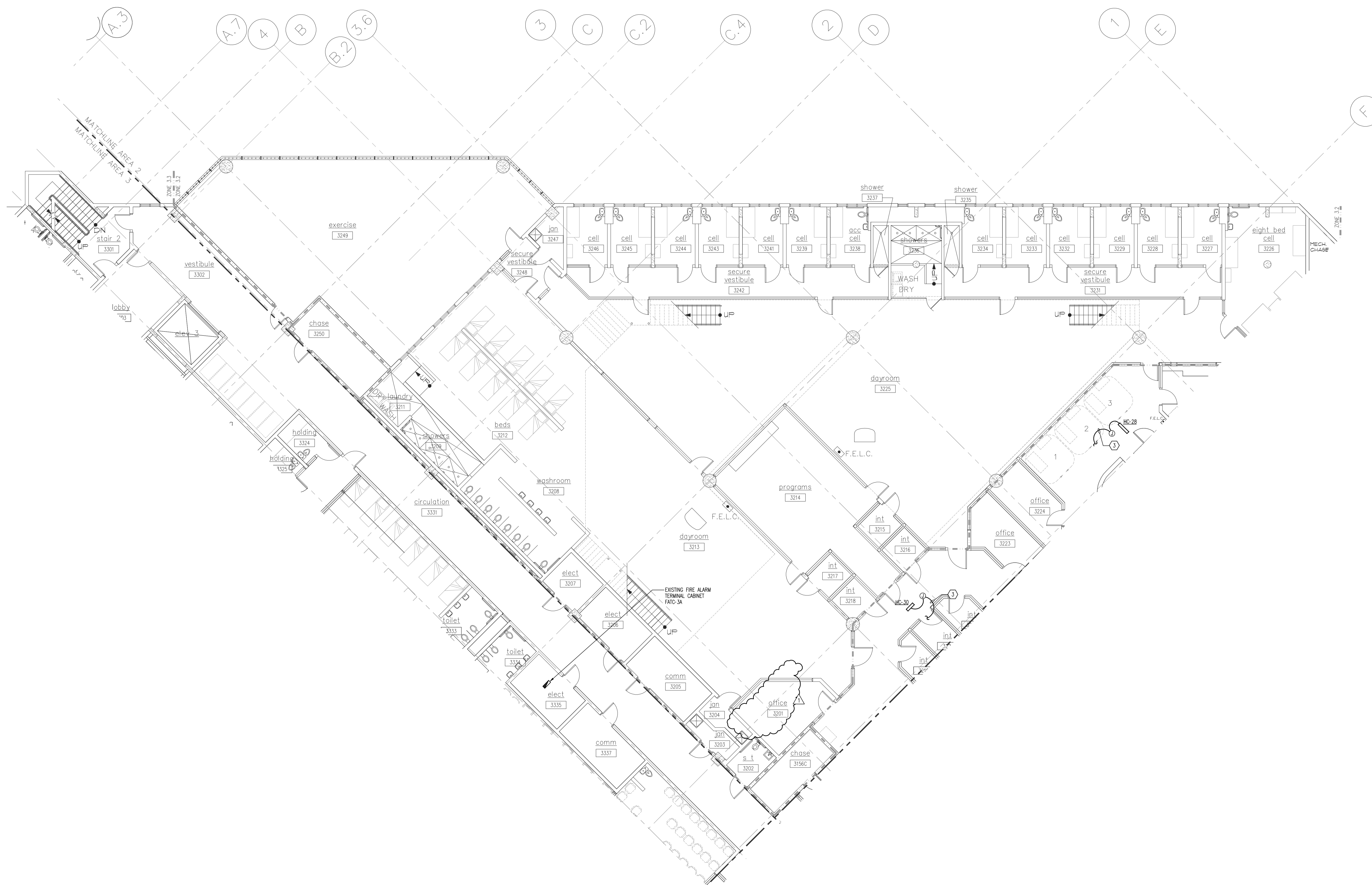
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Project No.: 111011
 Issue Date: 06/15/2012
 Drawn By: LMW
 Approved By: WEA
 Scale: 1/8"=1'-0"
 Drawing Title:
THIRD FLOOR AREA 1 - PHASE A ELECTRICAL

Drawing No.: **E3.31A**

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- PLAN NOTES:**
- ① NEW FIRE ALARM CIRCUIT WIRING & CONDUIT TO EXISTING F.A.C. IN ELEC ROOM 3305. PROVIDE NEW PROGRAMMING IN EXISTING FIRE ALARM SYSTEM.
 - ② EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR MOTORIZED DAMPERS IS RP-EMB-31. PROVIDE 2#12, 1#12 CND, 3/4" C. FROM NEW MOTORIZED DAMPER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
 - ③ EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR VAV CONTROL POWER IS RP-EMB-20. PROVIDE 2#12, 1#12 CND, 3/4" C. FROM NEW 1" C. BOX CONTROL POWER TRANSFORMER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.



KEY PLAN

Revisions:

No.	Date	Description
06/15/12		CPS & BID SET
07/26/12		ADDENDUM NO. 1

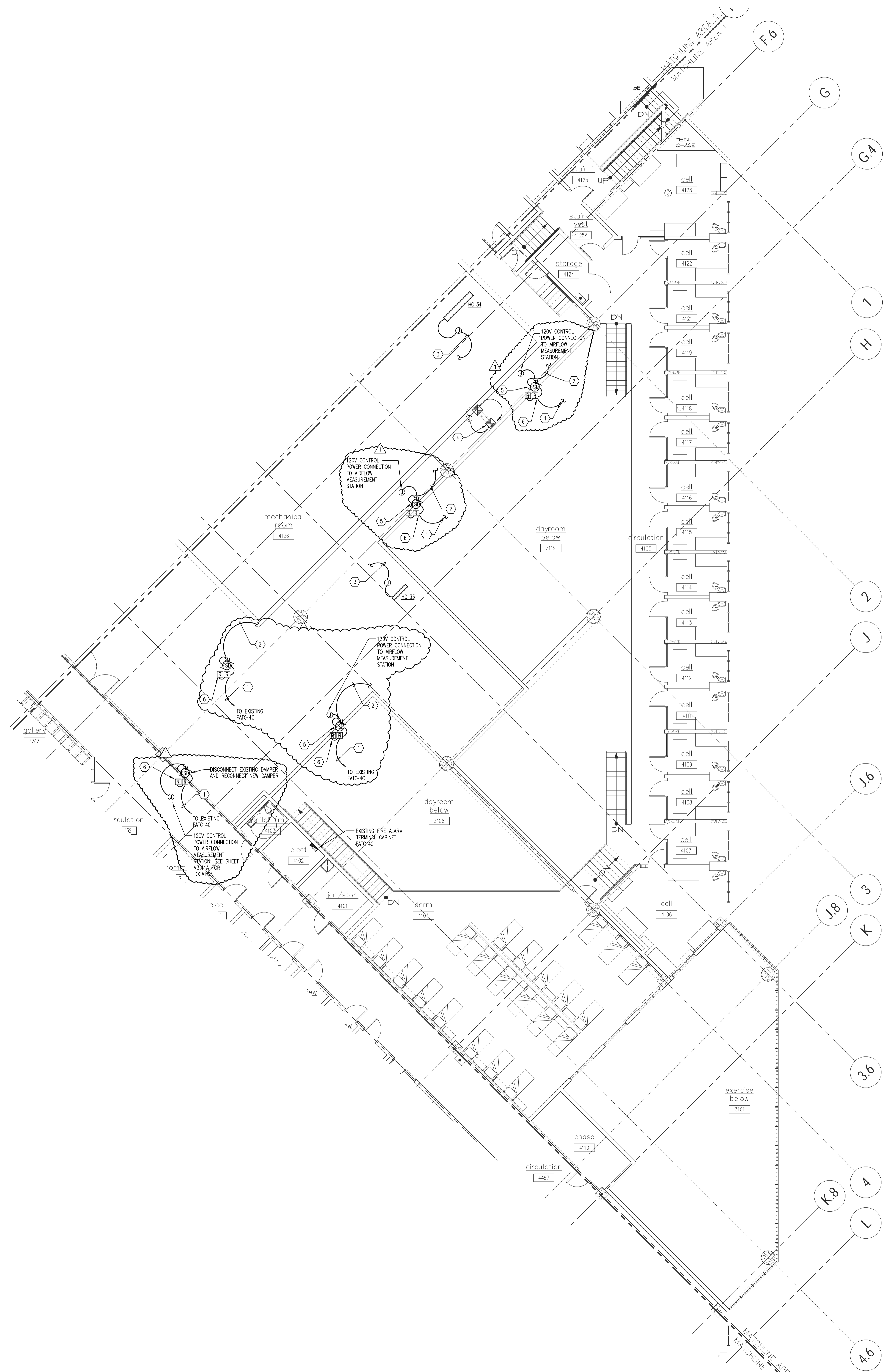
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 Florida License #45800

THIRD FLOOR AREA 2 - PHASE A
 SCALE: 1/8" = 1'-0"

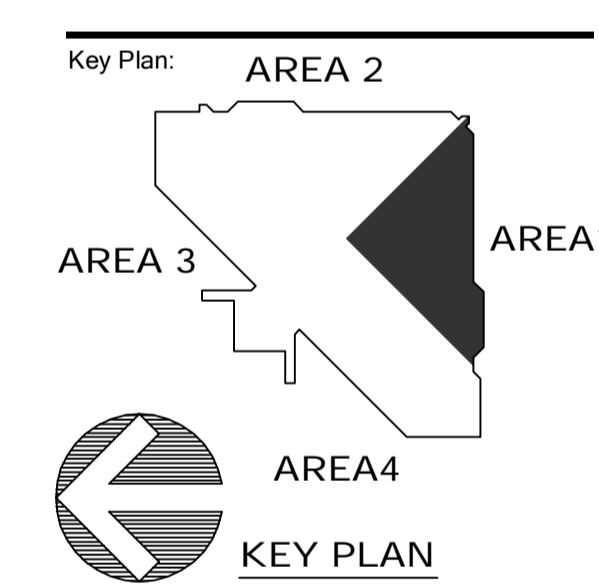
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Issue Date:	06/15/2012
Drawn By:	LMW
Approved By:	WEA
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Drawing No.:	E3.32A

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ORANGE COUNTY CORRECTIONS
BOOKING AND RELEASE CENTER 1ST, 2ND, 3RD, AND 4TH FLOORS
HVAC, BUILDING AUTOMATION SYSTEM AND FIRE ALARM SYSTEM RETROFIT
FOR
ORANGE COUNTY BOOKING AND RELEASE CENTER
 3855 SOUTH JOHN YOUNG PARKWAY
 ORLANDO, FLORIDA 32839



- PLAN NOTES:**
- 1 NEW FIRE ALARM CIRCUIT WIRING & CONDUIT TO EXISTING FATC-4C IN ELEC ROOM 4102. PROVIDE NEW PROGRAMMING IN EXISTING FIRE ALARM SYSTEM.
 - 2 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR HVAC CONTROL POWER IS RP-E425-62. PROVIDE 2#12, #112 CND, 3/4" x FROM NEW W/300Z DAMPER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
 - 3 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR HVAC CONTROL POWER IS RP-E425-62. PROVIDE 2#12, #112 CND, 3/4" x FROM NEW W/300Z DAMPER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
 - 4 EXISTING SMOKE DETECTOR IS BEING RELOCATED TO OTHER SIDE OF EXISTING DUCT AS SHOWN. DISCONNECT AND RECONNECT EXISTING FIRE ALARM CIRCUIT IN NEW LOCATION.
 - 5 PROVIDE 120V CONTROL POWER CONNECTION TO NEW FIRE/SMOKE DAMPER ACTUATOR.
 - 6 PROVIDE (2) ADDRESSABLE FIRE ALARM RELAYS AT FIRE/SMOKE DAMPER FOR MONITORING OF OPEN & CLOSED STATUS; TIE INTO AUXILIARY CONTACTS ON DAMPER.



Revisions:

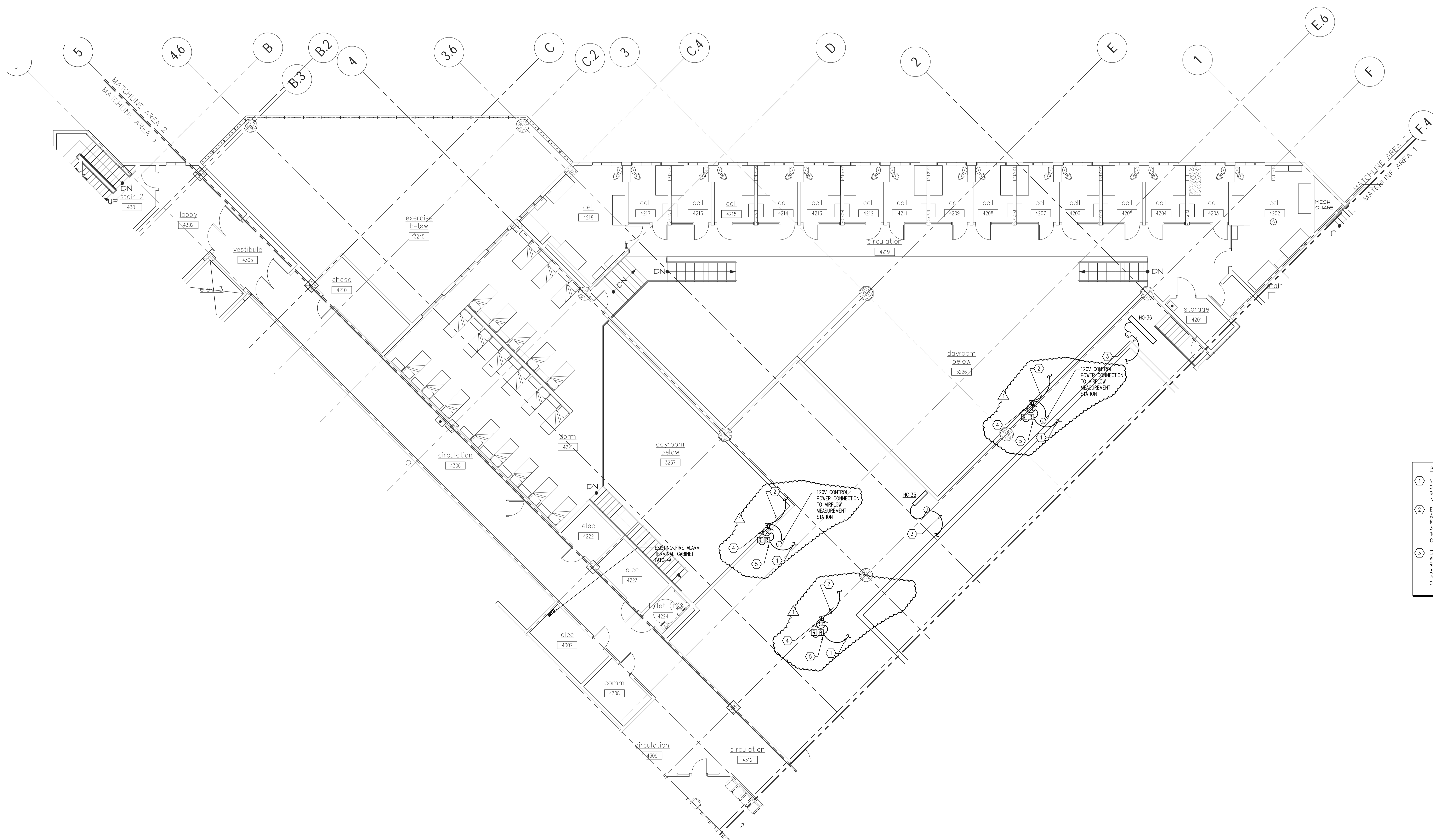
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07/26/12		ADDENDUM NO. 1

Seal
 Wayne Edward Alfred, P.E.
 Florida License #45800

Project No.: 111011
 Issue Date: 06/15/2012
 Drawn By: LMW
 Approved By: WEA
 Scale: 1/8"=1'-0"
 Drawing Title:
FOURTH FLOOR
AREA 1 - PHASE A
ELECTRICAL

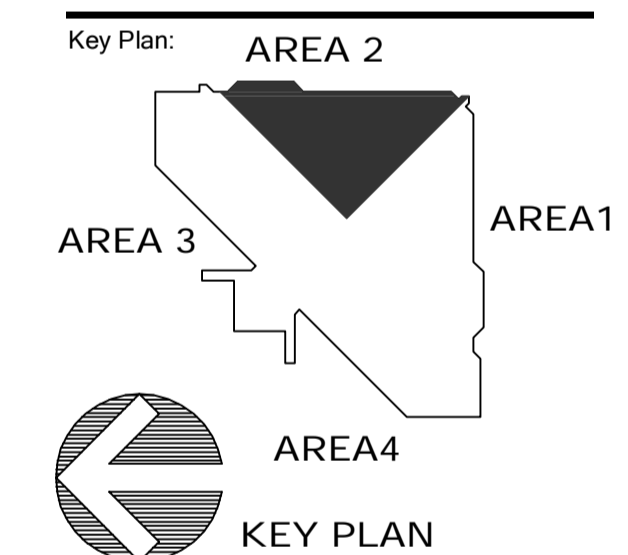
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PLAN NOTES

- 1 NEW FIRE ALARM CIRCUIT WIRING & CONDUIT TO EXISTING FATC-4A IN ELEC ROOM 4207. PROVIDE NEW PROGRAMMING IN EXISTING FIRE ALARM SYSTEM.
- 2 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR HVAC CONTROL. POWER IS RP-E445-22. PROVIDE 2#12, #12 GND, 3/4" C FROM NEW MOTORIZED DAMPER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
- 3 EXISTING 120V CIRCUIT PROVIDED FOR THIS AREA FOR HVAC CONTROL. POWER IS RP-E445-22. PROVIDE 2#12, #12 GND, 3/4" C FROM NEW "HC" BOX CONTROL POWER TRANSFORMER TO NEAREST CONNECTION POINT FOR THIS CIRCUIT.
- 4 PROVIDE 120V CONTROL POWER CONNECTION TO NEW FIRE/SMOKE DAMPER ACTUATOR.
- 5 ADDRESSABLE FIRE ALARM RELAYS AT THE SMOKE DAMPER FOR ENGINEERED SMOKE CONTROL SYSTEM FOR MONITORING OF OPEN & CLOSED STATUS. TIE INTO AUXILIARY CONTACTS ON DAMPER.



Revisions:

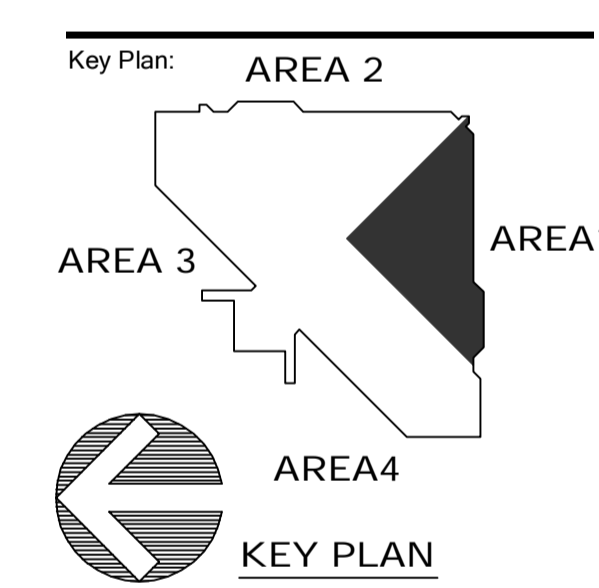
No.	Date	Description
06/15/12		CD'S & BID SET
07/26/12		ADDENDUM NO. 1

Seal
 Wayne Edward Allred, P.E.
 Florida License #45800

FOURTH FLOOR AREA 2 - PHASE A
 SCALE: 1/8" = 1'-0"

Project No.: 111011
 Issue Date: 06/15/2012
 Drawn By: LMW
 Approved By: WEA
 Scale: 1/8"=1'-0"
 Drawing Title:
FOURTH FLOOR
AREA 2 - PHASE A
ELECTRICAL
 Drawing No.:
E3.42A

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Revisions:

No.	Date	Description
06/15/12		CD'S & BID SET
07/26/12		ADDENDUM #1

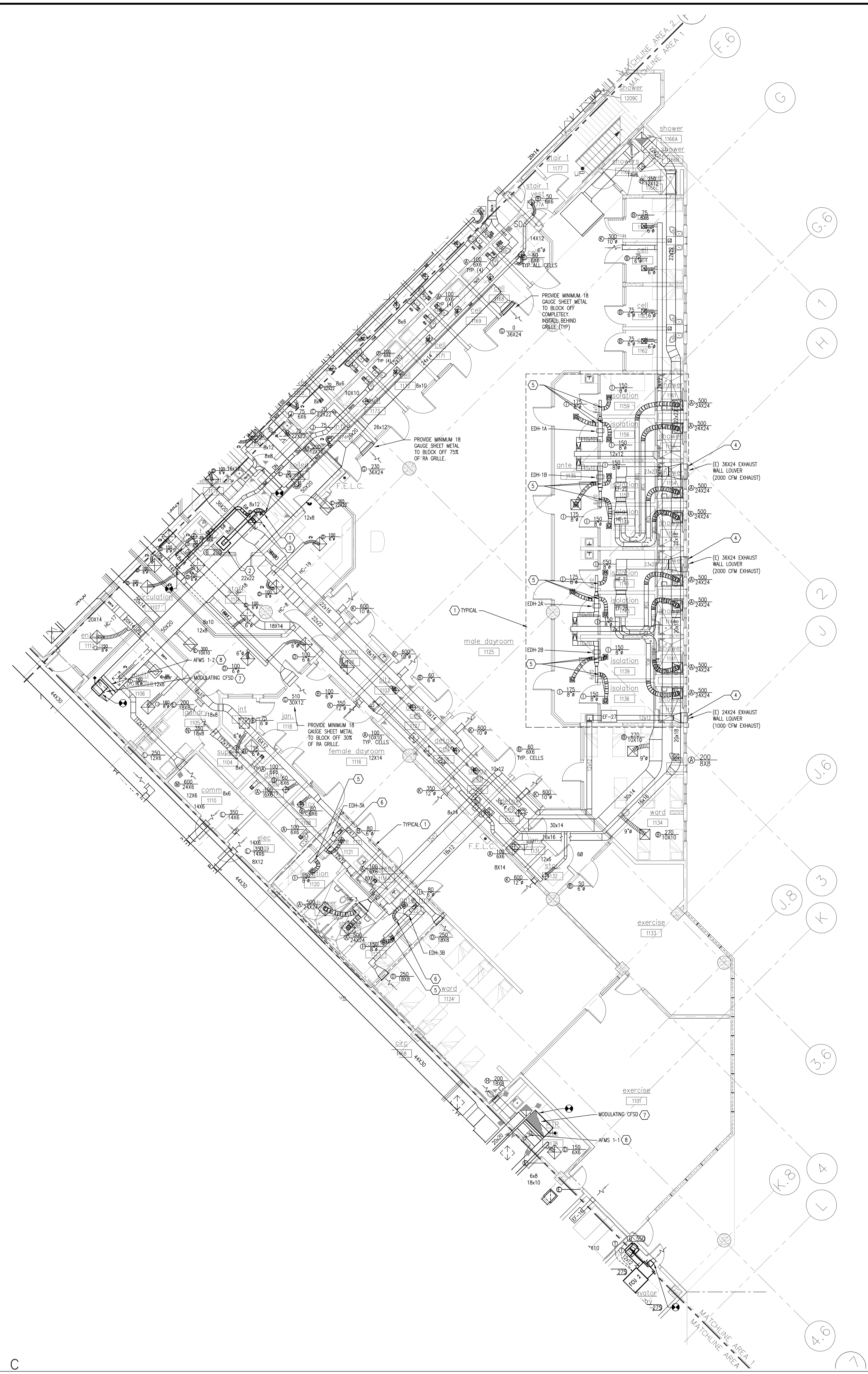
Seal
 Matthew John Wechart, P.E.
 Florida License #58442

Project No.: 111011
 Issue Date: 06/15/2012
 Drawn By: REM
 Approved By: MJW
 Scale: 1/8"=1'-0"
 Drawing Title:
FIRST FLOOR AREA 1 - PHASE C

Drawing No.: **M3.11C**

- GENERAL NOTES:**
- PATCH, SEAL, AND INSULATE UNUSED EXISTING DUCT OPENINGS TO MATCH EXISTING.
 - THERMOSTAT LOCATIONS INDICATED ARE NEW. CONTRACTOR SHALL PATCH AND PAINT ORIGINAL LOCATIONS TO MATCH ARCHITECTURAL FINISH PLAN.
 - EXISTING SUPPLY, RETURN, AND EXHAUST REGISTERS TO REMAIN UNLESS OTHERWISE NOTED. CLEAN REGISTERS PRIOR TO CONNECTING NEW DUCT.
 - REWORK T-BAR SUPPORT WIRES TO ACCOMMODATE DUCT AND MECHANICAL EQUIPMENT ROUTING.
 - PHASE D AIR SIDE TEST AND BALANCE:
 BALANCE AIR AND WATER SIDE EQUIPMENT, GRILLES, AND DIFFUSERS TO ORIGINAL AND/OR NEW DESIGN CFM VALUE AS INDICATED.

- REFERENCE NOTES:**
- RECALIBRATE EXISTING PRESSURE GAUGES, ASSOCIATED WITH THE ISOLATION ROOMS. PROVIDE A MINIMUM THREE POINT CALIBRATION WITH NIST CALIBRATED EQUIPMENT. FIELD VERIFY EXACT LOCATION AND QUANTITY.
 - NEW RETURN DIFFUSER. SEE M6.01 FOR AIR DISTRIBUTION SCHEDULE.
 - EXISTING SUPPLY DIFFUSER TO REMAIN. RE-BALANCE CFM TO INDICATED VALUE.
 - NEW SECURITY LOUVER WITH SECURITY BARS. SIZE TO MATCH EXISTING LOUVER. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR PROPER INSTALLATION OF SECURITY BARS (I.E. WELD...). REFER TO TYPICAL SECURITY LOUVER DETAIL.
 - REPLACE EXISTING FIELD FABRICATED BALANCE DAMPER AND PROVIDE NEW BALANCE DAMPER. PROVIDE FACTORY ASSEMBLED 6" BALANCE DAMPER WITH EDGE SEALS AND QUADRANT LOCKING OPERATOR. PROVIDE DUCT TRANSITIONS AS REQUIRED FOR A COMPLETE INSTALLATION. REPLACE FLEX DUCT FROM BRANCH DAMPER TO SUPPLY AIR GRILL AND REPAIR INSULATION.
 - REPLACE EXISTING FIELD FABRICATED BALANCE DAMPER AND PROVIDE NEW BALANCE DAMPER. PROVIDE FACTORY ASSEMBLED 6" BALANCE DAMPER WITH EDGE SEALS AND QUADRANT LOCKING OPERATOR. PROVIDE DUCT TRANSITIONS AS REQUIRED FOR A COMPLETE INSTALLATION. REPLACE FLEX DUCT FROM BRANCH DAMPER TO SUPPLY AIR GRILL AND REPAIR INSULATION.
 - REMOVE AND REPLACE EXISTING TWO POSITION CFSD SMOKE CONTROL DAMPER ON RA SHUNT AND REPLACE WITH A UL555S CFSD MODULATING SMOKE CONTROL DAMPER. SPRING RETURN CLOSED. CONNECT TO THE UL584 BAS CONTROL SYSTEM. PROVIDE FIRE ALARM AUXILIARY CONTACTS FOR OPEN AND CLOSED STATUS. FIRE ALARM SYSTEM SHALL MONITOR OPEN AND CLOSED STATUS. SIZE TO MATCH EXISTING CONDITIONS. FIELD VERIFY ACTUATOR VOLTAGE TO MATCH EXISTING ACTUATOR VOLTAGE. RUSHON OR APPROVED EQUAL.
 - PROVIDE NEW AIR FLOW MONITORING STATION IN MAIN RETURN AIR DUCT, AND EXPAND AND CONNECT TO THE UL584 BAS SYSTEM. SIZED AND NUMBER OF SAMPLE PROBES SHALL BE DETERMINED BY THE MANUFACTURER TO ACCOUNT FOR ACTUAL INSTALLED LOCATION DUCT CONFIGURATION. FIELD VERIFY EXISTING CONDITIONS. PROVIDE PROGRAMMING TO MODULATE AND MAINTAIN A RETURN AIR CFM SET-POINT. RA CFM SET-POINT SHALL BE DETERMINED BY TYPING THE SUPPLY AIR, AS DETERMINED BY THE ASSOCIATED W/C CFM READINGS, MINUS THE GENERAL EXHAUST IN THE AREA AND MINUS A BUILDING PRESSURE OFFSET. (ONLINE BUILDING PRESSURE OFFSET TO BE 1000 CFM). FIELD COORDINATE FINAL OFFSET TO MAINTAIN A POSITIVE BUILDING PRESSURE.

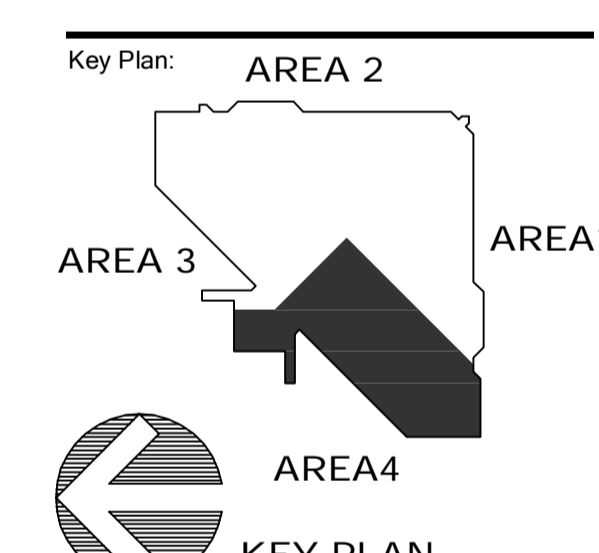
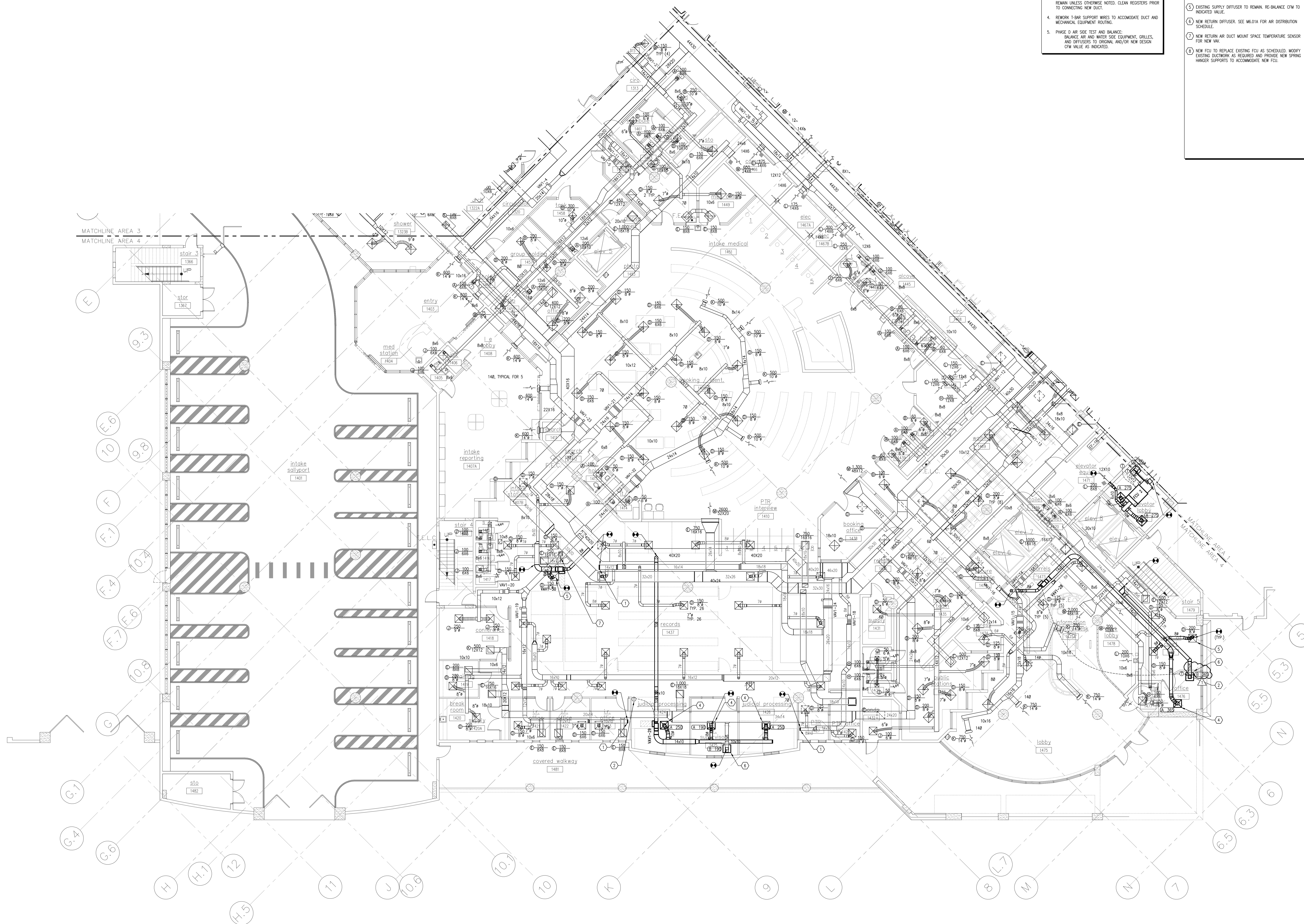


FIRST FLOOR AREA 1 - PHASE C
 SCALE: 1/8" = 1'-0"

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- GENERAL NOTES:**
1. PATCH, SEAL, AND INSULATE UNUSED EXISTING DUCT OPENINGS TO MATCH EXISTING.
 2. THERMOSTAT LOCATIONS INDICATED ARE NEW. CONTRACTOR SHALL PATCH AND PAINT ORIGINAL LOCATIONS TO MATCH ARCHITECTURAL FINISH PLAN.
 3. EXISTING SUPPLY, RETURN, AND EXHAUST REGISTERS TO REMAIN UNLESS OTHERWISE NOTED. CLEAN REGISTERS PRIOR TO CONNECTING NEW DUCT.
 4. REWORK T-BAR SUPPORT WIRES TO ACCOMMODATE DUCT AND MECHANICAL EQUIPMENT ROUTING.
 5. PHASE D AIR SIDE TEST AND BALANCE:
 BALANCE AIR AND WATER SIDE EQUIPMENT, GRILLES, AND DIFFUSERS TO ORIGINAL AND/OR NEW DESIGN. CFM VALUE AS INDICATED.

- REFERENCE NOTES:**
- ① CAP DUCT OPENING AIRTIGHT AND INSULATE.
 - ② NEW THERMOSTAT LOCATION.
 - ③ NOT USED.
 - ④ NEW SUPPLY DIFFUSER. SEE M6.01A FOR AIR DISTRIBUTION SCHEDULE.
 - ⑤ EXISTING SUPPLY DIFFUSER TO REMAIN. RE-BALANCE CFM TO INDICATED VALUE.
 - ⑥ NEW RETURN DIFFUSER. SEE M6.01A FOR AIR DISTRIBUTION SCHEDULE.
 - ⑦ NEW RETURN AIR DUCT MOUNT SPACE TEMPERATURE SENSOR FOR NEW VAV.
 - ⑧ NEW FCU TO REPLACE EXISTING FCU AS SCHEDULED. MODIFY EXISTING DUCTWORK AS REQUIRED AND PROVIDE NEW SPRING HANGER SUPPORTS TO ACCOMMODATE NEW FCU.



Revisions:

No.	Date	Description
06/15/12		CPS & BID SET
07/26/12		ADDENDUM #1

Seal
 Matthew John Wechart, P.E.
 Florida License #58442

Project No: 111011
 Issue Date: 06/15/2012
 Drawn By: REM
 Approved By: MJW
 Scale: 1/8"=1'-0"
 Drawing Title:
FIRST FLOOR AREA 4 - PHASE C

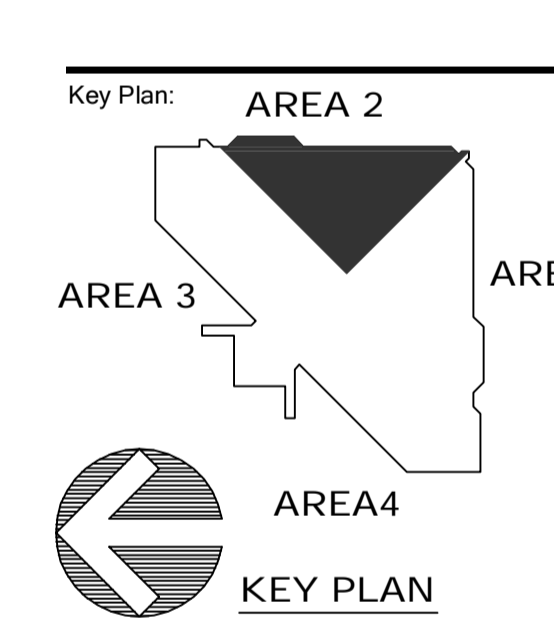
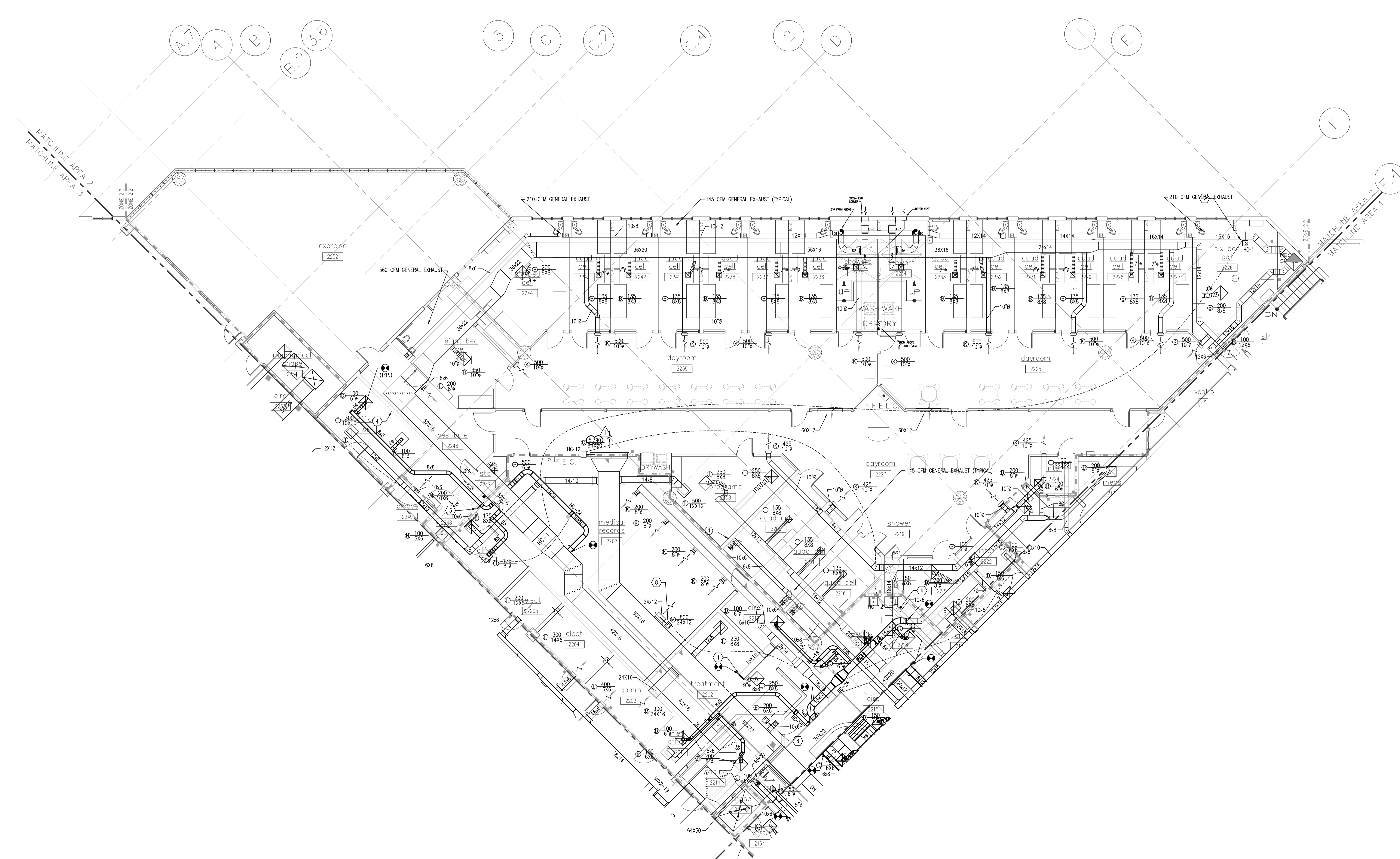
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FIRST FLOOR AREA 4 - PHASE C
 SCALE: 1/8" = 1'-0"

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- GENERAL NOTES:**
- PATCH, SEAL, AND INSULATE UNUSED EXISTING DUCT OPENINGS TO MATCH EXISTING.
 - THERMOSTAT LOCATIONS INDICATED ARE NEW. CONTRACTOR SHALL PATCH AND PAINT ORIGINAL LOCATIONS TO MATCH ARCHITECTURAL FINISH PLAN.
 - EXISTING SUPPLY, RETURN, AND EXHAUST REGISTERS TO REMAIN UNLESS OTHERWISE NOTED. CLEAN REGISTERS PRIOR TO CONNECTING NEW FLEX DUCT.
 - REWORK DUCTWORK HANGERS AND PROVIDE ADDITIONAL HANGERS AS NECESSARY.
 - REWORK I-BAR SUPPORT WIRES TO ACCOMMODATE DUCT AND MECHANICAL EQUIPMENT ROUTING.
 - PHASE D AIR SIDE TEST AND BALANCE: BALANCE AIR SIDE EQUIPMENT, GRILLES, AND DIFFUSERS TO ORIGINAL AND/OR NEW DESIGN CFM VALUE AS INDICATED.

- REFERENCE NOTES:**
- CAP DUCT OPENING AIRTIGHT AND INSULATE.
 - NEW THERMOSTAT LOCATION, CONTRACTOR SHALL PROVIDE ALL NECESSARY CONTROLS WIRING ETC. TO REQUIRED TO RELOCATE THERMOSTAT.
 - PROVIDE NEW FIRE DAMPER/FSO AT RATED WALL.
 - EXISTING GAU WALL, PATCH WALL OPENING TO MATCH EXISTING CONDITIONS.
 - REWORK FRAMING AND PROVIDE ADDITIONAL FRAMING AS NECESSARY TO SUPPORT THE EXAM ROOM CURTAIN TRACKS.
 - REWORK DUCTWORK HANGERS AND PROVIDE ADDITIONAL HANGERS AS NECESSARY FOR SMCMA 2005 HVAC DUCT CONSTRUCTION STANDARDS AND DETAIL #7 ON SHEET M7.01.
 - NEW EXHAUST AIR DUCT MOUNTED SPACE TEMPERATURE SENSOR FOR EXISTING HC.
 - NEW RETURN AIR DUCT MOUNTED SPACE TEMPERATURE SENSOR FOR EXISTING HC.
 - EXISTING SUPPLY DIFFUSER TO REMAIN.



Revisions:

No.	Date	Description
06/15/12		CPS & BID SET
07/26/12		ADDENDUM #1

Seal
 Matthew John Wechart, P.E.
 Florida License #58442

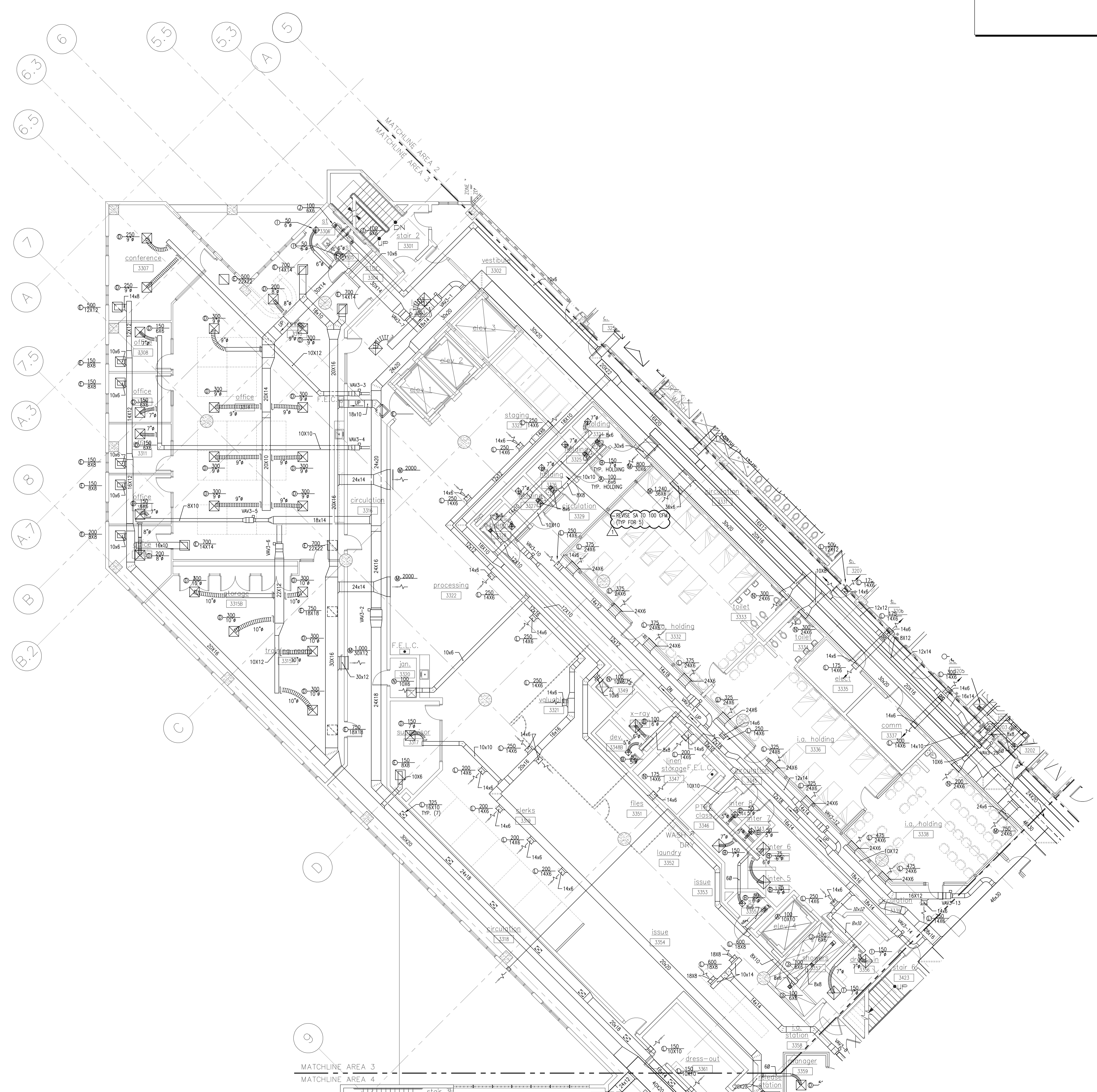
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 Issue Date: 06/15/2012
 Drawn By: REM
 Approved By: MJW
 Scale: 1/8"=1'-0"
 Drawing Title:
SECOND FLOOR
AREA 2 - PHASE B

Drawing No: **M3.22B**

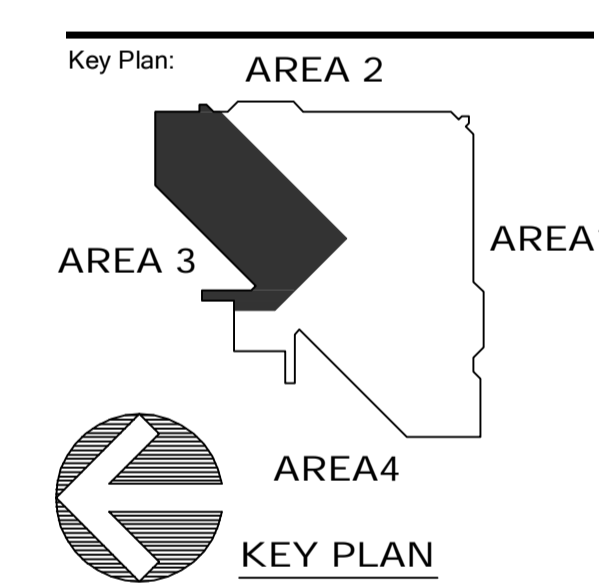
SECOND FLOOR AREA 2 - PHASE B
 SCALE: 1/8" = 1'-0"

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GENERAL NOTES:
 1. SHEET INDICATED FOR REFERENCE AND PHASE D TEST AND BALANCE.
 2. PHASE D AIR SIDE TEST AND BALANCE. BALANCE AIR SIDE EQUIPMENT, GRILLS, AND DIFFUSERS TO ORIGINAL AND/OR NEW DESIGN CFM VALUE AS INDICATED.



ORANGE COUNTY CORRECTIONS
 BOOKING AND RELEASE CENTER 1ST, 2ND, 3RD, AND 4TH FLOORS
 HVAC, BUILDING AUTOMATION SYSTEM AND FIRE ALARM SYSTEM RETROFIT
 FOR
 ORANGE COUNTY BOOKING AND RELEASE CENTER
 3855 SOUTH JOHN YOUNG PARKWAY
 ORLANDO, FLORIDA 32839



Revisions:

No.	Date	Description
06/15/12		CDS & BID SET
07/26/12		ADDENDUM #1

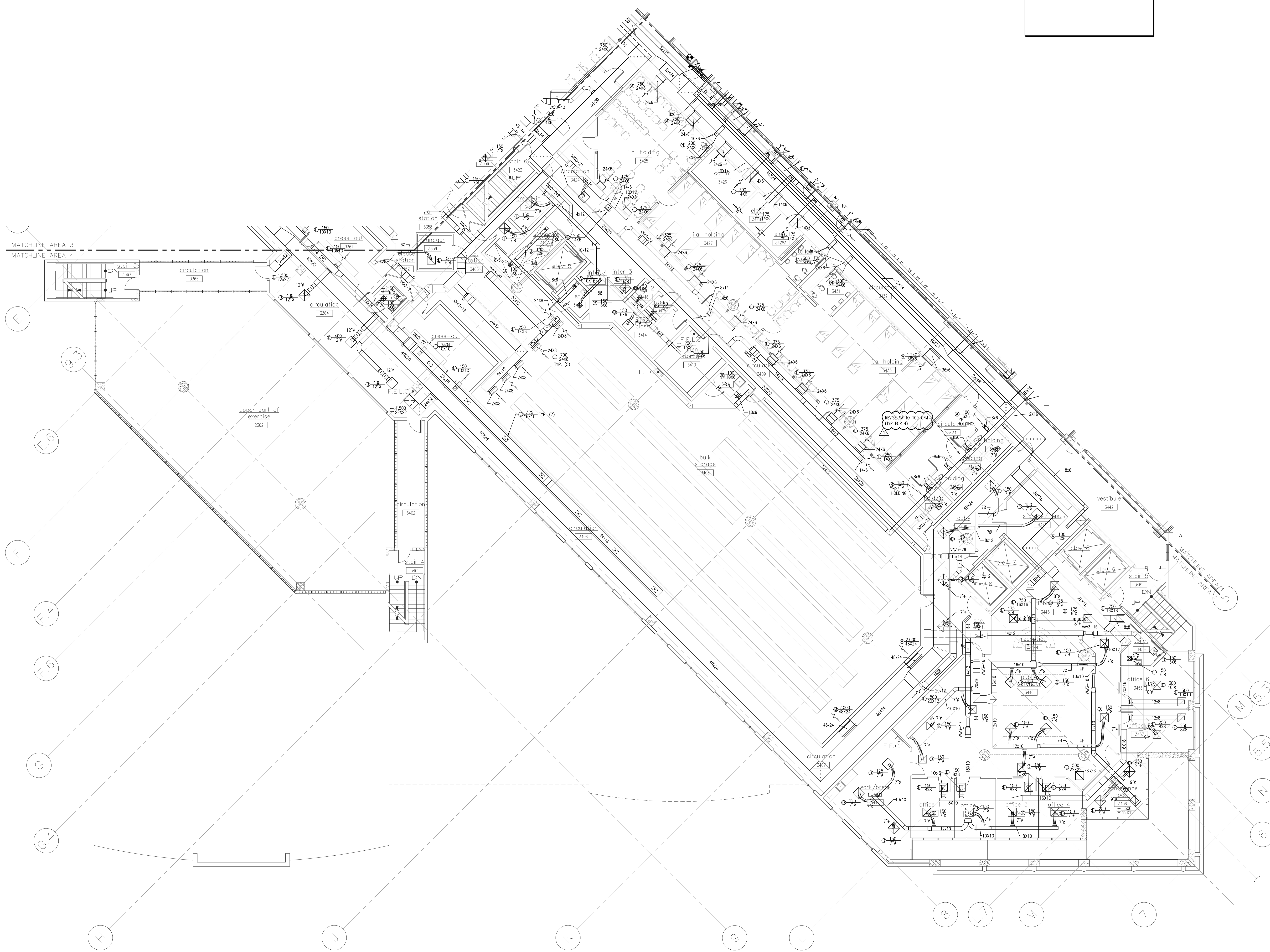
Seal
 Matthew John Wechart, P.E.
 Florida License #58442

Project No.: 111011
 Issue Date: 06/15/2012
 Drawn By: REM
 Approved By: MJW
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 Drawing Title:
THIRD FLOOR AREA 3 - PHASE A

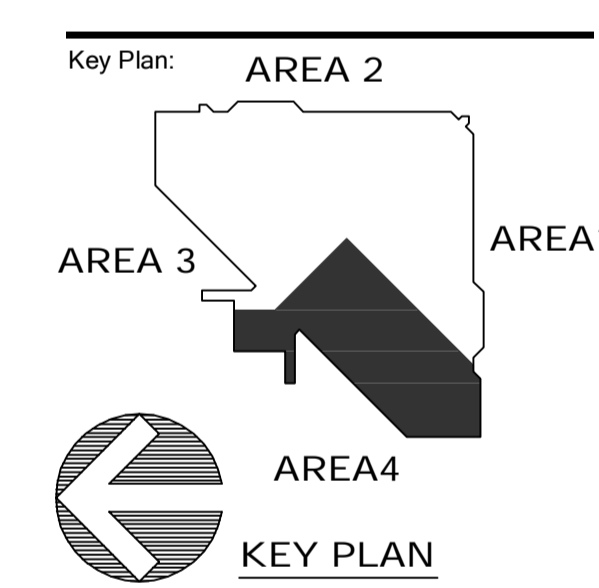
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GENERAL NOTES:

1. SHEET INDICATED FOR REFERENCE AND PHASE D TEST AND BALANCE.
2. PHASE D AIR SIDE TEST AND BALANCE.
 BALANCE AIR SIDE EQUIPMENT, GRILLS, AND DIFFUSERS TO ORIGINAL AND/OR NEW DESIGN CFM VALUE AS INDICATED.



ORANGE COUNTY CORRECTIONS
BOOKING AND RELEASE CENTER 1ST, 2ND, 3RD, AND 4TH FLOORS
HVAC, BUILDING AUTOMATION SYSTEM AND FIRE ALARM SYSTEM RETROFIT
 FOR
ORANGE COUNTY BOOKING AND RELEASE CENTER
 3855 SOUTH JOHN YOUNG PARKWAY
 ORLANDO, FLORIDA 32839



Revisions:

No.	Date	Description
06/15/12		CPS & BID SET
07/26/12		ADDENDUM #1

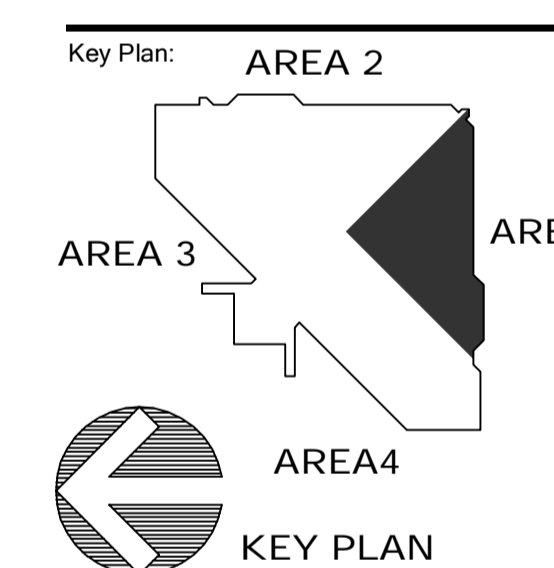
Seal
 Matthew John Wechart, P.E.
 Florida License #58442

Project No.: 111011
 Issue Date: 06/15/2012
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 Approved By: MJW
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 Drawing Title:
THIRD FLOOR AREA 4 - PHASE A

Drawing No.:
M3.34A

THIRD FLOOR AREA 4 - PHASE A
 SCALE: 1/8" = 1'-0"

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Revisions:

No.	Date	Description
06/15/12		CD'S & BID SET
07/26/12		ADDENDUM #1

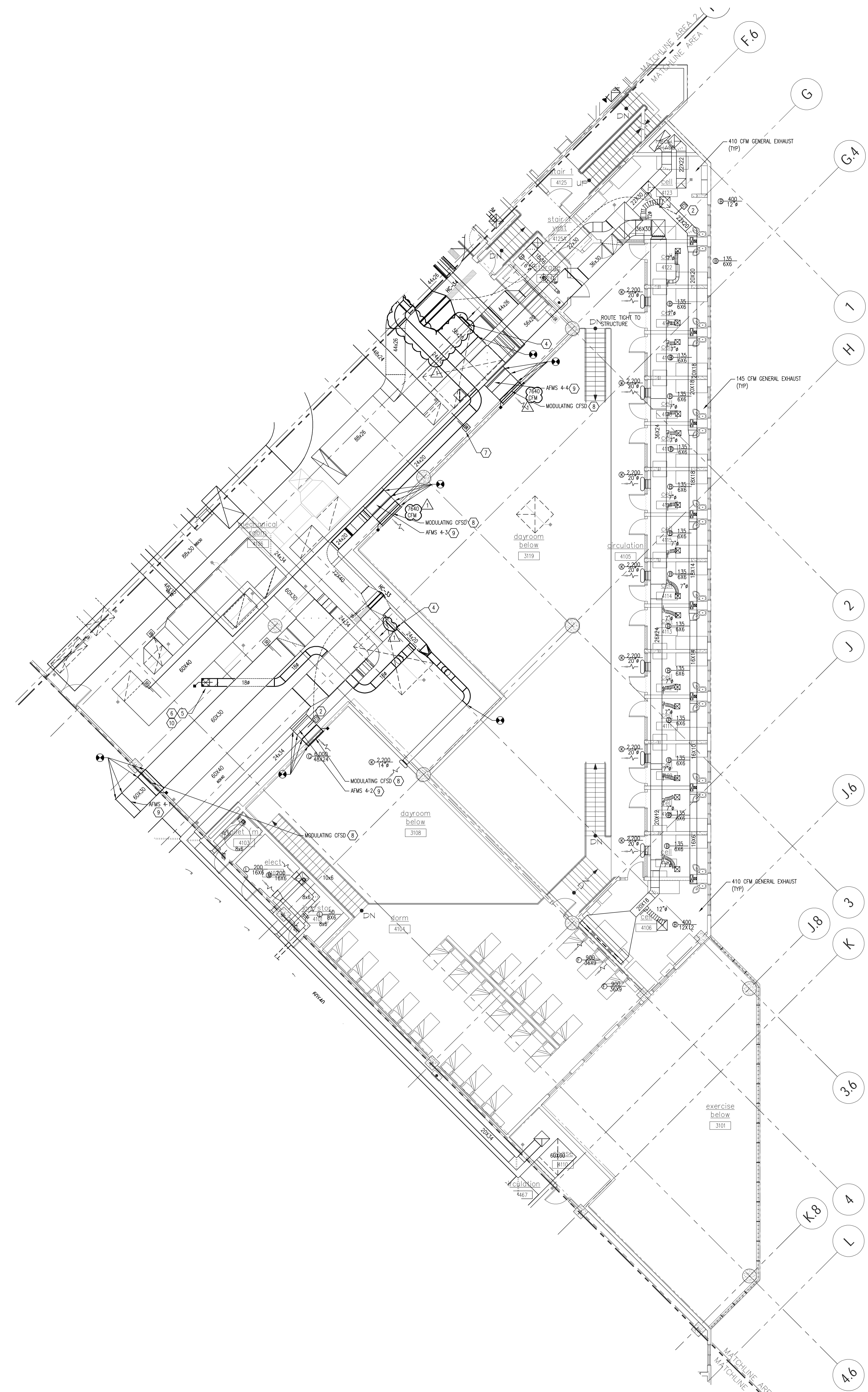
Seal
 Matthew John Weichert, P.E.
 Florida License #58442

Project No.: 111011
 Issue Date: 06/15/2012
 Drawn By: REM
 Approved By: MJW
 Scale: 1/8"=1'-0"
 Drawing Title:
FOURTH FLOOR
AREA 1 - PHASE A

Drawing No.: **M3.41A**

- GENERAL NOTES:**
1. PATCH, SEAL, AND INSULATE UNUSED EXISTING DUCT OPENINGS TO MATCH EXISTING.
 2. THERMISTAT LOCATIONS INDICATED ARE NEW. CONTRACTOR SHALL PATCH AND PAINT ORIGINAL LOCATIONS TO MATCH ARCHITECTURAL FINISH PLAN.
 3. EXISTING SUPPLY, RETURN, AND EXHAUST REGISTERS TO REMAIN UNLESS OTHERWISE NOTED. CLEAN REGISTERS PRIOR TO CONNECTING NEW FLEX DUCT.
 5. PHASE D AIR SIDE TEST AND BALANCE. BALANCE AIR SIDE EQUIPMENT, GRILLES, AND DIFFUSERS TO ORIGINAL AND/OR NEW DESIGN CFM VALUE AS INDICATED.

- REFERENCE NOTES:**
- (1) NOT USED.
 - (2) NEW RETURN/EXHAUST AIR DUCT MOUNTED SPACE. TEMPERATURE SENSOR FOR NEW HC.
 - (3) NOT USED.
 - (4) EXISTING 24" ROUND SUPPLY DUCT CLEAN PRIOR TO REINSTALLING QUIC-DRIP TO 1000 CFM.
 - (5) BUILDING SLAB CONSTRUCTION IS NOT TESTED. 3" RAY PRIOR TO CORING OR ANCHORING TO AVOID HITTING FT CABLES. COORDINATE WITH EXISTING BUILDING STRUCTURAL DRAWINGS AND 3199S.
 - (6) NEW 18" ROUND SUPPLY DUCT DOWN FROM MECHANICAL ROOM. TRANSITION 18" ROUND DUCT TO 18"x18" SQUARE DUCT PRIOR TO PENETRATING FOOT TENSION SLAB. PROVIDE A SECURE CFSD AT PENETRATION. SEE DETAIL #3 ON SHEET M7.01.
 - (7) EXISTING SMOKE DETECTOR TO BE RELOCATED. CONTRACTOR SHALL PROVIDE NEW SAMPLING TUBING TO ACCOMMODATE NEW DUCT SIZE. REMOVE AND REPLACE EXISTING TWO POSITION CFSD SMOKE CONTROL DAMPER ON RA SHAFT AND REPLACE WITH A UL864 CFSD MODULATING SMOKE CONTROL DAMPER. SPRING RETURN CLOSED. CONNECT TO THE UL864 BAS CONTROL SYSTEM. PROVIDE FIRE ALARM AUXILIARY CONTACTS FOR OPEN AND CLOSED STATUS. FIRE ALARM SYSTEM SHALL MONITOR OPEN AND CLOSED STATUS. SIZE TO MATCH EXISTING CONDITIONS. FIELD VERIFY ACTUATOR VOLTAGE TO MATCH EXISTING ACTUATOR VOLTAGE. RUSKIN OR APPROVED EQUAL.
 - (8) REMOVE AND REPLACE EXISTING TWO POSITION CFSD SMOKE CONTROL DAMPER ON RA SHAFT AND REPLACE WITH A UL864 CFSD MODULATING SMOKE CONTROL DAMPER. SPRING RETURN CLOSED. CONNECT TO THE UL864 BAS CONTROL SYSTEM. PROVIDE FIRE ALARM AUXILIARY CONTACTS FOR OPEN AND CLOSED STATUS. FIRE ALARM SYSTEM SHALL MONITOR OPEN AND CLOSED STATUS. SIZE TO MATCH EXISTING CONDITIONS. FIELD VERIFY ACTUATOR VOLTAGE TO MATCH EXISTING ACTUATOR VOLTAGE. RUSKIN OR APPROVED EQUAL.
 - (9) PROVIDE NEW AIR FLOW MONITORING STATION IN MAIN RETURN AIR DUCT. AND EXPAND AND CONNECT TO THE UL864 BAS SYSTEM. SIZE AND NUMBER OF SAMPLE PROBES SHALL BE DETERMINED BY THE MANUFACTURE TO ACCOUNT FOR ACTUAL INSTALLED LOCATION DUCT CONFIGURATION. FIELD VERIFY EXISTING CONDITIONS. PROVIDE PROGRAMMING TO MODULATE AND MAINTAIN A RETURN AIR CFM SET-POINT. RA CFM SET-POINT SHALL BE DETERMINED BY TYPING THE SUPPLY AIR, AS DETERMINED BY THE ASSOCIATED WY'S CFM READINGS, MINUS THE GENERAL EXHAUST IN THE AREA, AND MINUS A BUILDING PRESSURE OFFSET. (INITIAL BUILDING PRESSURE OFFSET TO BE 1000 CFM). FIELD COORDINATE FINAL OFFSET TO MAINTAIN A POSITIVE BUILDING PRESSURE.
 - (10) RE-WORK EXISTING CONDUITS AND DUCTWORK BELOW IN LEVEL 3 CEILING, AS REQUIRED TO ACCOMMODATE NEW DUCT DROP THROUGH FLOOR.



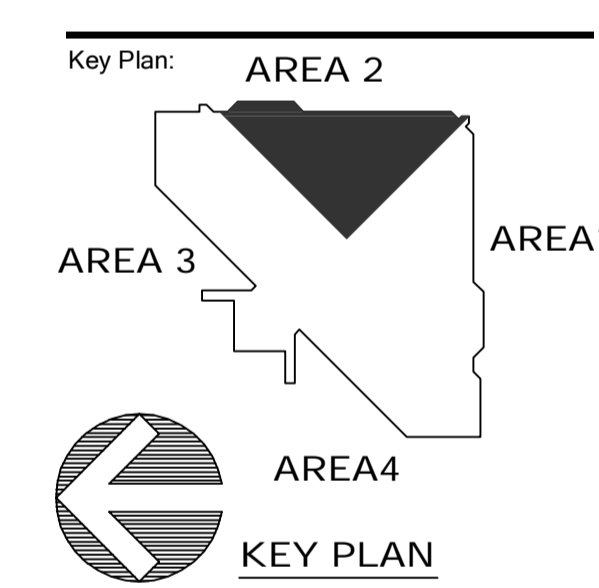
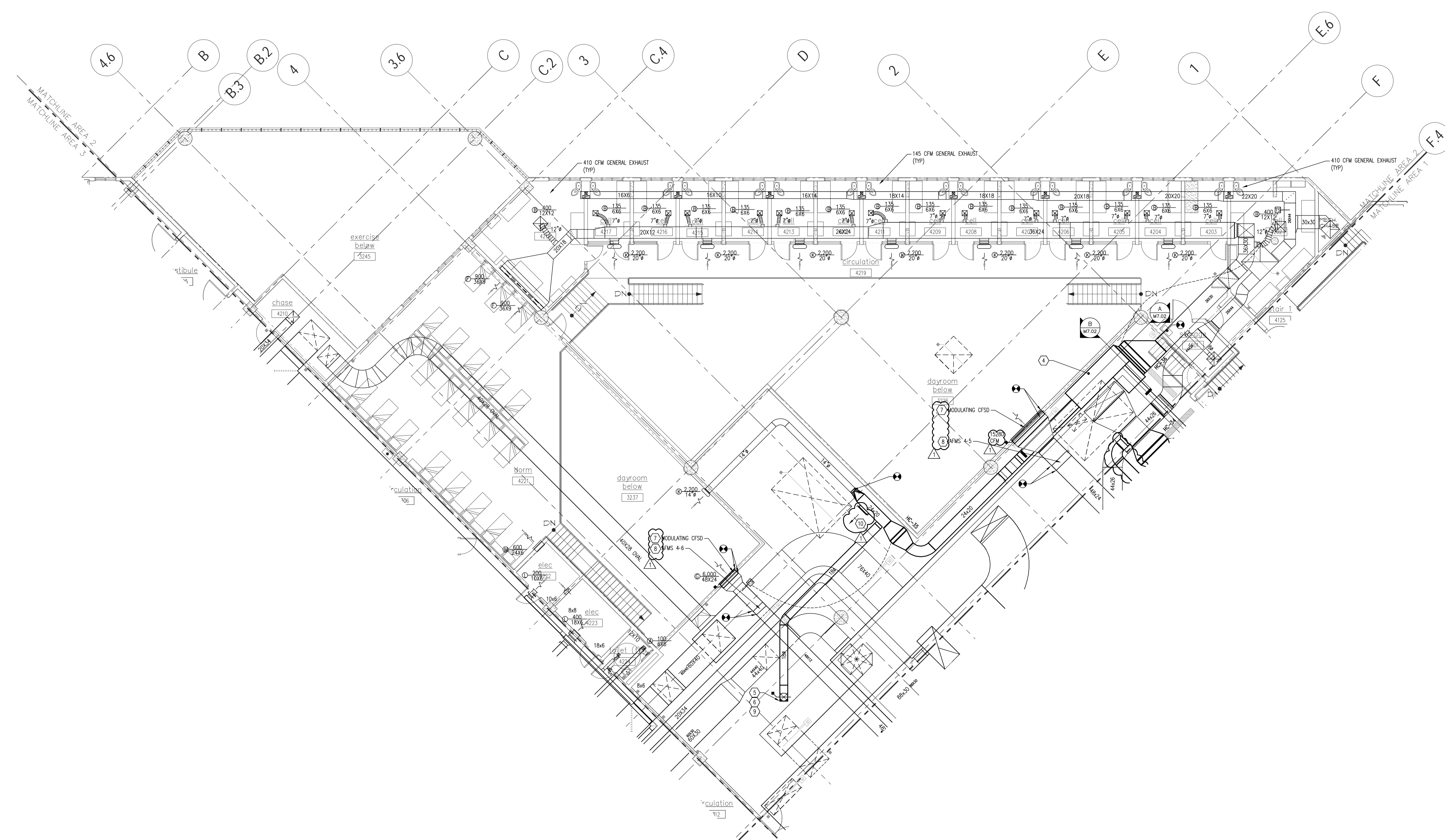
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GENERAL NOTES:

1. PATCH, SEAL, AND INSULATE UNUSED EXISTING DUCT OPENINGS TO MATCH EXISTING.
2. THERMOSTAT LOCATIONS INDICATED ARE NEW. CONTRACTOR SHALL PATCH AND PAINT ORIGINAL LOCATIONS TO MATCH ARCHITECTURAL FINISH PLAN.
3. EXISTING SUPPLY, RETURN, AND EXHAUST REGISTERS TO REMAIN UNLESS OTHERWISE NOTED. CLEAN REGISTERS PRIOR TO CONNECTING NEW FLEX DUCT.
5. PHASE D AIR SIDE TEST AND BALANCE: BALANCE AIR SIDE EQUIPMENT, GRILLES, AND DIFFUSERS TO ORIGINAL AND/OR NEW DESIGN CFM VALUE AS INDICATED.

REFERENCE NOTES:

- (1) NOT USED.
- (2) NEW RETURN/EXHAUST AIR DUCT MOUNTED SPACE.
- (3) NOT USED.
- (4) FIELD FABRICATED FLEXIM. SEE DETAIL #7 ON SHEET M7.02.
- (5) BUILDING SLAB CONSTRUCTION IS POST TENSION. X-RAY PRIOR TO CORING OR ANCHORING TO AVOID HITTING PT CABLES. COORDINATE WITH EXISTING BUILDING, STRUCTURAL DRAWINGS AND X-RAYS.
- (6) NEW 18" ROUND SUPPLY DUCT DOWN FROM MECHANICAL ROOM. TRANSITION 18" ROUND DUCT TO 18" X 18" SQUARE DUCT PRIOR TO PENETRATING POST TENSION SLAB. PROVIDE A SECURE CFSD AT PENETRATION. SEE DETAIL #3 ON SHEET M7.01.
- (7) REMOVE AND REPLACE EXISTING TWO POSITION CFSD SMOKE CONTROL DAMPER ON RA SHAFT AND REPLACE WITH A UL555S CFSD MODULATING SMOKE CONTROL DAMPER. SPRING RETURN CLOSED. CONNECT TO THE UL864 BAS CONTROL SYSTEM. PROVIDE FIRE ALARM AUXILIARY CONTACTS FOR OPEN AND CLOSED STATUS. FIRE ALARM SYSTEM SHALL MONITOR OPEN AND CLOSED STATUS. SIZE TO MATCH EXISTING CONDITIONS. FIELD VERIFY ACTUATOR VOLTAGE TO MATCH EXISTING ACTUATOR VOLTAGE. RUSKIN OR APPROVED EQUAL.
- (8) PROVIDE NEW AIR FLOW MONITORING STATION IN MAIN RETURN AIR DUCT. AND EXPAND AND CONNECT TO THE UL864 BAS SYSTEM. SIZE AND NUMBER OF SAMPLE PROBES SHALL BE DETERMINED BY THE MANUFACTURE TO ACCOUNT FOR ACTUAL INSTALLED LOCATION DUCT CONFIGURATION. FIELD VERIFY EXISTING CONDITIONS. PROVIDE PROGRAMMING TO MODULATE AND MAINTAIN A RETURN AIR CFM SETPOINT. RA CFM SETPOINT SHALL BE DETERMINED BY TOTALING THE SUPPLY AIR, AS DETERMINED BY THE ASSOCIATED VAV'S CFM READINGS, MINUS THE GENERAL EXHAUST IN THE AREA AND MINUS A BUILDING PRESSURE OFFSET. (INITIAL BUILDING PRESSURE OFFSET TO BE 1000 CFM). FIELD COORDINATE FINAL OFFSET TO MAINTAIN A POSITIVE BUILDING PRESSURE. REWORK EXISTING CONDUITS AND DUCTWORK BELOW IN LEVEL 3 CEILING, AS REQUIRED TO ACCOMMODATE NEW DUCT DROP THROUGH FLOOR.
- (10) EXISTING 3/4" SEAMLESS SUPPLY DIFFUSER. CLEAN PRIOR TO REINSTALLING. BALANCE GRILLE TO 1000 CFM.



Revisions:

No.	Date	Description
06/15/12		CD'S & BID SET
07/26/12		ADDENDUM #1

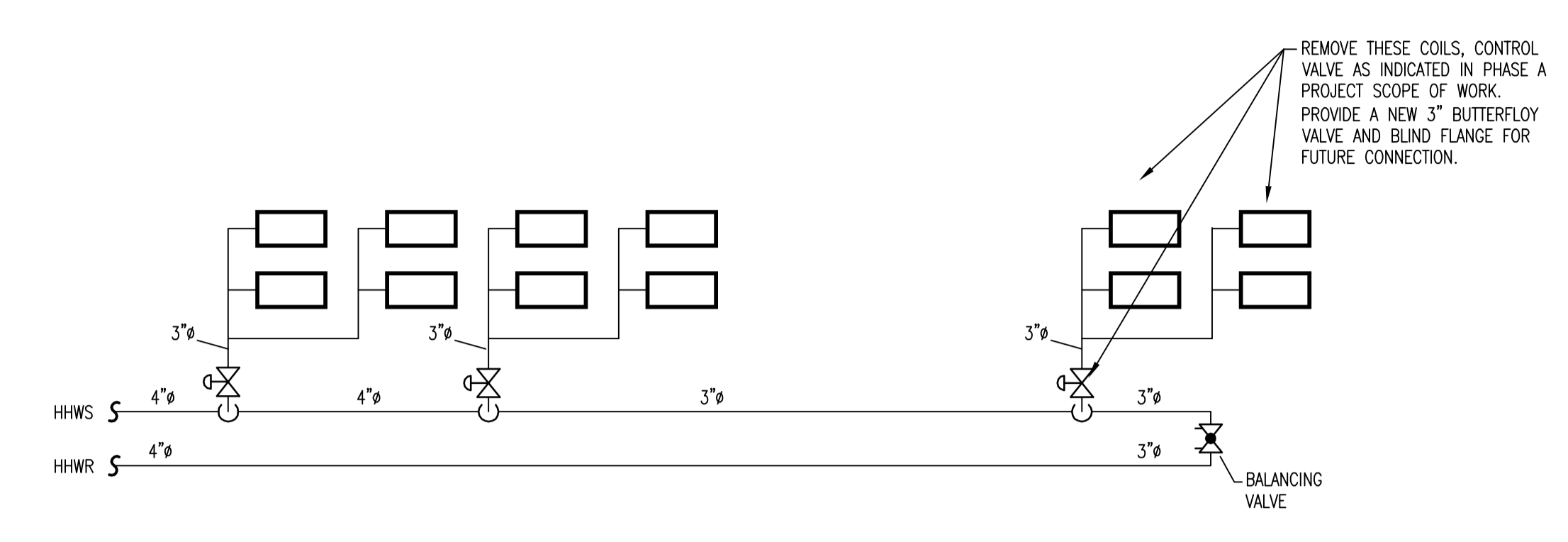
Seal
 Matthew John Weichert, P.E.
 Florida License #58442

Project No: 111011
 Issue Date: 06/15/2012
 Drawn By: REM
 Approved By: MJW
 Scale: 1/8" = 1'-0"
 Drawing Title:
**FOURTH FLOOR
 AREA 2 - PHASE A**

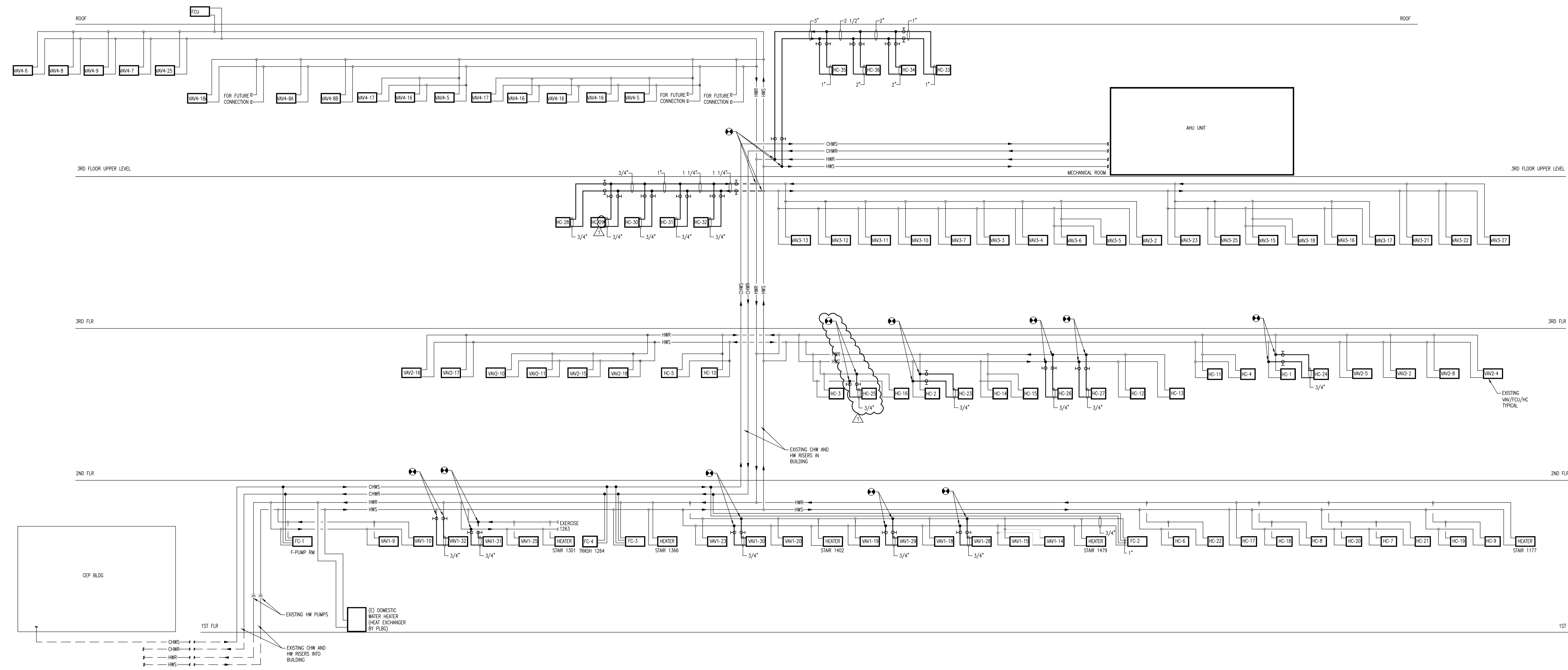
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FOURTH FLOOR AREA 2 - PHASE A
 SCALE: 1/8" = 1'-0"

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SCHEMATIC OF HW COILS WITHIN AIR HANDLING UNIT (EXISTING) N/S



Key Plan:

Revisions:

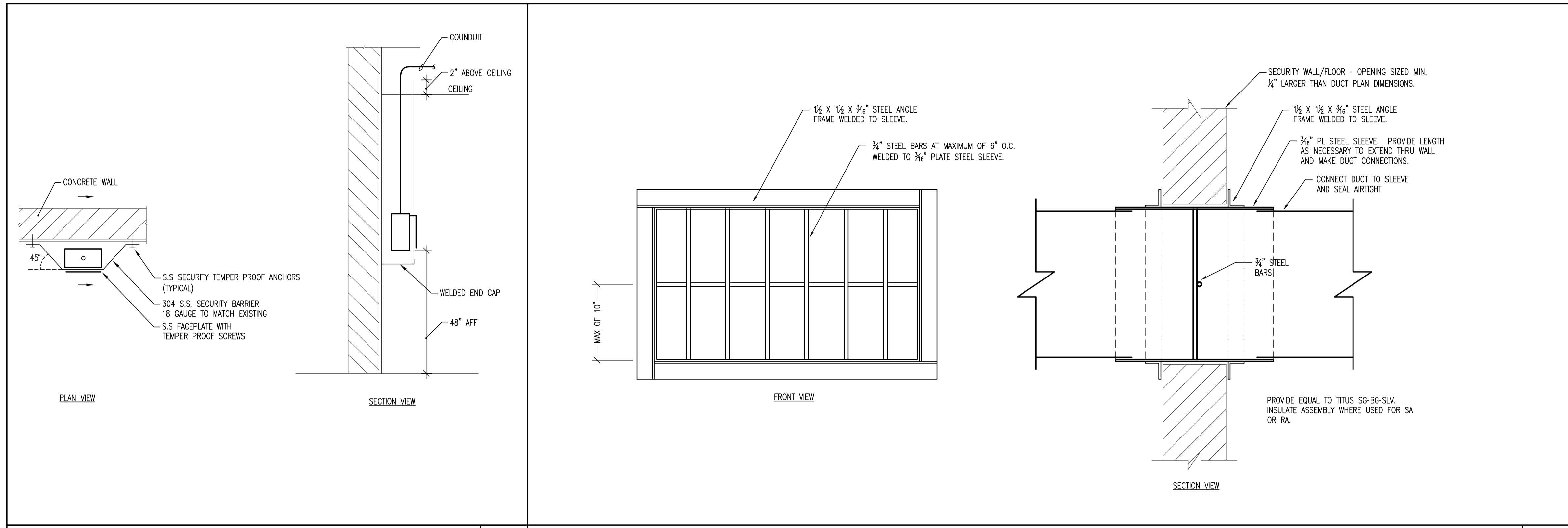
No.	Date	Description
06/15/12		CDPS & BID SET
07/26/12		ADDENDUM #1

Seal
 Matthew John Wiechart, P.E.
 Florida License #58442

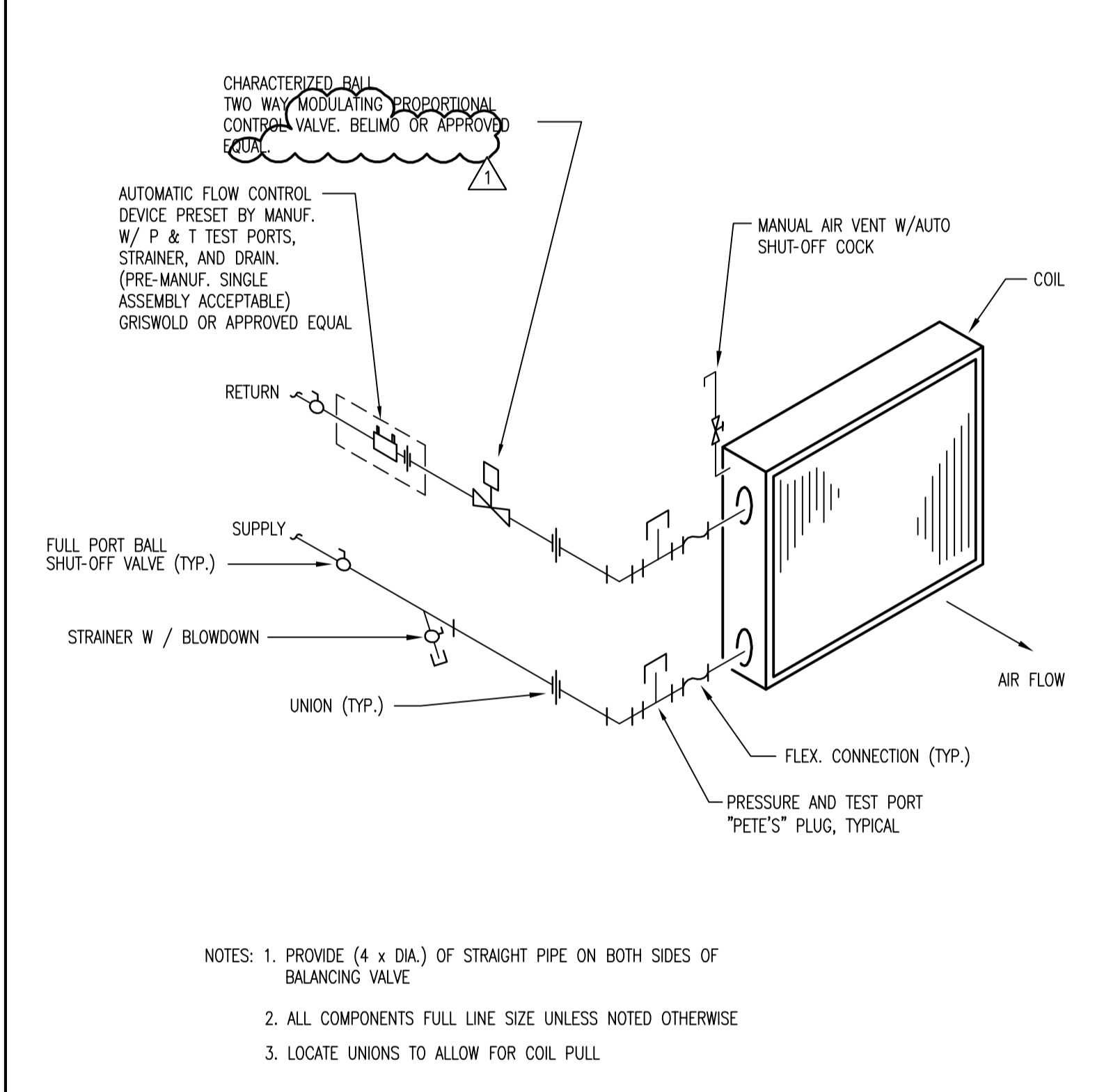
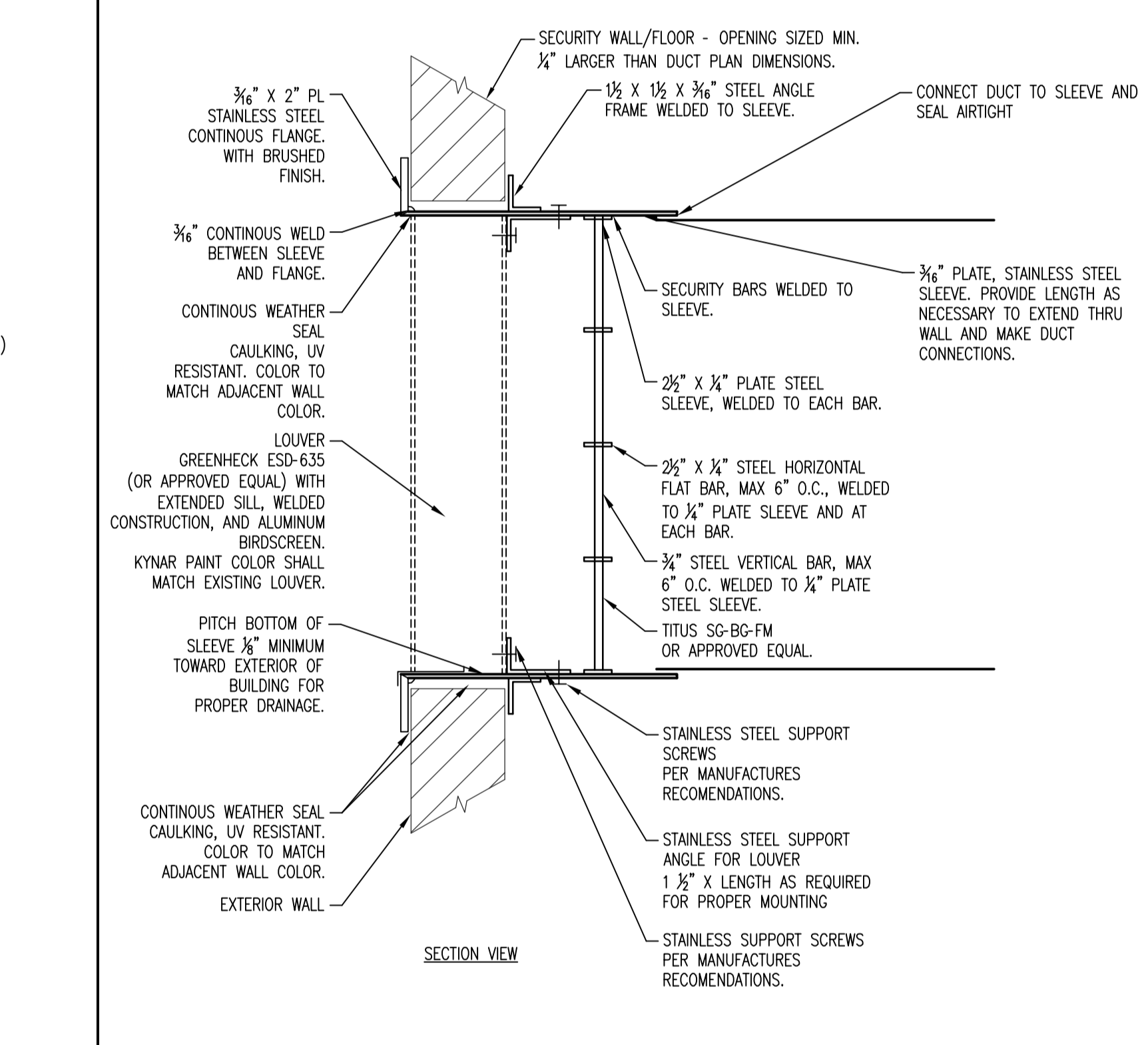
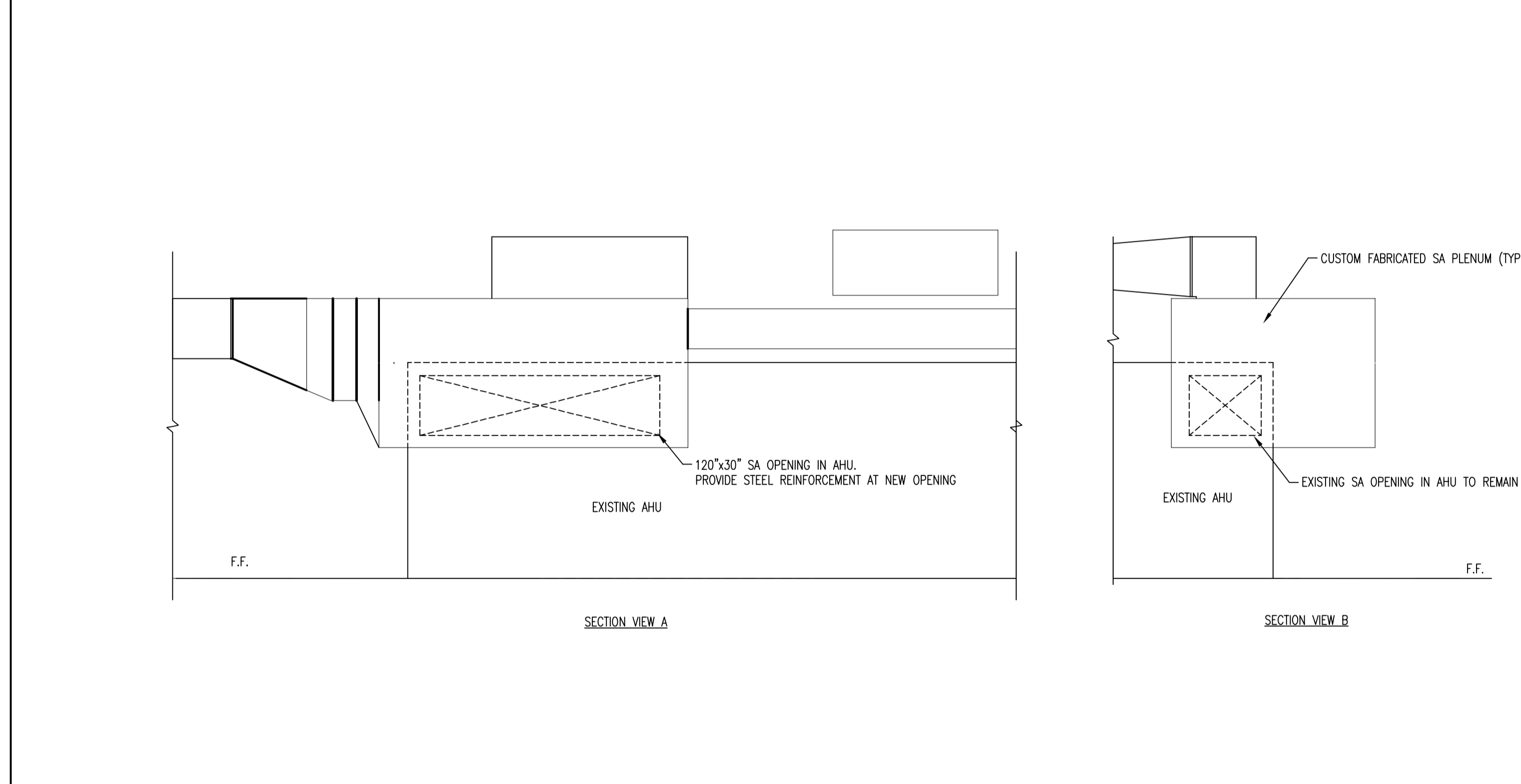
Project No.: 111011
 Issue Date: 06/15/2012
 Drawn By: REM
 Approved By: MJW
 Scale: NTS
 Drawing Title: HVAC DIAGRAMS

Drawing No.: M5.01A

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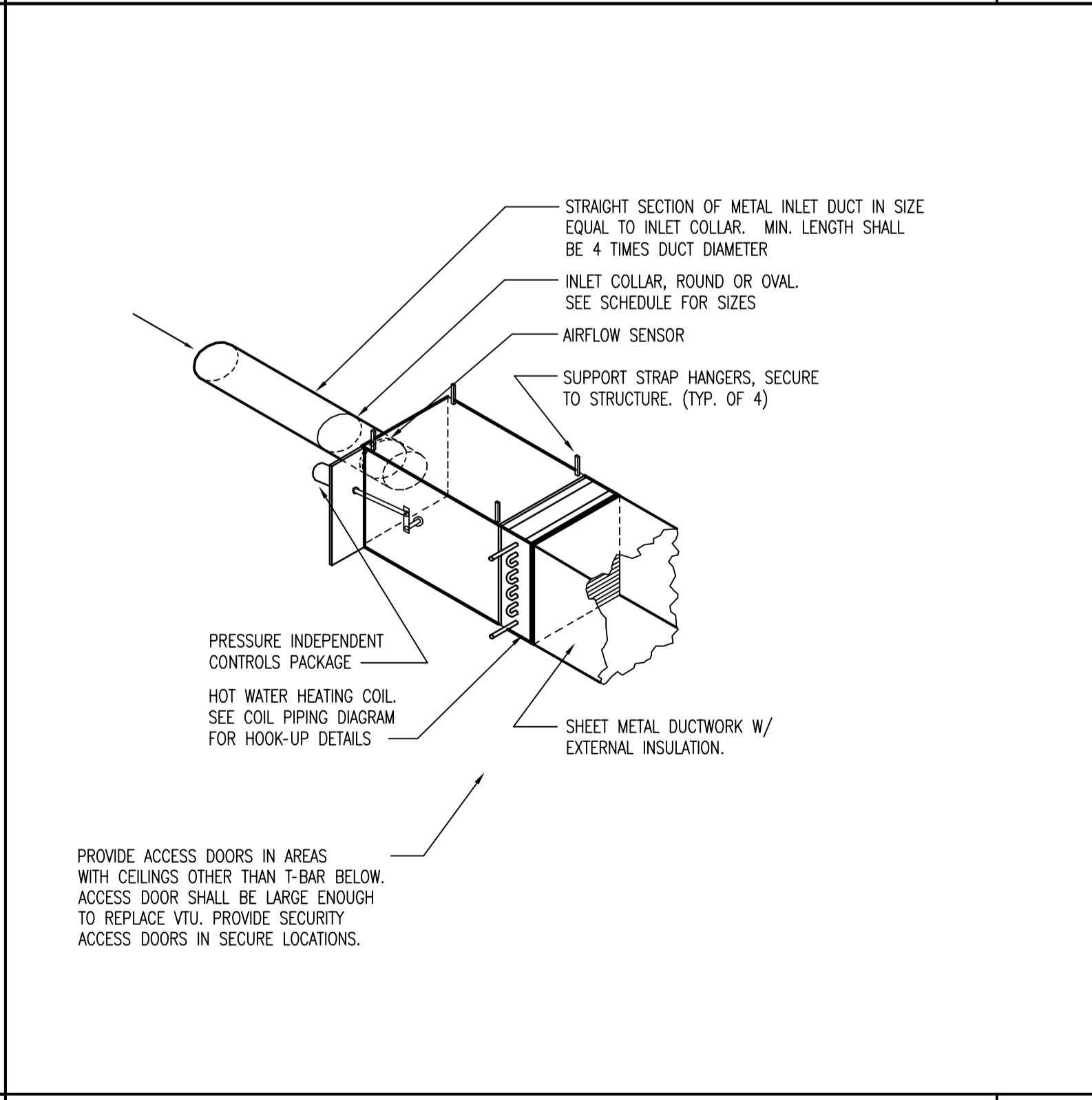
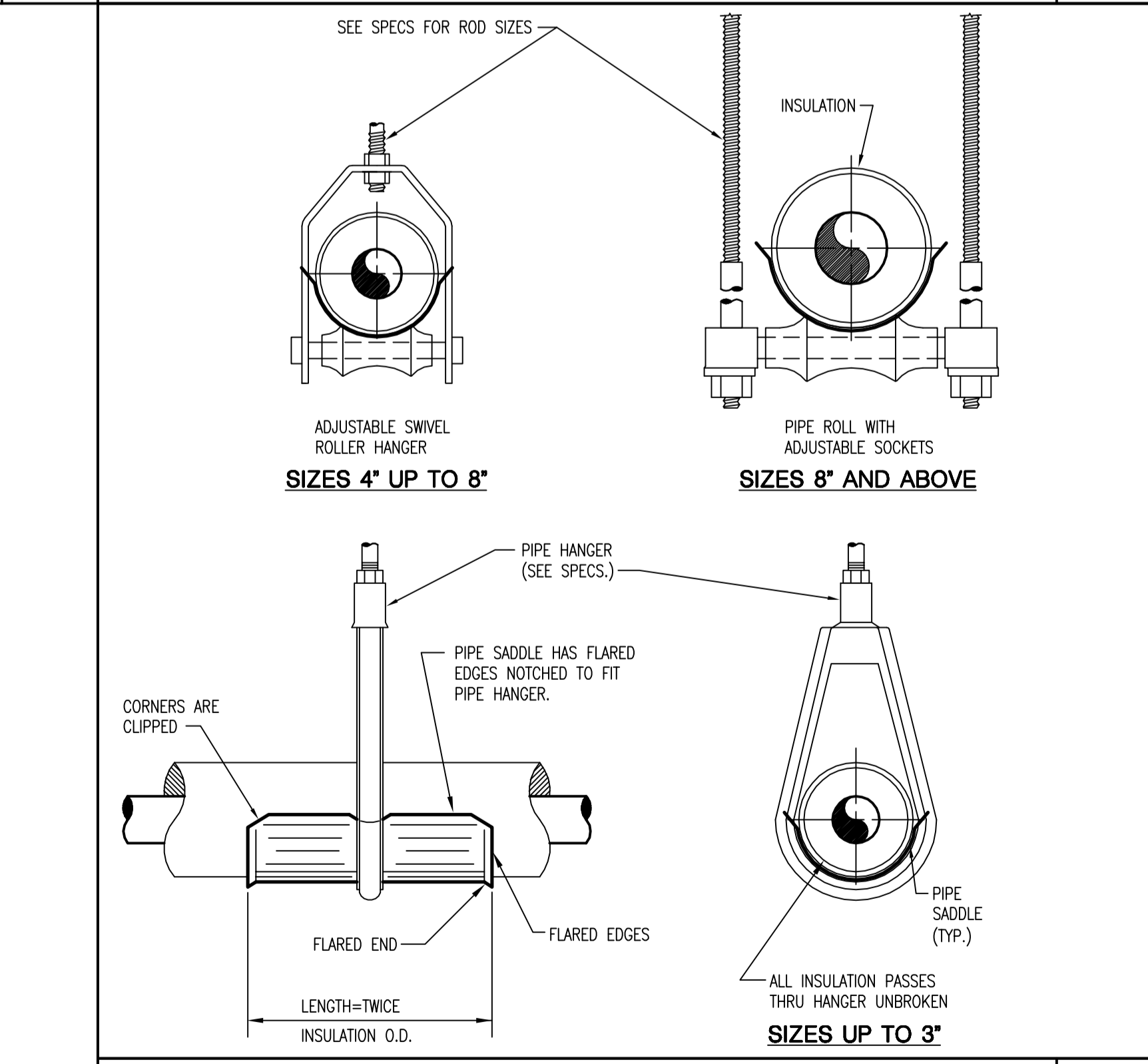
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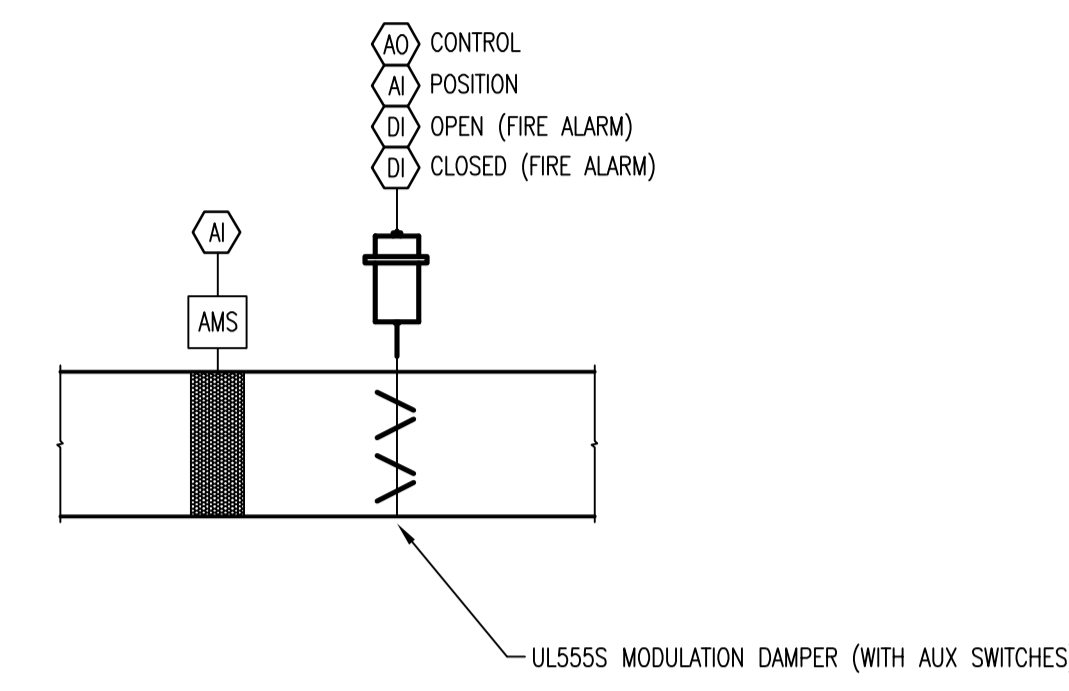
Revisions:	
No.	Description
06/15/12	CDPS & BID SET
07/26/12	ADDENDUM #1

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CONTROL DIAGRAM LEGEND

	BINARY/DIGITAL INPUT
	BINARY/DIGITAL OUTPUT
	ANALOG INPUT
	ANALOG OUTPUT
	DIFFERENTIAL PRESSURE SWITCH (DPS) OR TRANSMITTER (DPT)
	AVERAGING TEMPERATURE SENSOR
	PROBE TYPE TEMPERATURE SENSOR
	HUMIDITY SENSOR
	TWO-WAY CONTROL VALVE
	DUCT MOUNTED SMOKE DETECTOR
	DAMPER AND ACTUATOR
	STARTER DISCONNECT
	FAN
	AIR FILTER
	WALL-MOUNTED THERMOSTAT/TEMP. SENSOR HUMIDITY SENSOR, CO2 SENSOR, ETC. AS NOTED
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
	HEATING/COOL
	AIRFLOW DIRECTION (BREAK INDICATES SEPARATION FROM WSP.)
	VARIABLE FREQUENCY DRIVE
	END SWITCH



GENERAL SEQUENCE OF OPERATIONS:
 PROVIDE SEQUENCE FOR EACH AIRFLOW MONITOR SYSTEM ON EACH FLOOR.

FOR VAV AREAS SERVED:

- CONTROL SYSTEM SHALL CALCULATE THE TOTAL SUPPLY AIR BEING DELIVERED TO THE ASSOCIATED AREA AND DETERMINE THE TOTAL SUPPLY AIR FLOW.
- RETURN AIR CFM SET-POINT SHALL BE CALCULATED FROM THE FOLLOWING: (RA CFM SET-POINT) = (TOTAL SA CALCULATED ABOVE) - (CV GENERAL EXHAUST IN ASSOCIATED AREA) - (BUILDING PRESSURE OFFSET).

FOR CV AREAS SERVED:

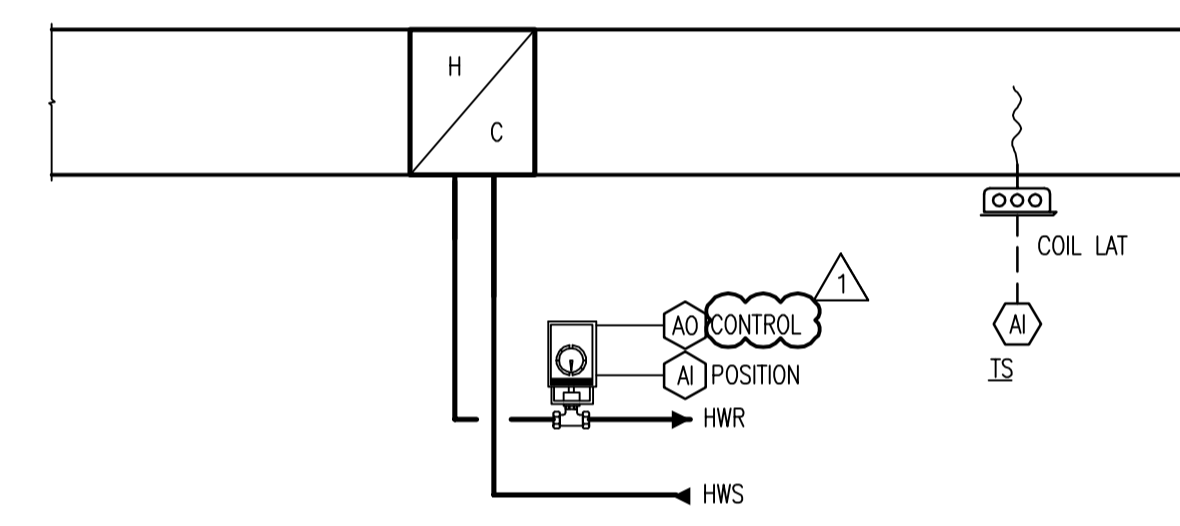
- TOTAL SUPPLY AIR BEING DELIVERED TO THE ASSOCIATED AREA IS CV, SO SA VALUE SHALL BE INITIALLY SET TO DESIGN SA AND THEN ADJUSTED DURING TAB TO MATCH ACTUAL SA TOTAL FOR AREA SERVED.
- RETURN AIR CFM SET-POINT SHALL BE CALCULATED FROM THE FOLLOWING: (RA CFM SET-POINT) = (TOTAL SA CALCULATED ABOVE) - (CV GENERAL EXHAUST IN ASSOCIATED AREA) - (BUILDING PRESSURE OFFSET).

A. INITIAL BUILDING PRESSURE OFFSET SHALL BE 1000 CFM. FINAL BUILDING PRESSURE OFFSET SHALL BE DETERMINED DURING TAB OF THE BUILDING TO MAINTAIN AT LEAST 0.03" POSITIVE BUILDING PRESSURE RELATIVE TO AMBIENT.

DURING SMOKE CONTROL IN ANY ZONE:

- OPEN DAMPER 100% OR CLOSE DAMPER SIMILAR TO EXISTING DAMPER POSITION REQUIRED FOR SMOKE CONTROL OPERATION. REFER TO SMOKE CONTROL MATRIX ON SHEET M8.01.

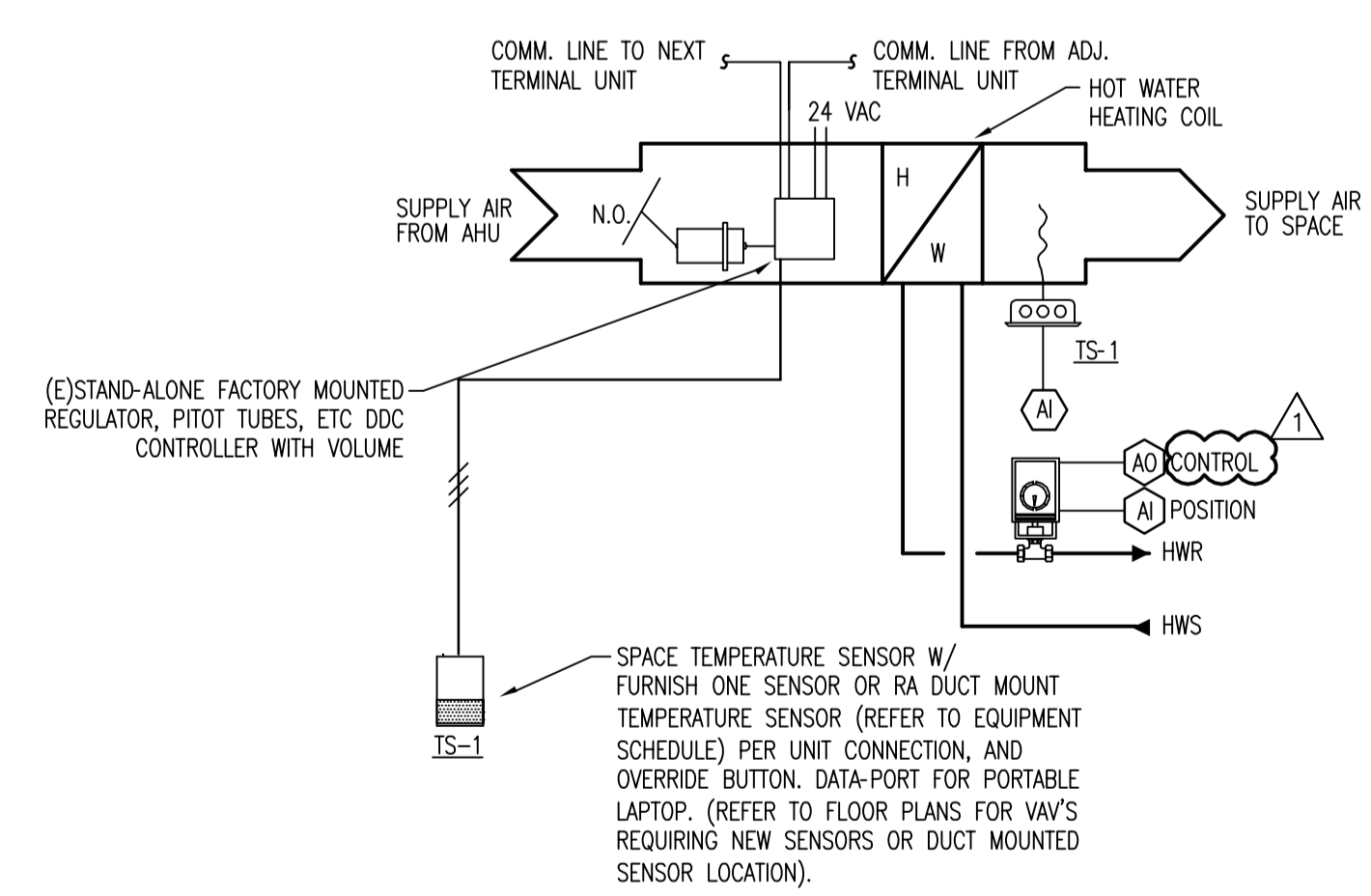
CONTROL DIAGRAM FOR AIR FLOW MONITORING STATION AND MODULATING DAMPER



GENERAL SEQUENCE OF OPERATIONS:

- PROVIDE OCCUPIED AND UNOCCUPIED SETPOINTS AND ASSOCIATED SCHEDULES.
- MODULATE HEATING COIL TO MAINTAIN ZONE TEMPERATURE SETPOINT.

CONTROL DIAGRAM FOR DUCT MOUNTED HOT WATER REHEAT COIL



GENERAL SEQUENCE OF OPERATIONS:

- PROVIDE OCCUPIED AND UNOCCUPIED SETPOINTS AND ASSOCIATED SCHEDULES. (FIELD COORDINATE WITH OWNER FOR SETPOINTS AND SCHEDULE).
- VAV SEQUENCE SHALL MATCH EXISTING VAV SEQUENCE IN BUILDING.

CONTROL DIAGRAM FOR VAV WITH HOT WATER REHEAT COIL

Key Plan:

No.	Date	Description
06/15/12		CDPS & BID SET
07/26/12		ADDENDUM #1

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Drawing Title:
HVAC CONTROLS - PHASE A

Drawing No.: **M8.01A**