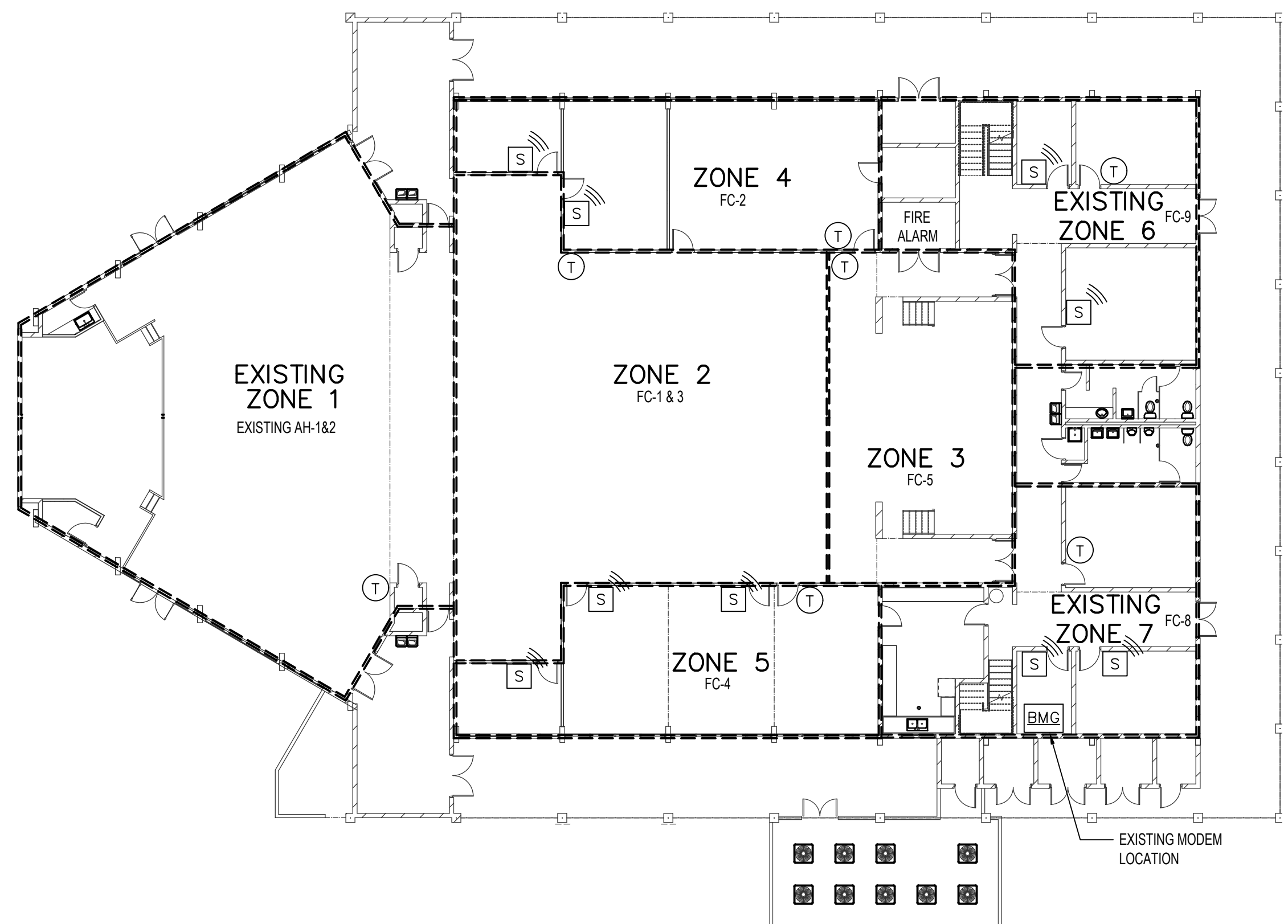
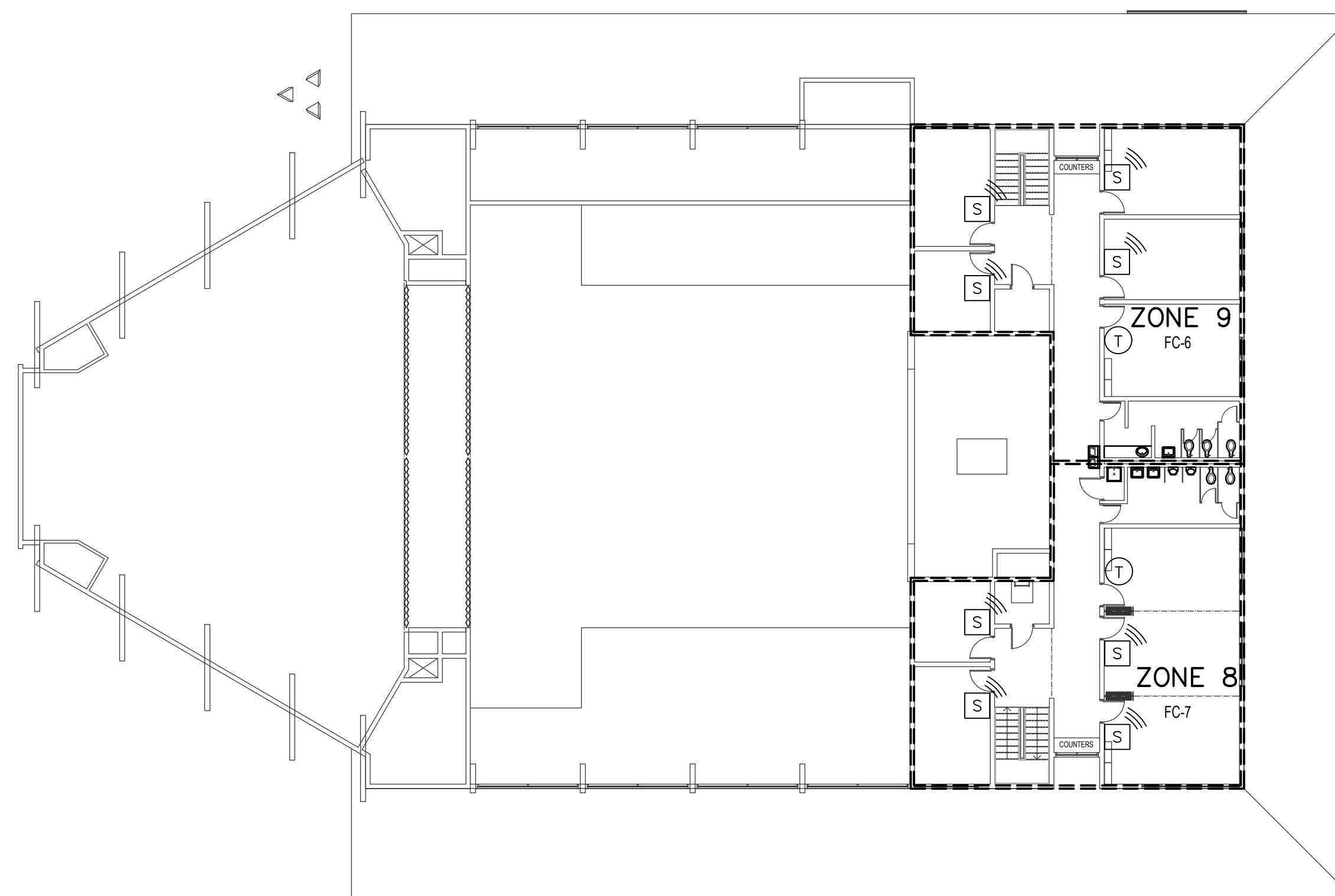


NOTE:
ALL DEVICES MUST BE
INSTALLED AT LEAST
2'-0" APART (TYPICAL).

NOTE:
ALL TEMPERATURE CONTROL CONDUIT SHALL
BE FURNISHED AND INSTALLED BY DIVISION 26.



MAIN LEVEL ZONE PLAN
SCALE: 1/8" = 1'-0"



UPPER LEVEL ZONE PLAN
SCALE: 1/8" = 1'-0"

SYMBOLS

- M** EQUIPMENT INTERFACE MODULE (DIV 23). MOUNT MODULE IN ACCESSIBLE LOCATION ON WALL NEAR ASSOCIATED FAN UNIT.
- RP-6** RELAY PANEL (DIV 23) MOUNT 5'-0" TO BOTTOM OF CABINET
- T** THERMOSTAT OUTLET (DIV 26)
- RIG** RIG MODULE (DIV 23)
- S** WIRELESS INDOOR AIR SENSOR
- OA** WIRELESS OUTDOOR AIR SENSOR. SEE NOTE 9, SHEET ME701.
- CO2** CO₂ SENSOR (DIV 23) INSTALL UPSTREAM OF RELIEF OR OUTSIDE AIR CONNECTION. REFER TO SECTIONS C, D & E/M301. (SIMILAR FOR ALL)
- BMG** NEW BUILDING MANAGEMENT GATEWAY

NOTES:

1. BOXES FOR THERMOSTAT (T) OUTLETS SHALL BE 2"x4" WITH LONG DIMENSION VERTICAL. USE METAL BRACKET OF COVER PLATE ASSEMBLY TO MOUNT THERMOSTAT HORIZONTAL.
2. CONDUIT TO BE 1/2" UNLESS NOTED OTHERWISE.
3. TEMPERATURE CONTROL WIRING THAT IS NOT IN CONDUIT SHALL BE RUN PARALLEL AND PERPENDICULAR TO BUILDING CONSTRUCTION LINES. SEE SPECIFICATIONS FOR ACCEPTABLE FASTENING METHODS AND MAXIMUM ALLOWABLE SPACING BETWEEN FASTENERS.
4. TEMPERATURE CONTROL WIRING THAT IS NOT IN CONDUIT SHALL BE LABELED. PROVIDE A LABEL AT ALL POINTS WHERE TEMPERATURE CONTROL WIRING ENTERS CONDUIT AND AT CONNECTIONS TO DEVICES.
5. SEAL OPEN END OF CONDUIT AIR-TIGHT AROUND THERMOSTAT WIRE WITH SEALANT COMPOUND. SEE SPECS FOR APPROVED PRODUCT.
6. SEAL ANNULAR SPACE BETWEEN CONDUIT AND OPENING IN FLOOR OR WALL WITH SEALANT COMPOUND. SEE SPECS FOR APPROVED PRODUCT.
7. SEAL OPEN END OF CONDUIT AT J-BOX AIR TIGHT AROUND THERMOSTAT WIRE. SEAL ALL AIR GAPS AROUND J-BOX TO ISOLATE J-BOX FROM WALL CAVITY. SEAL BACK OF THERMOSTAT AROUND WIRES. PACK J-BOX TIGHT WITH GLASS FIBER BATT INSULATION. USE SEALING COMPOUND SPECIFICALLY MADE FOR REFRIGERATION AND AIR CONDITIONING APPLICATIONS. SEE SPECIFICATION FOR APPROVED PRODUCTS.

HAWAII COUNTY ENERGY CODE

2018 IECC, HAWAII REVISED STATUTES HRS 107-24 TO 28 & HAWAII ADMINISTRATIVE RULES HAR 3-181.1

COMMERCIAL BUILDING ENERGY EFFICIENCY STANDARDS

I CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THIS PROJECT'S DESIGN SUBSTANTIALLY CONFORMS TO THE BUILDING ENERGY EFFICIENCY STANDARDS PERTAINING TO THE **COMMERCIAL PROVISIONS FOR MECHANICAL SYSTEMS (C403, C404 & C405)** OF THE 2018 IECC WITH AMENDMENTS PER HAR 3-181.1

STATE AMENDMENTS: [EFFECTIVE FOR NEW APPLICATIONS BEGINNING 09/01/2021](#)
COUNTY AMENDMENTS: PENDING

COMPLIANCE METHOD

- 2018 IECC as amended. Mandatory & Prescriptive
- 2018 IECC as amended. Mandatory & Total Building Performance
- ASHRAE Standard 90.1-2016. Mandatory & Prescriptive
- ASHRAE Standard 90.1-2016. Mandatory & Energy Cost Budget

INFORMATION IN CONSTRUCTION DOCUMENTS

| | Yes | N/A |
|--|-------------------------------------|--------------------------|
| HVAC Systems | | |
| Equipment capacity and efficiency. C403.3 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Thermostatic controls C403.4 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Guest room door switches. C403.2.3 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Ventilation rate C403.7 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Demand control ventilation controls C403.7.1 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Enclosed parking garage ventilation control. C403.7.2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Energy recovery ventilation system. C403.7.4 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Kitchen exhaust systems. C403.7.5 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Duct and plenum insulation thickness/R-value. C403.11.1 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Duct and plenum sealing requirements. C403.11.1 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Pipe insulation thickness/R-value. C403.2.11.3 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Fan motor horsepower. C403.8.1 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Fan efficiency. C403.8.3 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Fan motor efficiency. C405.7 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Pump motor efficiency. C405.7 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Variable-flow fan control. C403.8.5 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Static pressure sensor location. C403.6.9 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Static pressure reset control. C403.6.8 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Chilled water variable flow control. C403.4.4 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Chiller isolation. C403.4.5 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Cooling tower fan control. C403.9 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Terminal unit minimum and maximum airflow. C403.6 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Commissioning requirements. C408.2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Refrigeration | | |
| Refrigeration equipment efficiency. C403.10 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Walk-in coolers and freezers. C403.10.1, C403.10.2 & C403.10.4 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Refrigerated warehouses. C403.10.1 & C403.10.4 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Refrigerated display cases. C403.10.3 & C403.10.4 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Service Water Heating | | |
| Heat recovery for service water heating. C403.9.5 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Equipment capacity and efficiency. C404.2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Pipe insulation. C404.4 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Hot water pipe length/volume. C404.5 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Hot water circulation controls. C404.6 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Heated pool and spa covers. C404.9.3 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Commissioning requirements. C408.2 | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

NOTES

The above must be submitted to the County of Hawaii Building Division as a block or detail within the plan sets on its respective trade sheet (Mechanical and/or Plumbing as Applies).
Effective Date: 09/01/2021

**CITY AND COUNTY OF HONOLULU
REVISED ORDINANCES OF HONOLULU 1990
CHAPTER 32**

To the best of my knowledge, this project's design substantially conforms to the Building Energy Conservation Code for:

- Building Component Systems
- Electrical Component Systems
- Mechanical Component Systems

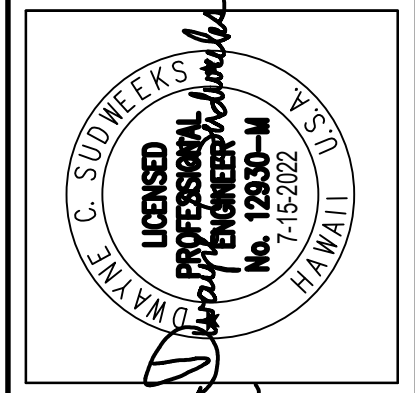
Signature: Dwayne C. Sudweeks Date: _____
Name: DWAYNE C. SUDWEES
Title: MECHANICAL ENGINEER
License No.: 12930-M

APPLICABLE CODES*

| |
|--|
| 2018 INTERNATIONAL BUILDING CODE |
| 2018 INTERNATIONAL ENERGY CONSTRUCTION CODE. |
| 2012 UNIFORM PLUMBING CODE |
| 2018 NATIONAL FIRE PROTECTION ASSOCIATION |

*AS AMENDED BY THE STATE OF HAWAII

Emc2 Architects Planners, PC
1635 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 8888
F: 480 830 3966
www.emc2architects.com



This work was prepared by me or under my direct supervision and I am a duly licensed Professional Engineer in the State of Hawaii.
Dwayne C. Sudweeks
Professional Engineer, License No. 12930-M
Mechanical Engineering
Hawaii State Board of Professional Engineers, Architects, Surveyors and Landscape Architects

Project Name:
HAWAII KAI
REMODEL
HONOLULU HI STAKE
TMK: 39040040
219 Lunalilo Home Road
Honolulu, HI 96825-1806

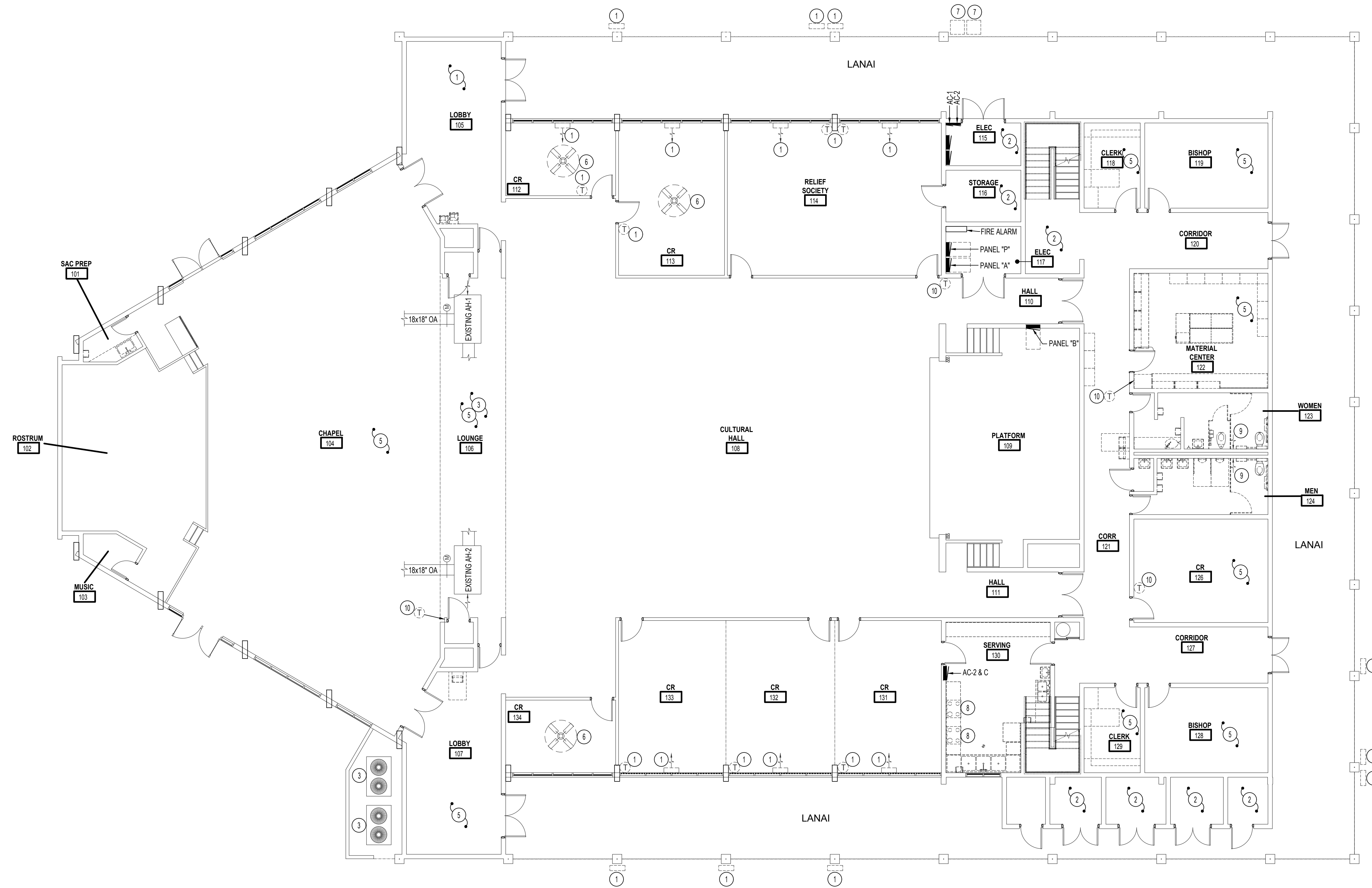
Owner:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

| REVISIONS / SUBMISSIONS | DATE |
|-------------------------|------|
| # | |

Project Number: 1720727.00
Plan Series:
Property Number: 513-1391

Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
1355 EAST CENTER
POCATELLO, IDAHO 83201
PHONE: (208) 233-0501
EMAIL: eso@engsystems.com
ESA JOB NUMBER: 20035

Sheet Title:
MECHANICAL LEGEND
Sheet:
M001



MAIN FLOOR PLAN - MECHANICAL DEMO

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



MECHANICAL NOTES:

- 1 EXISTING MINI SPLIT ALONG WITH CORRESPONDING THERMOSTAT, REFRIGERATION LINE, SUPPORTS, CONDENSING UNIT, CONCRETE PAD, AND PROTECTIVE REFRIGERATION COVERINGS TO BE REMOVED AND DISPOSED OF. SEE ARCHITECT PLANS FOR PATCHING. LOCATIONS ON PLANS ARE APPROXIMATE. FIELD VERIFY EXACT LOCATIONS.
- 2 NO WORK TO BE DONE IN THIS ROOM. PROTECT DURING CONSTRUCTION.
- 3 CHAPEL AIR HANDLERS ABOVE LOUNGE ALONG WITH ITS CORRESPONDING CONDENSING UNITS TO REMAIN. PROTECT DURING CONSTRUCTION.
- 4 NOT USED
- 5 EXISTING MECHANICAL EQUIPMENT, DUCTWORK, & GRILLES IN THIS ROOM TO REMAIN. PROTECT DURING CONSTRUCTION.
- 6 EXISTING CEILING FAN TO REMAIN. PROTECT DURING CONSTRUCTION.
- 7 EXISTING CONDENSING UNITS TO BE REMOVED AND DISPOSED OF. ALONG WITH CORRESPONDING THERMOSTAT, REFRIGERATION LINE, SUPPORTS, CONDENSING UNIT, AND PROTECTIVE REFRIGERATION COVERINGS TO BE REMOVED AND DISPOSED OF. SEE ARCHITECT PLANS FOR PATCHING.
- 8 EXISTING VAPOR HOOD TO REMAIN. PROTECT DURING CONSTRUCTION.
- 9 EXISTING EXHAUST SYSTEM TO BE REMOVED AND DISPOSED OF. MAINTAIN VERTICAL EXHAUST DUCT TO ATTIC SPACE. COORDINATE WITH THE GENERAL FOR PATCHING.
- 10 EXISTING THERMOSTAT, TIMER AND/OR SENSOR TO BE REMOVED AND REPLACED WITH NEW CONTROL SYSTEM. SEE SHEET M001 AND M300-M302 FOR ADDITIONAL DETAILS.

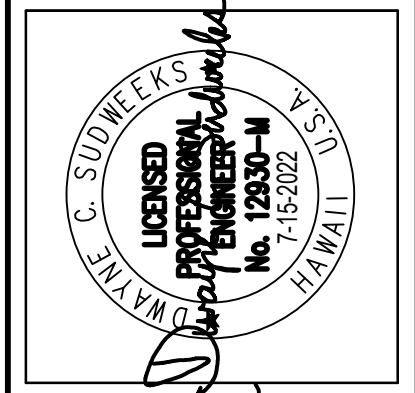
GENERAL NOTES:

- A PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS PRIOR TO BID AND CONNECTIONS ON THE JOB SITE. ALL WORK SHALL BE EXECUTED FROM MEASUREMENTS TAKEN AT THE SITE.
- B THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO INSURE PROPER CODE CLEARANCES FOR ELECTRICAL AND MECHANICAL ACCESS WHEN INSTALLING ANY EQUIPMENT SUPPLIED BY THE MECHANICAL CONTRACTOR.
- C IT IS CRITICAL THAT THIS CONTRACTOR COORDINATE EQUIPMENT LOCATIONS WITH PIPING, DUCTWORK, ELECTRICAL CONDUIT AND BUILDING STRUCTURE TO INSURE CODE COMPLIANCE.

MECHANICAL LEGEND

| SYMBOL | DESCRIPTION |
|--------|------------------------------------|
| ⓪ | ELECTRONIC THERMOSTAT |
| FC | EQUIPMENT SYMBOL |
| HD | HAND DAMPER |
| ⌋ | ROUND BRANCH DUCT WITH HAND DAMPER |
| ⌈ | INSULATED FLEXIBLE DUCT |
| ⌋ | RETURN AIR OR EXHAUST GRILLE |
| ⌈ | CEILING DIFFUSER |

Emc2
Architects Planners, P.C.
1635 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 8838
F: 480 830 3966
www.emc2architects.com



This work was prepared by me or under my direct supervision and I am a duly Licensed Professional Engineer in the State of Hawaii. My license number is 12337-H. My expiration date is 7/15/2022.
Dwayne C. Sandwick
Professional Engineer, Architects, Surveyors
License No. 12337-H
Expires 7/15/2022
www.dcsandwick.com

Project Name:
HAWAII KAI
REMODEL
HONOLULU HI STAKE
TMK: 39040040
219 Lunalilo Home Road
Honolulu, HI 96825-1806

Owner:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

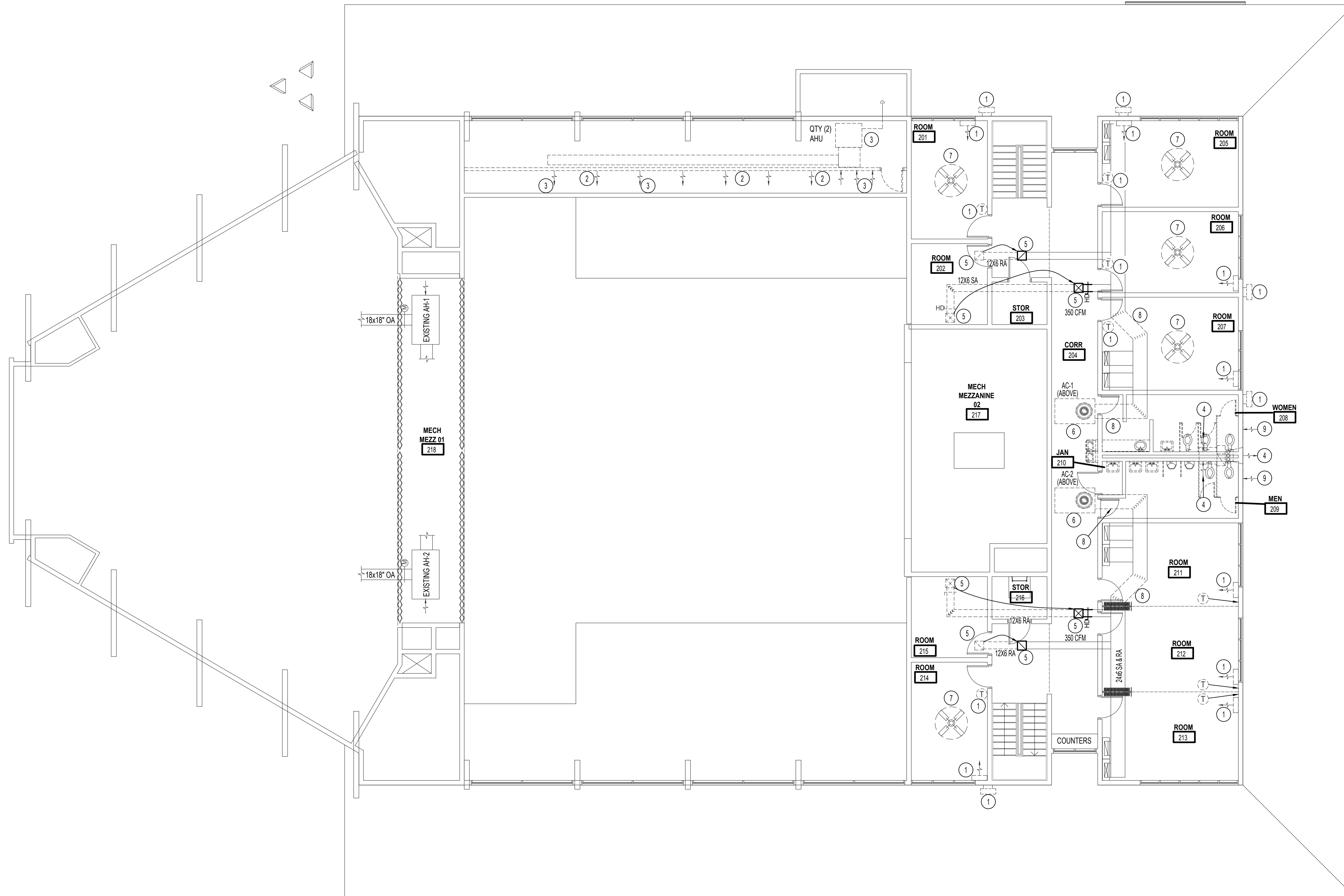
| REVISIONS / SUBMISSIONS | DATE |
|-------------------------|------|
| # | |

Project Number:
1720727.00
Plan Series:
Property Number:
513-1391

Sheet Title:
DEMO MECHANICAL MAIN LEVEL

Sheet:
M002

Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
1355 EAST CENTER
POCATELLO, IDAHO 83201
PHONE: (208) 233-0501
EMAIL: eso@engsystems.com
ESA JOB NUMBER: 20035



UPPER FLOOR PLAN - MECHANICAL DEMO
SCALE: 1/8" = 1'-0"



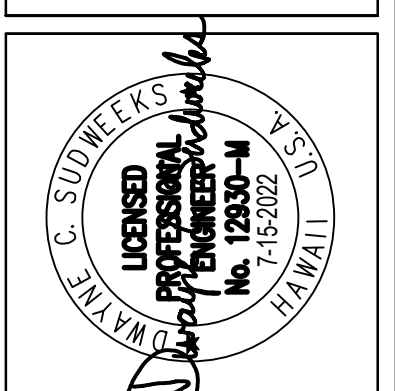
MECHANICAL NOTES:

- 1 EXISTING MINI SPLIT ALONG WITH CORRESPONDING THERMOSTAT, REFRIGERATION LINE, SUPPORTS, CONDENSING UNIT, MOUNTING HARDWARE, AND PROTECTIVE REFRIGERATION COVERINGS TO BE REMOVED AND DISPOSED OF. SEE ARCHITECT PLANS FOR PATCHING. LOCATIONS ON PLANS ARE APPROXIMATE. FIELD VERIFY EXACT LOCATIONS.
- 2 EXISTING WALL TO BE REMOVED. SEE ARCHITECT PLANS.
- 3 EXISTING AIR HANDLER ALONG WITH ALL DUCTWORK & GRILLES TO BE REMOVED AND DISPOSED OF. REMOVE AND DISPOSE OF ACCESSIBLE CONDENSATE UP TO PENETRATION THRU BUILDING. LOCATIONS ARE APPROXIMATE. FIELD VERIFY EXACT LOCATIONS.
- 4 EXISTING EXHAUST FAN SYSTEM TO BE REMOVED AND DISPOSED OF. MAINTAIN VERTICAL EXHAUST DUCT TO ATTIC SPACE ALONG WITH OUTSIDE LOUVER. COORDINATE WITH THE GENERAL FOR PATCHING.
- 5 EXISTING SUPPLY & RETURN GRILLE TO BE RELOCATED TO NEW LOCATION. BALANCE TO CFM AS INDICATED ON PLANS. REMOVE DUCTWORK AS REQUIRED.
- 6 EXISTING AIR CONDITIONERS IN ATTIC TO BE DISASSEMBLED, REMOVED AND DISPOSED OF. SEE SHEET M102. RUSTED ACCESSIBLE DUCTWORK FROM UNITS TO BE REPLACED WITH NEW. SEE SHEET M102.
- 7 EXISTING CEILING FAN TO REMAIN. PROTECT DURING CONSTRUCTION.
- 8 REMOVE DUCTWORK AS SHOWN. SEE SHEET M102 FOR NEW ROUTES.
- 9 EXISTING LOUVER ALONG WITH CORRESPONDING DUCTWORK TO BE REMOVED AND DISPOSED OF. COORDINATE WITH THE GENERAL CONTRACTOR FOR PATCHING AFTER THE WORK IS COMPLETE.

MECHANICAL LEGEND

| SYMBOL | DESCRIPTION |
|--------|------------------------------------|
| | ELECTRONIC THERMOSTAT |
| | EQUIPMENT SYMBOL |
| | HAND DAMPER |
| | ROUND BRANCH DUCT WITH HAND DAMPER |
| | INSULATED FLEXIBLE DUCT |
| | RETURN AIR OR EXHAUST GRILLE |
| | CEILING DIFFUSER |

Emc2 Architects Planners, P.C.
1635 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 8838
F: 480 830 3966
www.emc2planners.com



This work was prepared by me or under my direct supervision and I am a duly Licensed Professional Engineer in the State of Hawaii. My license number is 12337-H. My expiration date is 7-15-2022. I am not providing any services in any other state.

Dwayne C. Sandwick
Professional Engineer, License No. 12337-H, State of Hawaii
D:\Projects\1720727\1720727-00\1720727-00.dwg

Project Name:
HAWAII KAI
REMODEL
HONOLULU HI STAKE
TMK: 39040040
219 Lunalilo Home Road
Honolulu, HI 96825-1806

Owner:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

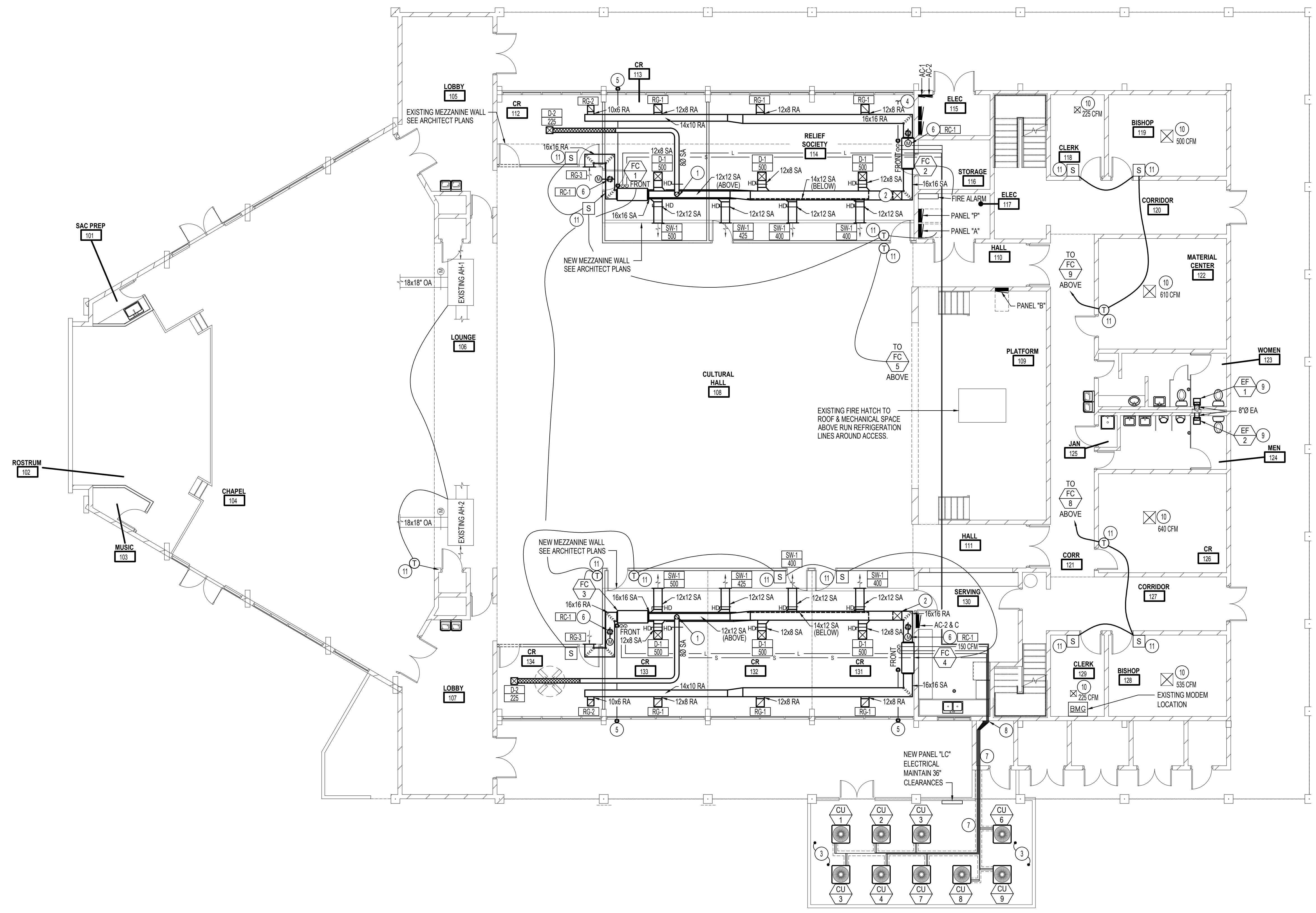
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Project Number:
1720727.00
Plan Series:
Property Number:
513-1391

Sheet Title:
DEMO MECHANICAL UPPER LEVEL

Sheet:
M003

Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
1355 EAST CENTER
POCATELLO, IDAHO 83201
PHONE: (208) 233-0501
EMAIL: eso@engsystems.com
ESA JOB NUMBER: 20035



MAIN FLOOR PLAN - MECHANICAL
SCALE: 1/8" = 1'-0"



MECHANICAL NOTES:

- 1 RAISE DUCT AS HIGH AS POSSIBLE.
- 2 RAISE DUCT IN LOCATION AS SHOWN. ROUTE 6" MIN ABOVE F-1F-3 BELOW. SEE DUCT MOUNTING DETAILS ON SHEET M202.
- 3 SEE CONDENSING MOUNTING DETAIL ON SHEET M200. SPACE CONDENSING UNITS 18" AWAY FROM EACH OTHER AND 24" FROM WALL.
- 4 RUN CONDENSATE LINES TO NEAREST EXISTING PENETRATION.
- 5 RUN CONDENSATE LINES TO NEAREST OUTSIDE WALL AND PENETRATE TO OUTSIDE WITH 90° DOWNTURN ELBOW & INSECT SCREEN.
- 6 PROVIDE AND INSTALL 8" OUTSIDE AIR DUCT TO OUTSIDE ROOF CAP COMPLETE WITH MOTORIZED DAMPER INSTALLED IN VERTICAL PORTION WITH INTERLOCK WITH FAN COIL UNIT. BALANCE TO CFM AS INDICATED ON OUTSIDE VENTILATION SCHEDULE ON SHEET M200.
- 7 RUN REFRIGERATION LINES THRU STORAGE ROOM AND ABOVE CONCRETE SLAB. SEE SHEET M201 FOR COVERING DETAILS AND SHEET M200 FOR LINE SIZES.
- 8 RAISE REFRIGERATION LINE TO 1ST & 2ND STORY CEILING SPACE AS REQUIRED. INSTALL REFRIGERATION COVERS MATCHING WALL COLOR OVER EXPOSED LINES.
- 9 INSTALL NEW EXHAUST SYSTEM AS SHOWN. CORE DRILL AS AND DEMO CEILING AS REQUIRED. COORDINATE WITH GENERAL FOR PATCHING AFTER WORK IS COMPLETE. FIELD VERIFY VERTICAL EXHAUST DUCT PORTION. FIELD VERIFY EXACT JOIST LOCATIONS FOR NEW EXHAUST FAN.
- 10 EXISTING CEILING DIFFUSERS TO REMAIN. BALANCE TO CFM AS SHOWN.
- 11 NEW THERMOSTAT OR REMOTE SENSOR. SEE SHEETS M300-M302.

MECHANICAL LEGEND

| SYMBOL | DESCRIPTION |
|--------------------------|------------------------------------|
| (1) | ELECTRONIC THERMOSTAT |
| FC | EQUIPMENT SYMBOL |
| HD | HAND DAMPER |
| (Symbol with damper) | ROUND BRANCH DUCT WITH HAND DAMPER |
| (Symbol with insulation) | INSULATED FLEXIBLE DUCT |
| (Symbol with grille) | RETURN AIR OR EXHAUST GRILLE |
| (Symbol with diffuser) | CEILING DIFFUSER |

Emc2 Architects Planners, PC
1635 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 3838
F: 480 830 3966
www.emc2architects.com

Professional Engineer
No. 12330-H
7-15-2022
C. S. WEEKS

This work was prepared by me or under my direct supervision and I am a duly licensed Professional Engineer in the State of Arizona.
Dwayne C. Sandwick
D. C. SANDWICK
Professional Engineer, License No. 12330-H
7-15-2022

Project Name:
HAWAII KAI
REMODEL
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219 Lunalilo Home Road
Honolulu, HI 96825-1806

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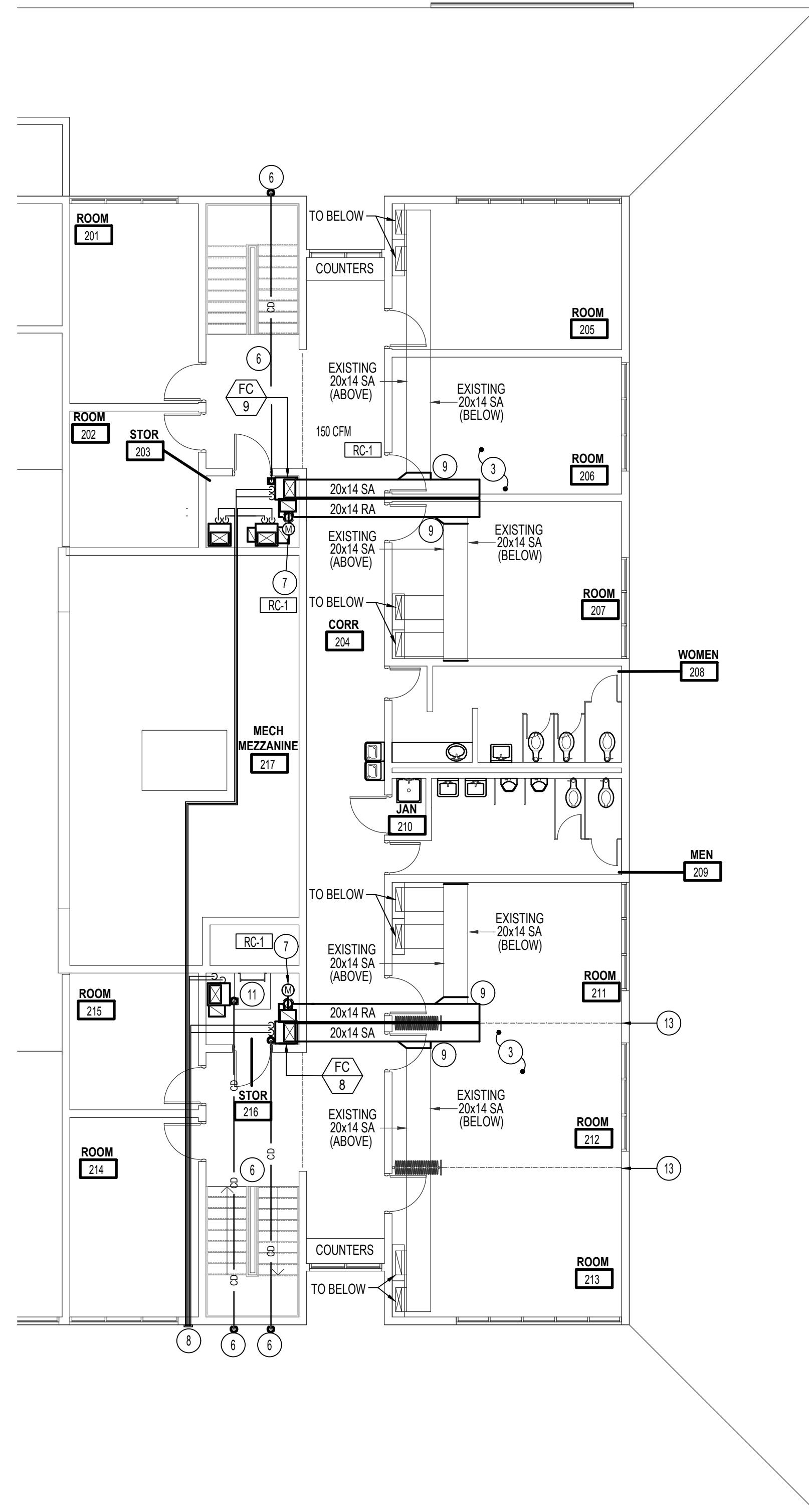
| REVISIONS / SUBMISSIONS | DATE |
|-------------------------|------|
| # | |

Project Number:
1720727.00
Plan Series:
Property Number:
513-1391

Sheet Title:
MECHANICAL MAIN LEVEL

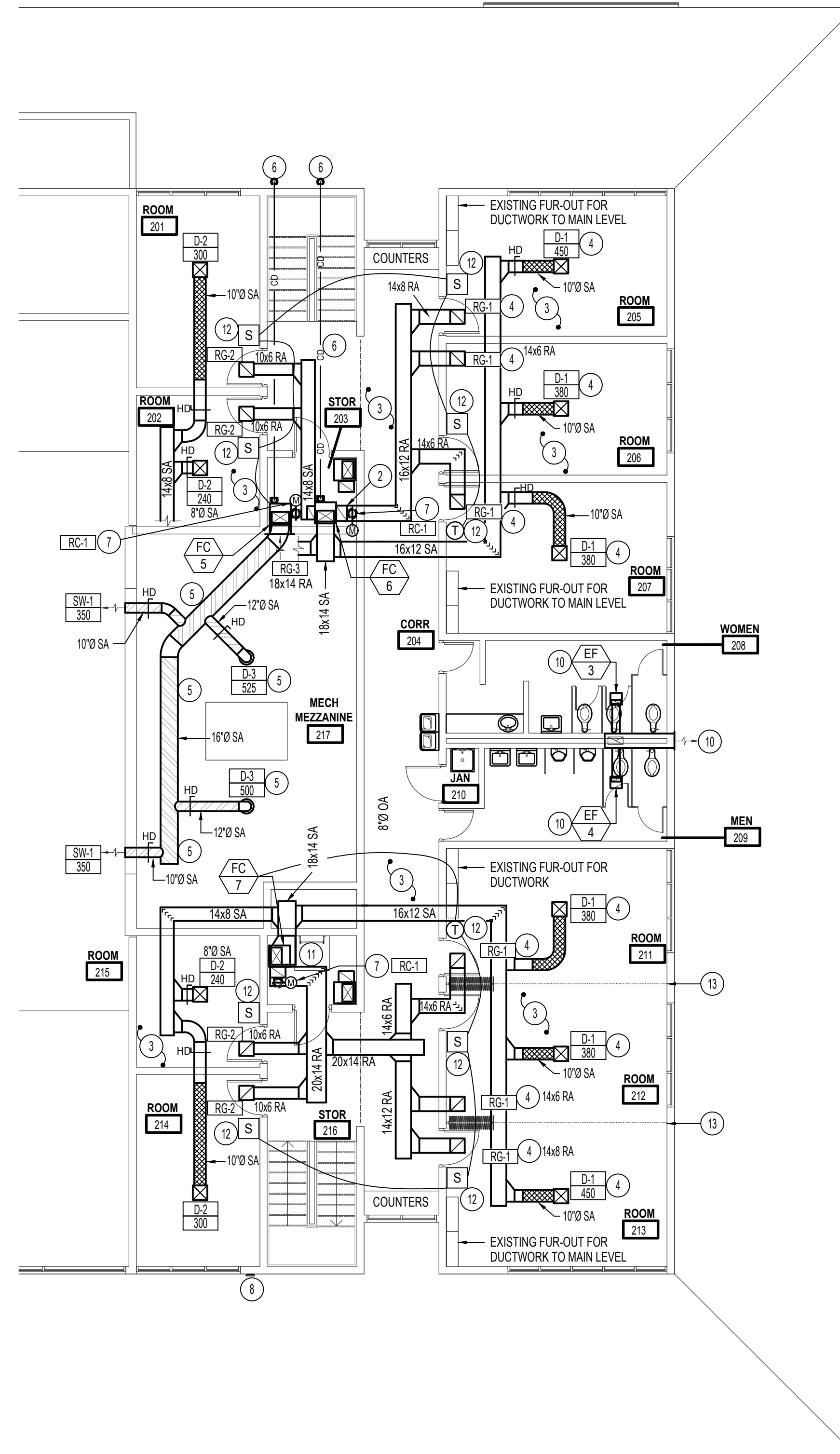
Sheet:
M101

Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
1355 EAST CENTER
POCATELLO, IDAHO 83201
PHONE: (208) 233-0501
EMAIL: esa@engsystems.com
ESA JOB NUMBER: 20035



UPPER FLOOR PLAN - FC-8/9

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



UPPER FLOOR PLAN - MECHANICAL

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



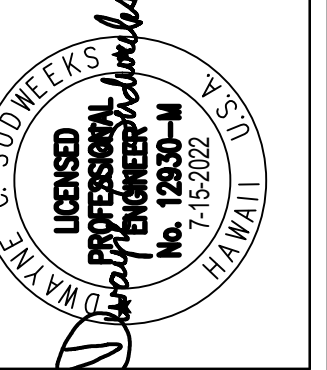
MECHANICAL NOTES:

- 1 RUN DUCT AS HIGH AS POSSIBLE. MOUNT SUPPLY DIFFUSERS 15' ABOVE PLATFORM FLOOR.
- 2 RAISE DUCT IN LOCATION AS SHOWN & RUN AS HIGH AS POSSIBLE.
- 3 FIELD VERIFY EXISTING ATTIC CONDITIONS & REPORT TO ENGINEER FOR ANY MAJOR DESIGN CHANGES TO THE DUCTWORK.
- 4 MAINTAIN MIN TWO 90° TURNS BETWEEN EACH CLASSROOM FOR SOUND ISOLATION.
- 5 RUN DUCT AS HIGH AS POSSIBLE. MOUNT SUPPLY DIFFUSERS APPROXIMATELY 17' ABOVE PLATFORM FLOOR. DUCT / DIFFUSER TO COME PRIMED AND READY FOR PAINT.
- 6 RUN NEW 3/4" CONDENSATE LINE IN CEILING SPACE & PENETRATE THRU WALL WITH 90° DOWNTURN ELBOW AND INSECT SCREEN.
- 7 PROVIDE AND INSTALL 8" OUTSIDE AIR DUCT TO RETURN ROOF CAP COMPLETE WITH MOTORIZED DAMPER INSTALLED IN VERTICAL PORTION & INTERLOCK WITH FAN COIL. INTEROPERABILITY, BALANCE TO CFM AS INDICATED ON OUTSIDE VENTILATION SCHEDULE ON SHEET M200.
- 8 RAISE REFRIGERATION LINE TO CEILING SPACE AS REQUIRED. INSTALL PLASTIC REFRIGERATION COVERS MATCHING WALL COLOR OVER EXPOSED LINES.
- 9 TIE NEW FAN COIL INTO EXISTING DUCTED SYSTEM AS SHOWN.
- 10 INSTALL NEW EXHAUST SYSTEM AS SHOWN. COORDINATE WITH GENERAL FOR PATCHING AFTER WORK IS COMPLETE. FIELD VERIFY VERTICAL EXHAUST DUCT PORTION. INSTALL NEW DUCTWORK WHERE EXISTING DUCTED FAN USE TO BE. FIELD VERIFY EXISTING EXHAUST DUCT ROUTES AND SIZES.
- 11 KEEP NEW EQUIPMENT CLEAR OF CEILING ACCESS.
- 12 NEW THERMOSTAT OR REMOTE SENSOR. SEE SHEETS M300-M302.
- 13 COORDINATE WITH EXISTING STRUCTURAL DRAWINGS FOR BEAM ABOVE PARTITION IN THIS LOCATION. MODIFY DUCTWORK AS REQUIRED TO AVOID CLASHES.

MECHANICAL LEGEND

| SYMBOL | DESCRIPTION |
|--------|------------------------------------|
| Ⓢ | ELECTRONIC THERMOSTAT |
| FC | EQUIPMENT SYMBOL |
| HD | HAND DAMPER |
| ⌒ | ROUND BRANCH DUCT WITH HAND DAMPER |
| ⌘ | INSULATED FLEXIBLE DUCT |
| ⌚ | RETURN AIR OR EXHAUST GRILLE |
| ⌚ | CEILING DIFFUSER |

Emc2
Architects Planners, PC
1638 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 3838
F: 480 830 3966
www.emc2mechanics.com



This work was prepared by Dr. Wayne S. Tanner in full and complete cooperation with the project architect. It will be under my observation.
Dr. Wayne S. Tanner
Professional Engineer, License No. 12320-H
Hawaii State Board of Professional Engineers, Architects, Surveyors and Planning Engineers
1000 Kalia Road, Suite 1115, Honolulu, HI 96813
(808) 943-0000

Project Name:
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REMODEL
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Owner:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

| REVISIONS / SUBMISSIONS | DATE |
|-------------------------|------|
| # | |

Project Number:
1720727.00
Plan Series:
Property Number:
513-1391

Sheet Title:
MECHANICAL UPPER PLAN

Sheet:
M102

Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
1355 EAST CENTER
POCATELLO, IDAHO 83201
PHONE: (208) 233-0501
EMAIL: esa@engsystems.com
ESA JOB NUMBER: 20035

REFRIGERANT PIPING LEGEND

| SYMBOL | DESCRIPTION |
|--------|--|
| | EXPANSION VALVE. SEE DETAIL B/M501 |
| | MOISTURE INDICATING SIGHT GLASS |
| | FLEXIBLE CONNECTION |
| | FILTER DRIER |
| | PIPE SUPPORT. SEE DETAIL C/M501 |
| | EXTERIOR PIPE SUPPORT. SEE DETAILS D/M501 AND E/M501 |
| | DIRECTION OF SLOPE DOWN |
| | SUCTION LINE |
| | LIQUID LINE |
| | SCHRADER VALVE PORT |

REFRIGERANT LINE SIZES

| SYSTEM SIZE | LIQUID | SUCTION |
|-------------|--------|---------|
| FC-1 | 5/8" | 1-1/8" |
| FC-2 | 5/8" | 1-1/8" |
| FC-3 | 1/2" | 7/8" |
| FC-4 | 1/2" | 7/8" |
| FC-5 | 5/8" | 1-1/8" |
| FC-6 | 5/8" | 1-1/8" |
| FC-7 | 1/2" | 7/8" |
| FC-8 | 1/2" | 7/8" |
| FC-9 | 5/8" | 1-1/8" |

* REFER TO COMPRESSOR UNIT SCHEDULE. THIS SHEET FOR SYSTEM SIZES.

FAN UNIT SCHEDULE (COOLING ONLY)

| MARK | MIN. REQ'D OUTPUT BTU/HR ① | MINIMUM A.C.F.M. | MINIMUM O.A. | EXT. S.P. IN. W.G. | MOTOR ⑤ | | REMARKS ③ |
|------|----------------------------|------------------|--------------|--------------------|--------------|---------|---|
| | | | | | MINIMUM H.P. | SPEED ⑦ | |
| F 1 | 60,000 | 1725 | 7 | 0.3 | 3/4 | HIGH ⑥ | CARRIER MODEL FE4C WITH CONDENSATE OVERFLOW PROTECTION, CONDENSATE PUMP (IF REQUIRED), AND SEACOAST COATING |
| F 2 | 60,000 | 1725 | | 0.3 | 3/4 | HIGH ⑥ | CARRIER MODEL FE4C WITH CONDENSATE OVERFLOW PROTECTION, CONDENSATE PUMP (IF REQUIRED), AND SEACOAST COATING |
| F 3 | 60,000 | 1725 | | 0.3 | 3/4 | HIGH ⑥ | CARRIER MODEL FE4C WITH CONDENSATE OVERFLOW PROTECTION, CONDENSATE PUMP (IF REQUIRED), AND SEACOAST COATING |
| F 4 | 60,000 | 1725 | | 0.3 | 3/4 | HIGH ⑥ | CARRIER MODEL FE4C WITH CONDENSATE OVERFLOW PROTECTION, CONDENSATE PUMP (IF REQUIRED), AND SEACOAST COATING |
| F 5 | 60,000 | 1725 | | 0.3 | 3/4 | HIGH ⑥ | CARRIER MODEL FE4C WITH CONDENSATE OVERFLOW PROTECTION, CONDENSATE PUMP (IF REQUIRED), AND SEACOAST COATING |
| F 6 | 60,000 | 1725 | | 0.3 | 3/4 | HIGH ⑥ | CARRIER MODEL FE4C WITH CONDENSATE OVERFLOW PROTECTION, CONDENSATE PUMP (IF REQUIRED), AND SEACOAST COATING |
| F 7 | 60,000 | 1725 | | 0.3 | 3/4 | HIGH ⑥ | CARRIER MODEL FE4C WITH CONDENSATE OVERFLOW PROTECTION, CONDENSATE PUMP (IF REQUIRED), AND SEACOAST COATING |
| F 8 | 48,000 | 1400 | | 0.3 | 3/4 | HIGH ⑥ | CARRIER MODEL FE4C WITH CONDENSATE OVERFLOW PROTECTION, CONDENSATE PUMP (IF REQUIRED), AND SEACOAST COATING |
| F 9 | 48,000 | 1400 | | 0.3 | 3/4 | HIGH ⑥ | CARRIER MODEL FE4C WITH CONDENSATE OVERFLOW PROTECTION, CONDENSATE PUMP (IF REQUIRED), AND SEACOAST COATING |

- ① SEA LEVEL RATING
- ② FAN UNIT MARKS CORRESPOND WITH COMPRESSOR UNIT AND DX COIL MARKS.
- ③ SEE SPECIFICATION FOR APPROVED MANUFACTURERS
- ④ VARIABLE SPEED ECM MOTOR.
- ⑤ ELECTRICAL CHARACTERISTICS - MOTOR: 115V/1PH/60HZ
- ⑥ SET FAN MOTOR SPEED TAP TO LOWEST POSSIBLE SETTING REQUIRED TO ACHIEVE DESIGN AIR FLOW.
- ⑦ SEE OUTSIDE AIR SCHEDULE ON THIS SHEET

COMPRESSOR UNIT SCHEDULE (COOLING ONLY)

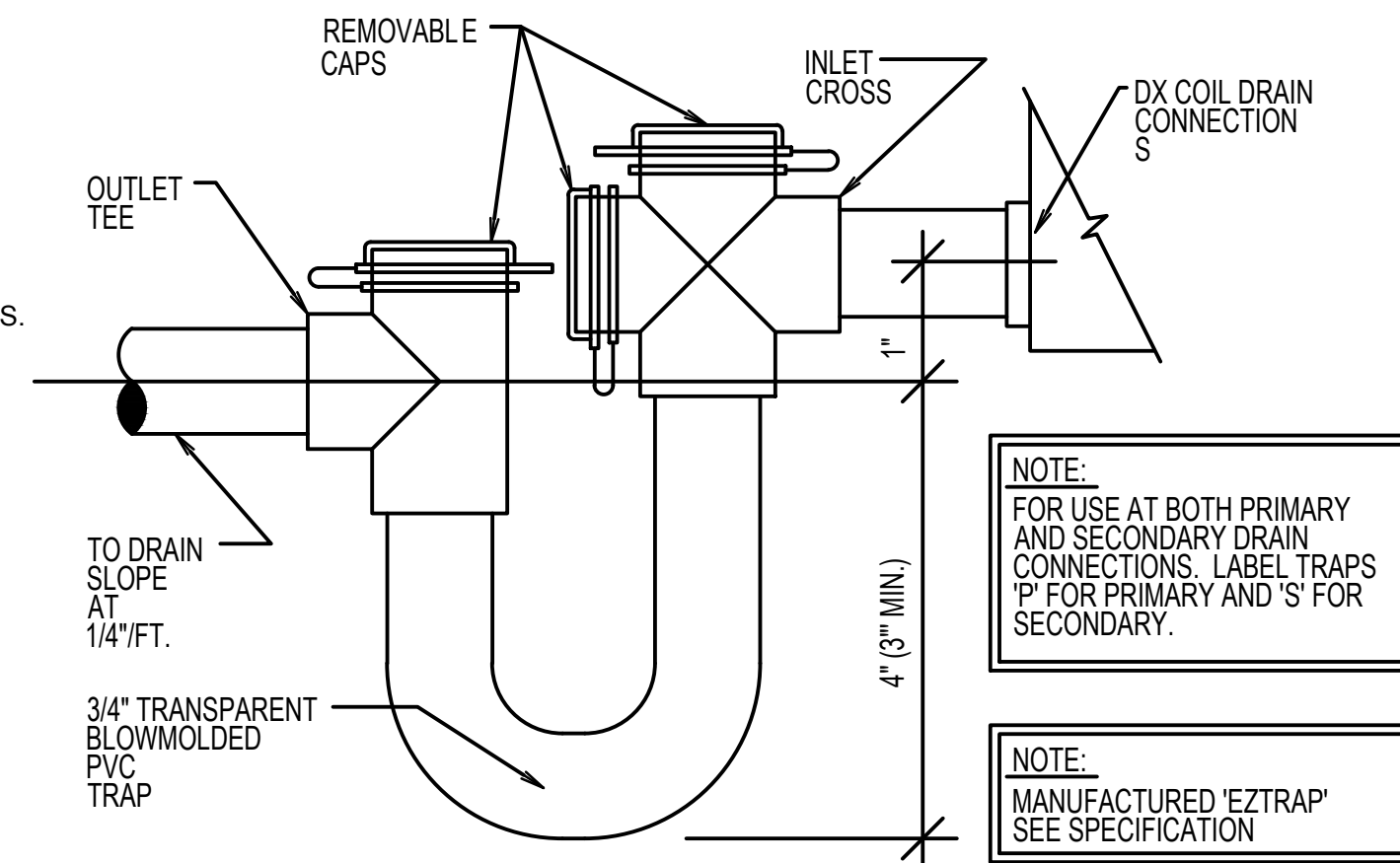
| MARK | MIN. NOMINAL SIZE (TONS) ② | COMPRESSOR RATED LOAD AMPS | MCOP | MIN. CIRCUIT AMPS | REMARKS ⑤ |
|------|----------------------------|----------------------------|------|-------------------|---|
| CU 1 | 5.0 | 26.4 | 60 | 34.8 | CARRIER MODEL 24ABB WITH SEACOAST COATING |
| CU 2 | 5.0 | 26.4 | 60 | 34.8 | CARRIER MODEL 24ABB WITH SEACOAST COATING |
| CU 3 | 5.0 | 26.4 | 60 | 34.8 | CARRIER MODEL 24ABB WITH SEACOAST COATING |
| CU 4 | 5.0 | 26.4 | 60 | 34.8 | CARRIER MODEL 24ABB WITH SEACOAST COATING |
| CU 5 | 5.0 | 26.4 | 60 | 34.8 | CARRIER MODEL 24ABB WITH SEACOAST COATING |
| CU 6 | 5.0 | 26.4 | 60 | 34.8 | CARRIER MODEL 24ABB WITH SEACOAST COATING |
| CU 7 | 5.0 | 26.4 | 60 | 34.8 | CARRIER MODEL 24ABB WITH SEACOAST COATING |
| CU 8 | 4.0 | 21.8 | 50 | 28.8 | CARRIER MODEL 24ABB WITH SEACOAST COATING |
| CU 9 | 4.0 | 21.8 | 50 | 28.8 | CARRIER MODEL 24ABB WITH SEACOAST COATING |

- ① REFRIGERANT R-410a
- ② AT DESIGN CONDITIONS AND 100°F ENTERING AIR TEMPERATURE TO CONDENSER.
- ③ COMPRESSOR UNIT MARKS CORRESPOND WITH DX COIL AND FAN UNIT MARKS.
- ④ ELECTRICAL CHARACTERISTICS-COMPRESSOR: 208V/1 PHASE/60HZ
- ⑤ SEE SPECIFICATION FOR APPROVED MANUFACTURERS

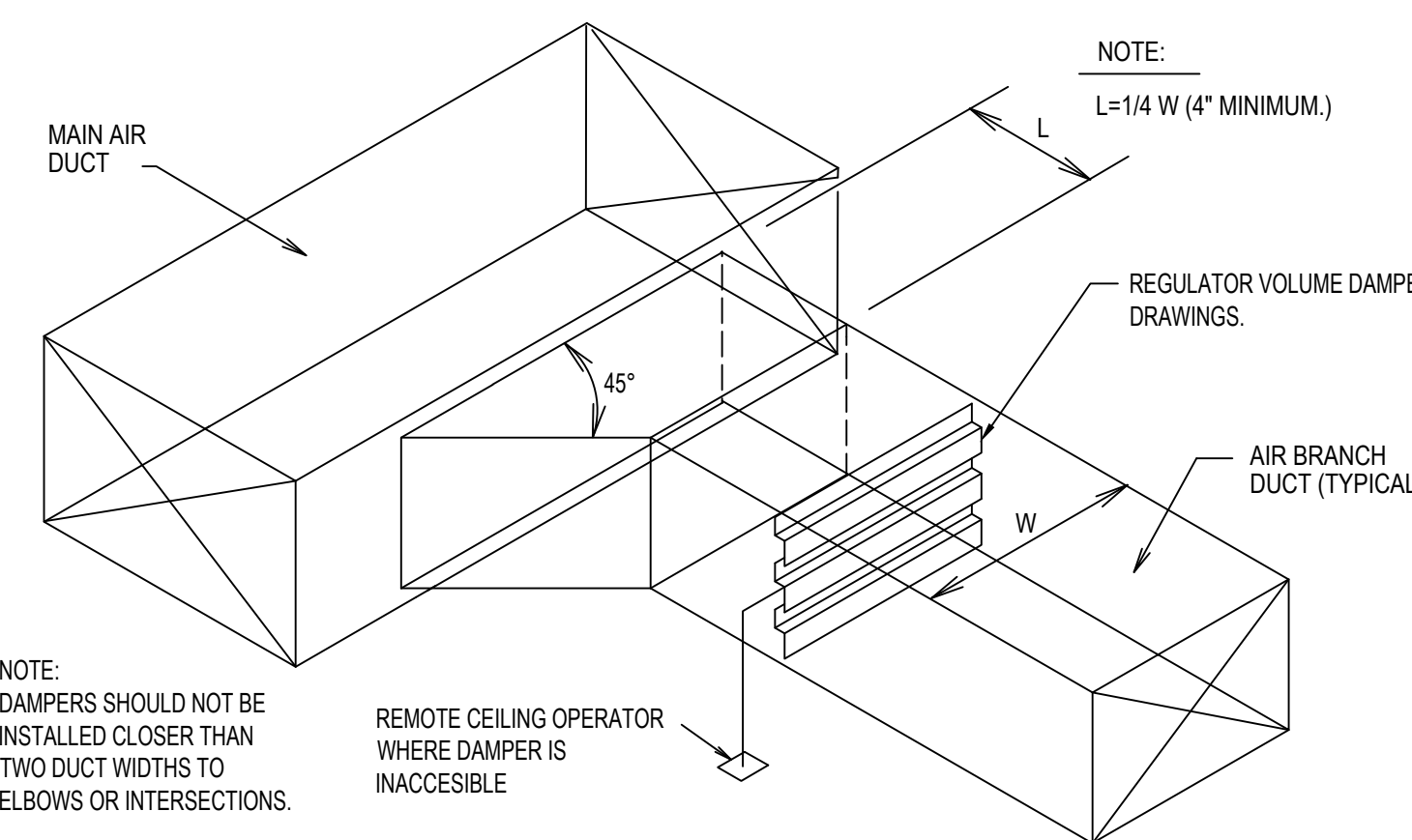
EXHAUST FAN SCHEDULE

| MARK | SERVES ROOM | MIN. A.C.F.M. ① | STATIC PRESSURE IN. W.G. | WATTS | REMARKS |
|------|----------------------|-----------------|--------------------------|-------|---------------------------|
| EF 1 | WOMEN'S RESTROOM 123 | 200 | 0.375 | 166W | PROVIDE BACK-DRAFT DAMPER |
| EF 2 | MEN'S RESTROOM 124 | 250 | 0.375 | 250W | PROVIDE BACK-DRAFT DAMPER |
| EF 3 | WOMEN'S RESTROOM 208 | 300 | 0.375 | 250W | PROVIDE BACK-DRAFT DAMPER |
| EF 4 | MEN'S RESTROOM 209 | 350 | 0.375 | 250W | PROVIDE BACK-DRAFT DAMPER |

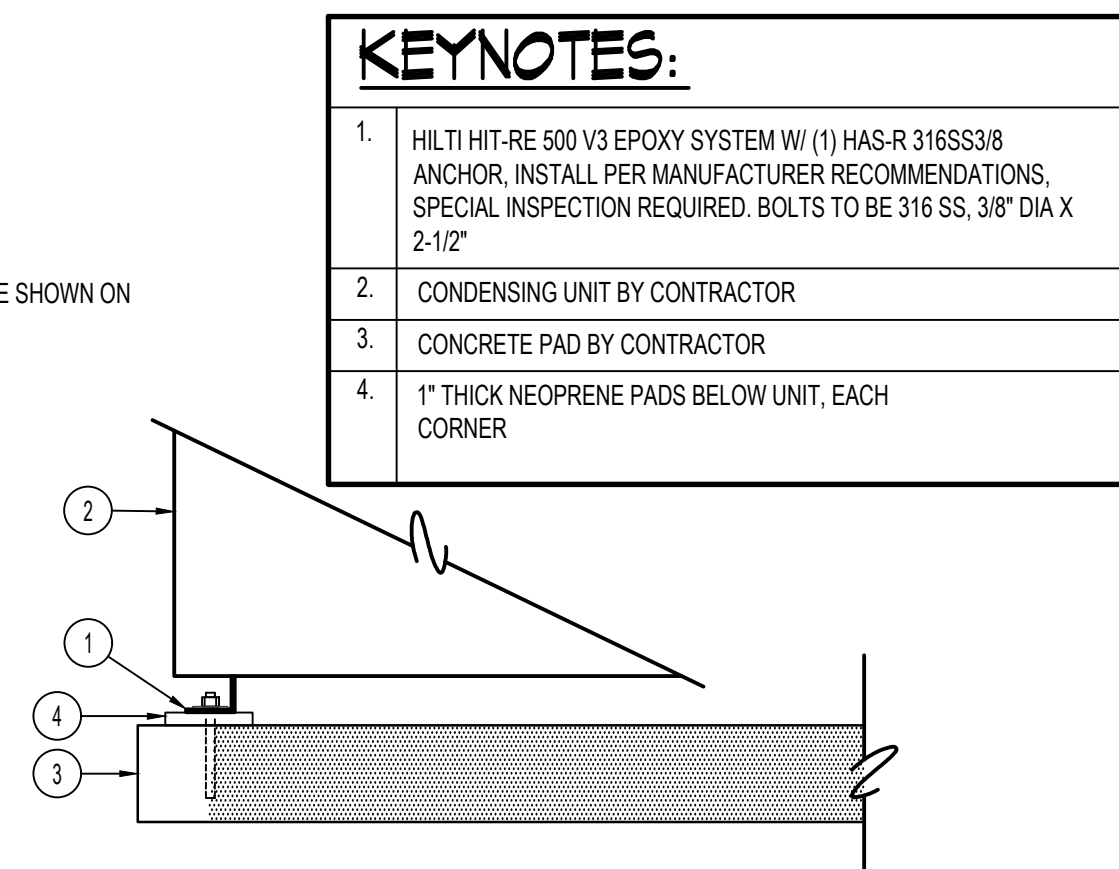
- ① SET BALANCE DAMPERS SHOWN ON M101 TO CFM LISTED
- ② CONTROL BY DIVISION 26.
- ③ VOLTAGE IS 115V/1 PHASE/60HZ
- ④ LINE VOLTAGE COOLING THERMOSTAT CONTROL. ACCESSORY THERMOSTAT BY DIV. 23, INSTALLED BY DIV. 26.



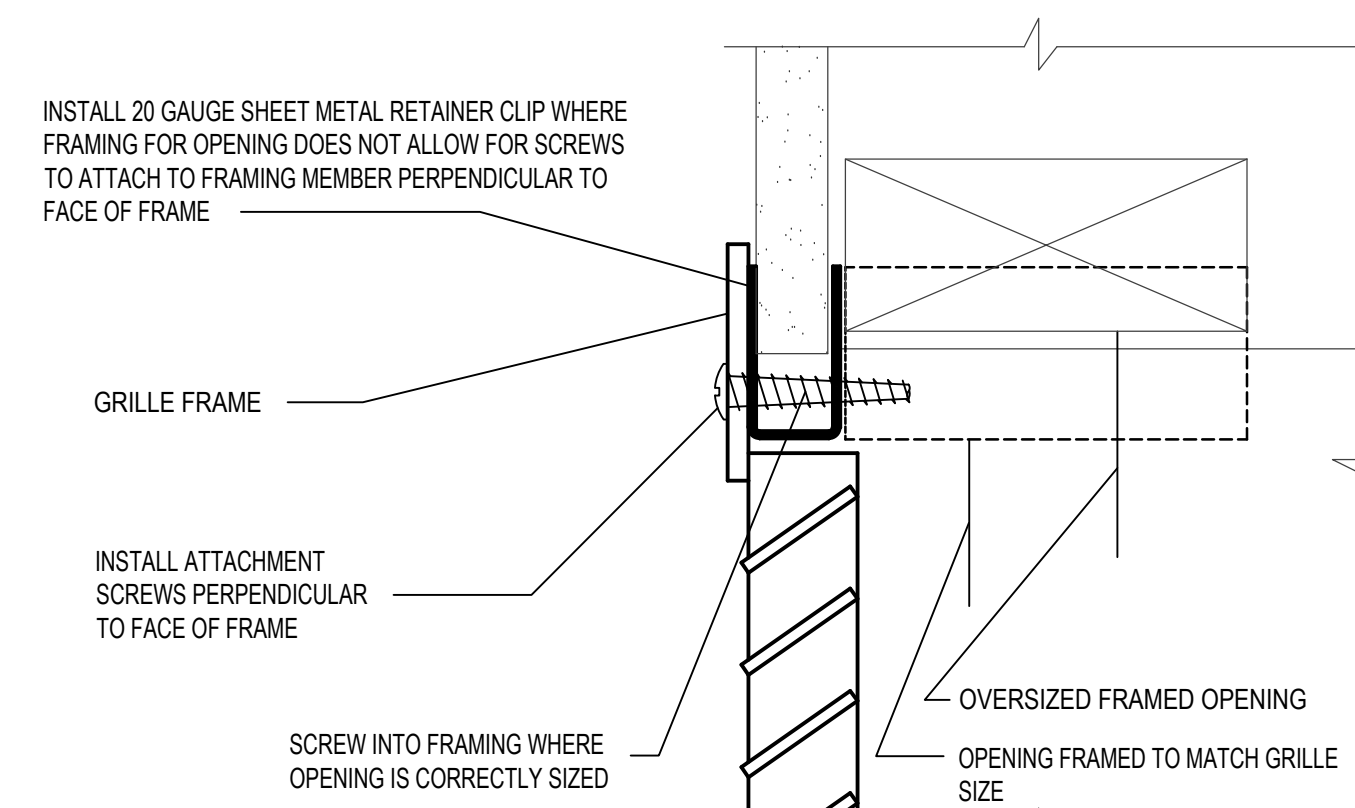
DX COIL CONDENSATE DRAIN DETAIL
SCALE: NONE



SUPPLY OR RETURN AIR DUCT BRANCH CONNECTION DETAIL
SCALE: NONE



CONDENSING UNIT MOUNTING DETAIL
SCALE: NONE



GRILLE ATTACHMENT DETAIL
SCALE: NONE

DIFFUSER SCHEDULE

| MARK | C.F.M. RANGE ① | DIFFUSER SIZE | NECK CONN. | BLOW | PATTERN | AIR DIST./SIDE | |
|---------|----------------|---------------|------------|-------|---------|----------------|-------|
| | | | | | | A (%) | B (%) |
| D-1 CFM | 340-500 ④ | 12X12 | 12X8 | 4 WAY | | 25 | 25 |
| D-2 CFM | 170 - 225 ⑩④ | 9X9 | 8\"/> | | | | |

REGISTER, LOUVER & GRILLE SCHEDULE

| MARK | TYPE | SERVICE | CFM RANGE ① | NOMINAL SIZE | REMARKS ③ |
|------|---------------------|---------|-------------|--------------|-----------|
| RG-1 | CEILING ④ | RA | 340-500 | 14X14 | |
| RG-2 | CEILING ④ | RA | 225 | 10X10 | |
| RG-3 | SIDEWALL ⑩④ | RA | 1750 | 20X32 | |
| SW-1 | SIDEWALL REGISTER ④ | SA | 325-500 | 12X12 | |
| RC-1 | SLOPE ROOF CAP ⑤ | EA | 100-144 | 8\"/> | |

- REGISTER, LOUVER AND DIFFUSER SCHEDULE NOTES:
- ① MAXIMUM NC=25 @ MAXIMUM CFM NOTED.
 - ② SHALL BE TITUS TDC TYPE 6 OR EQUAL BY OTHER APPROVED MANUFACTURERS. (SEE SPECIFICATIONS)
 - ③ SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.
 - ④ FINISH SHALL BE OFF-WHITE BAKED ENAMEL.
 - ⑤ BAKED ENAMEL FINISH WITH COLOR AS DIRECTED BY ARCHITECT.
 - ⑥ INTAKE AIR - NO BACK FLOW DAMPER REQUIRED.
 - ⑦ NOT USED.
 - ⑧ NOT USED.
 - ⑨ SET REGISTER BLADES FOR AIR THROW TO BE WITHIN 9' FROM FLOOR AS RECOMMENDED BY MANUFACTURE.
 - ⑩ SHEET METAL CONTRACTOR TO PROVIDE A TRANSIZE FROM 8" NECK TO 10" FLEX DUCT WHERE REQUIRED.
 - ⑪ BLADE ORIENTATION SHALL BE HORIZONTAL

OUTSIDE VENTILATION AIR REQUIREMENTS

| FAN COIL UNIT OUTDOOR REQUIREMENT | | | | | |
|-----------------------------------|-----------------|-----------------|-----------------|--------------------------|--|
| COVERED SQ. FT. | CFM PER SQ. FT. | REQUIRED OA CFM | BALANCED OA CFM | OCCUPANCY CLASSIFICATION | |
| F 1 | .06 | 96 | 120 | MULTIPURPOSE ASSEMBLY | |
| F 2 | .12 | 144 | 150 | RELIGIOUS CLASSROOM | |
| F 3 | .06 | 96 | 120 | MULTIPURPOSE ASSEMBLY | |
| F 4 | .12 | 144 | 150 | RELIGIOUS CLASSROOM | |
| F 5 | .06 | 60 | 100 | MULTIPURPOSE ASSEMBLY | |
| F 6 | .12 | 156 | 160 | RELIGIOUS CLASSROOM | |
| F 7 | .12 | 156 | 160 | RELIGIOUS CLASSROOM | |
| F 8 | .12 | 120 | 150 | RELIGIOUS CLASSROOM | |
| F 9 | .12 | 120 | 150 | RELIGIOUS CLASSROOM | |

* CLASSROOMS AND MULTIPURPOSE ASSEMBLY WILL NOT BE OCCUPIED FOR LONGER THAN 1 HOUR

Emc2
Architects Planners, P.C.
1638 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 3838
F: 480 830 3966
www.emc2architects.com

LICENSED PROFESSIONAL ARCHITECT
No. 12330-H
7-15-2022

This work was prepared by...
Dwayne C. Sandwick
Professional Engineer, License No. 45522024
Professional Seal No. 111111
www.dcsandwick.com

Project Name:
HAWAII KAI
REMODEL
HONOLULU HI STAKE
TMK: 39040040
219 Lunalilo Home Road
Honolulu, HI 96825-1806

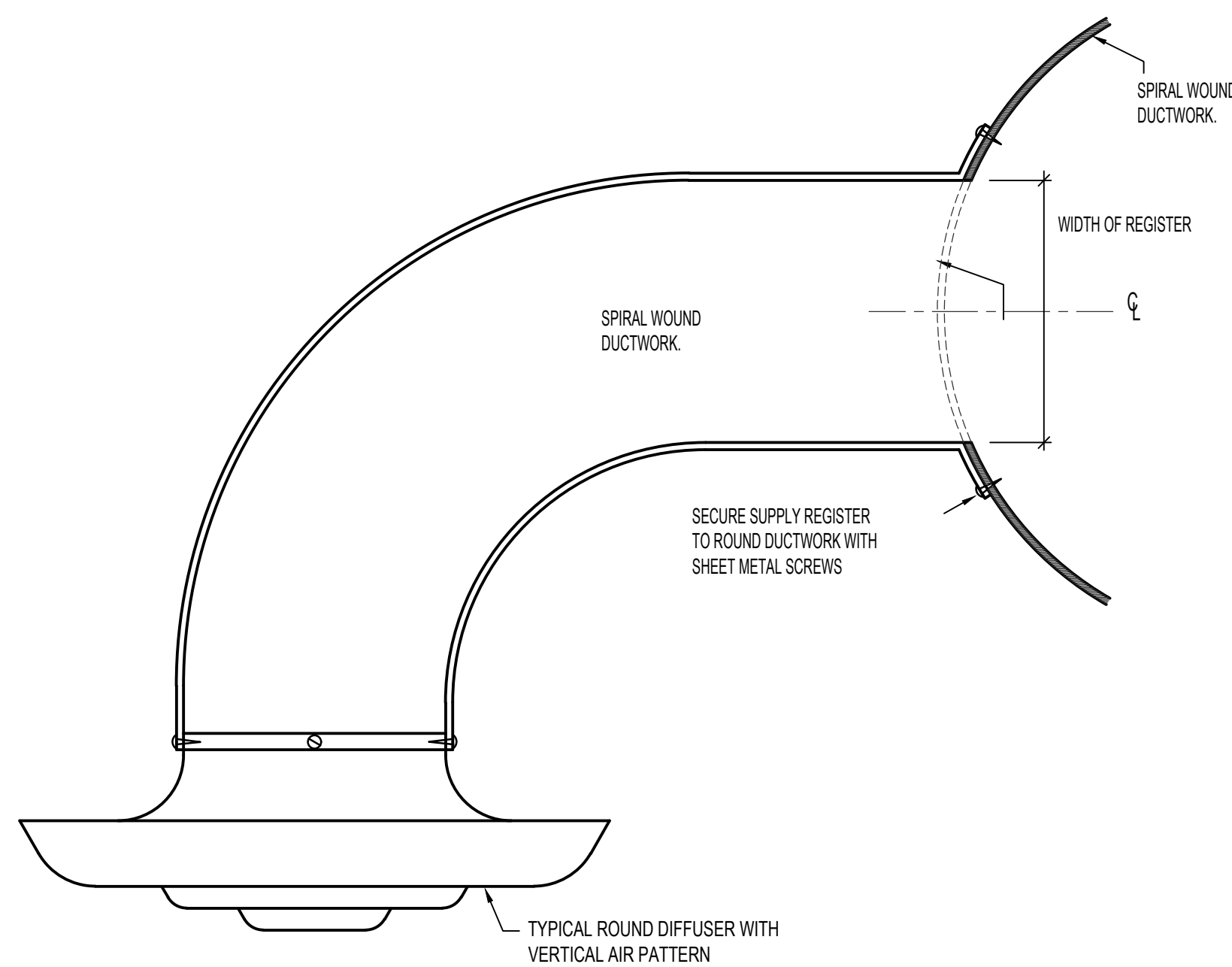
Owner:
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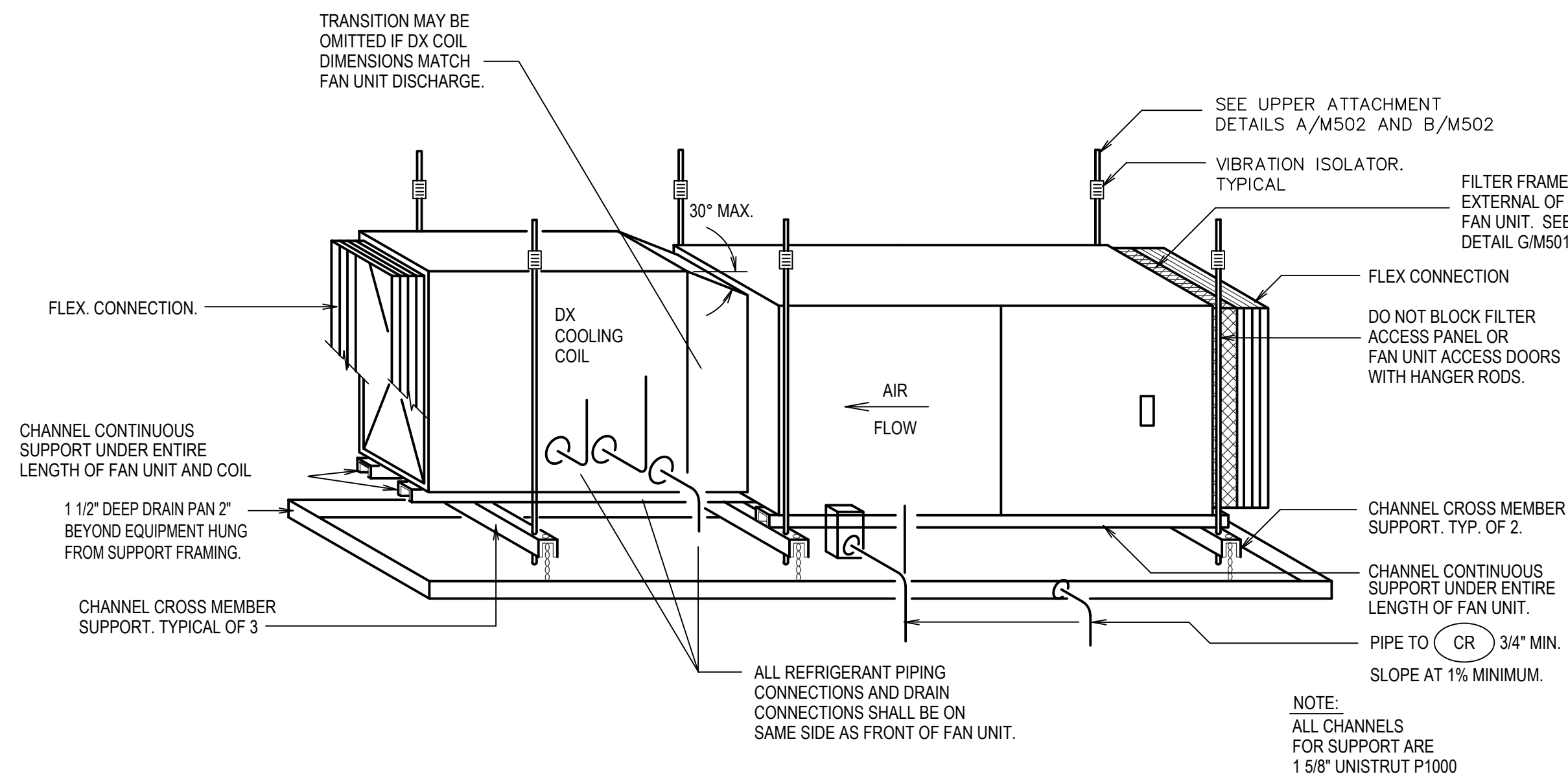
Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
1355 EAST CENTER
POCATELLO, IDAHO 83201
PHONE: (208) 233-0501
EMAIL: eso@engsystems.com
ESA JOB NUMBER: 20035

Sheet Title:
SCHEDULES AND DETAILS
Sheet:
M200



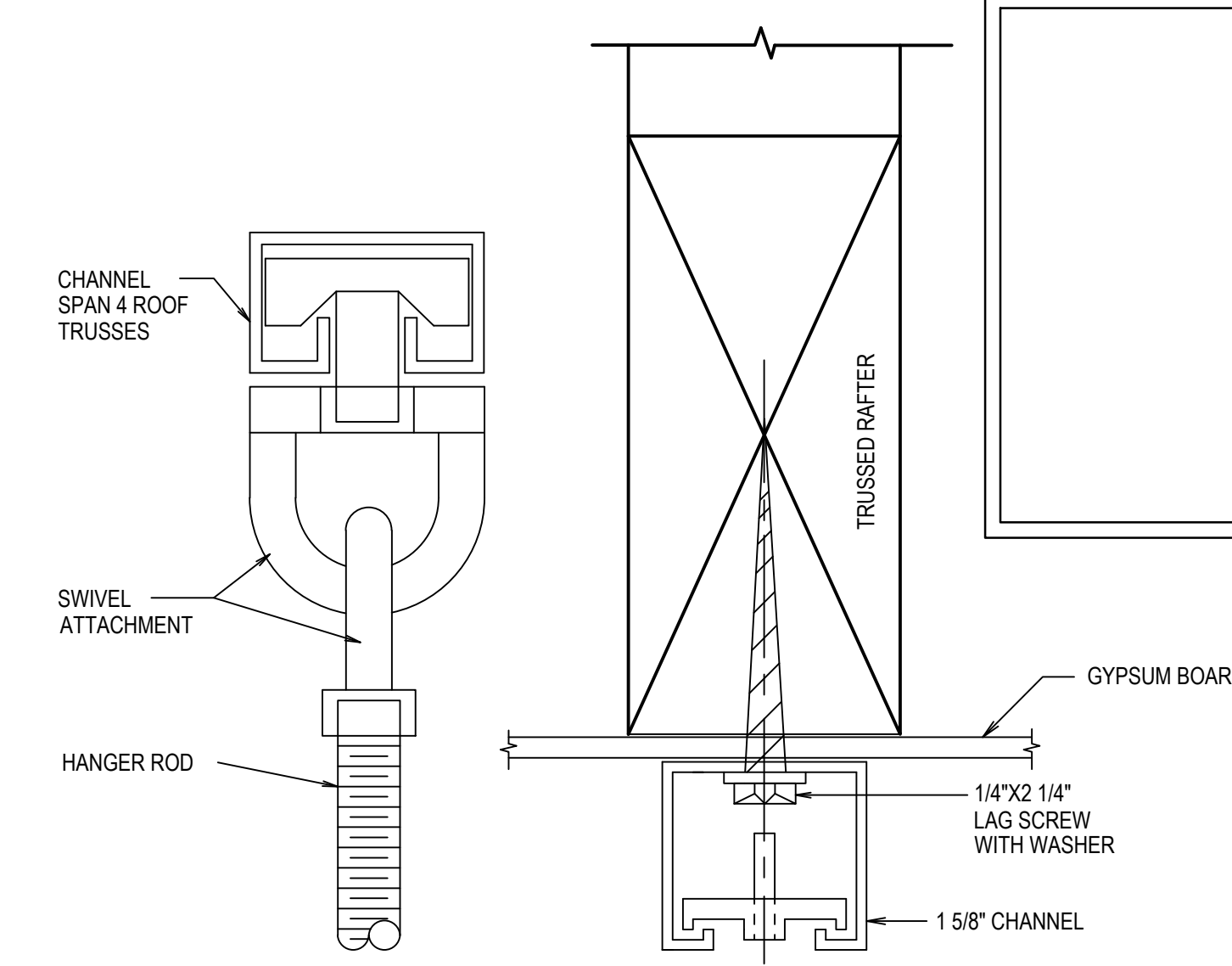
ROUND DIFFUSER DETAIL

NO SCALE



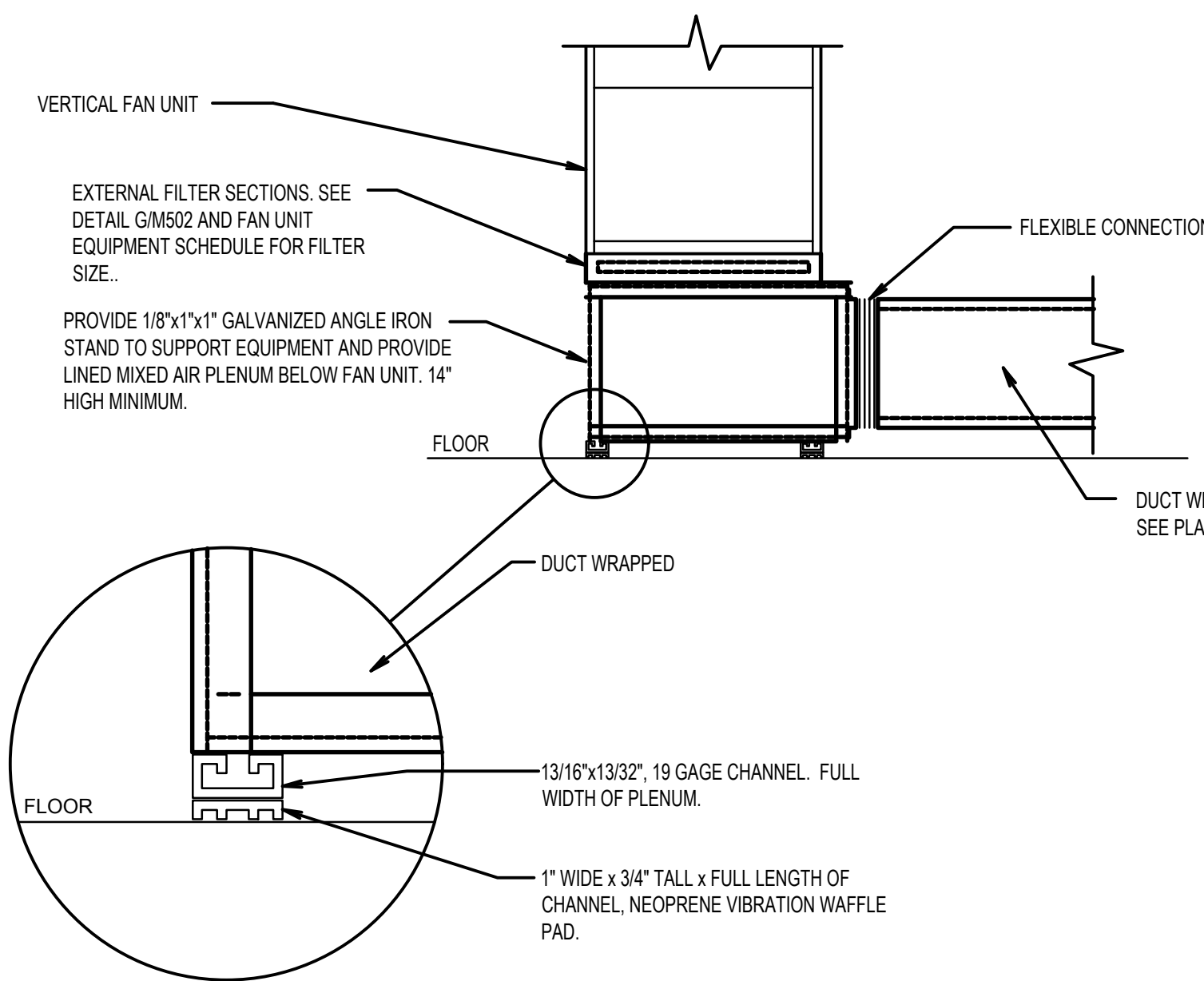
FAN UNIT SUPPORT DETAIL

SCALE: NONE



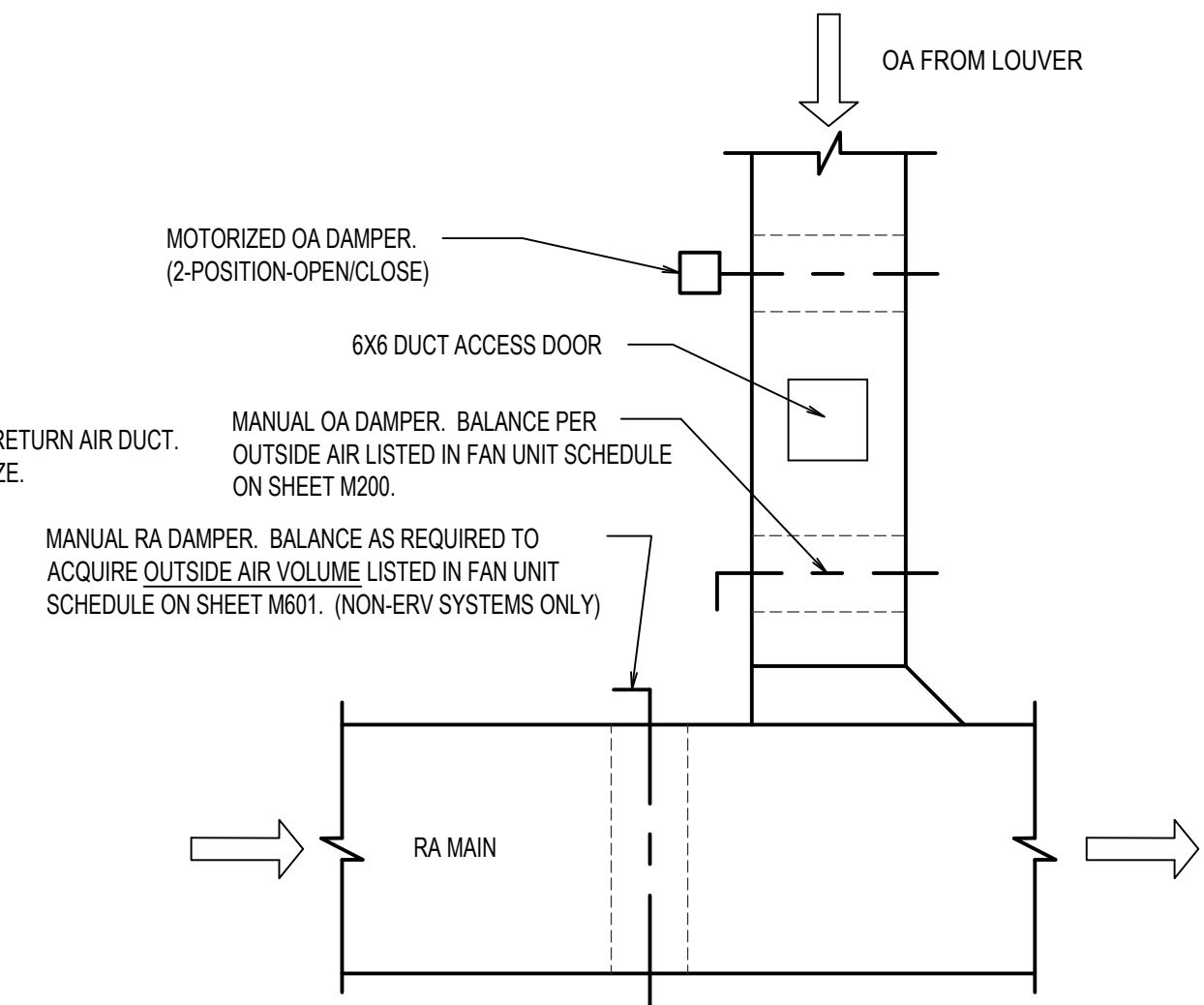
UPPER ATTACHMENT DETAIL

SCALE: NONE



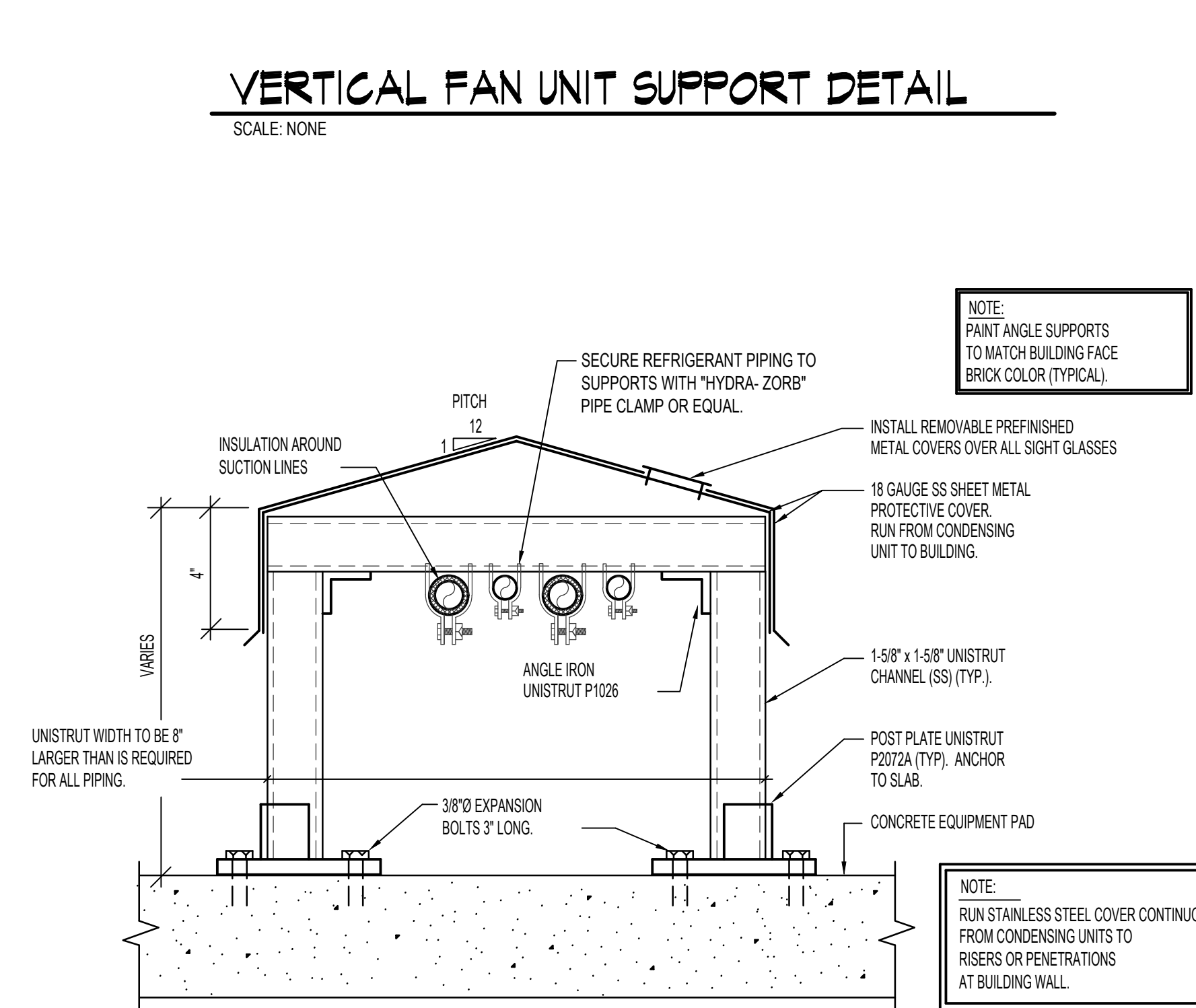
VERTICAL FAN UNIT SUPPORT DETAIL

SCALE: NONE



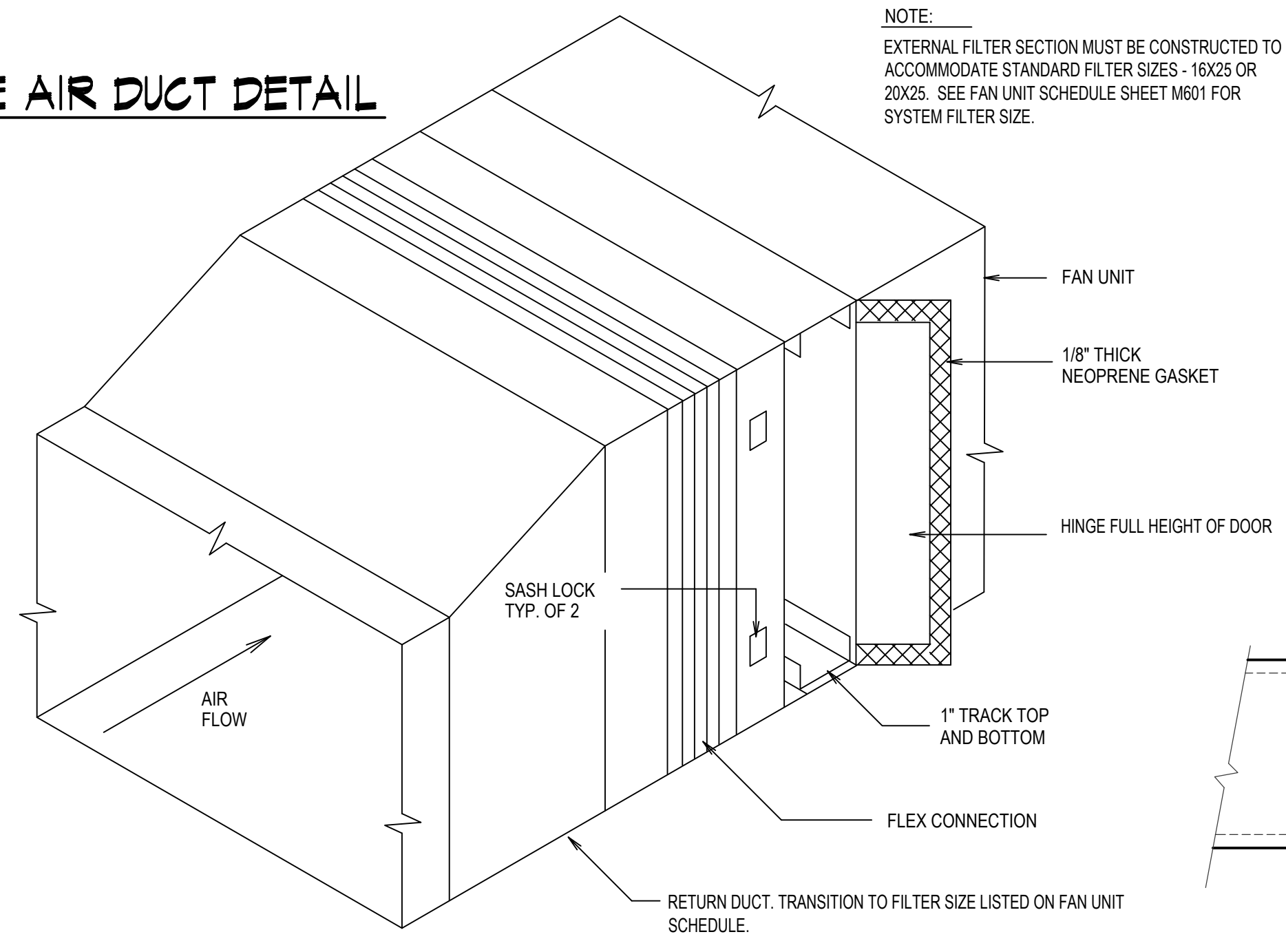
TYPICAL OUTSIDE AIR DUCT DETAIL

SCALE: NONE



REFRIGERANT PIPE SUPPORT DETAIL

NO SCALE



EXTERNAL FILTER SECTION DETAIL

SCALE: NONE

DO NOT BLOCK FILTER ACCESS WITH CONDUIT, THREADED ROD, OR CONDENSATE DRAINS.

| DIMENSION OF LONGEST SIDE, INCHES | SHEET METAL GAGE (ALL FOUR SIDES) | TRANSVERSE REINFORCING (1) | |
|-----------------------------------|-----------------------------------|---|--|
| | | MINIMUM REINFORCING ANGLE SIZE AND MAXIMUM LONGITUDINAL SPACING BETWEEN TRANSVERSE JOINTS & OR INTERMEDIATE REINFORCING | AT JOINTS |
| UP THRU 12 | 26 | NONE REQUIRED | DRIVE SLIP HEMMED S SLIP RECOM-MENDED GAGE 26 |
| 13 - 18 | 24 | NONE REQUIRED | 24 |
| 19 - 30 | 24 | 1"x1"x18" @ 60 IN | 24 |

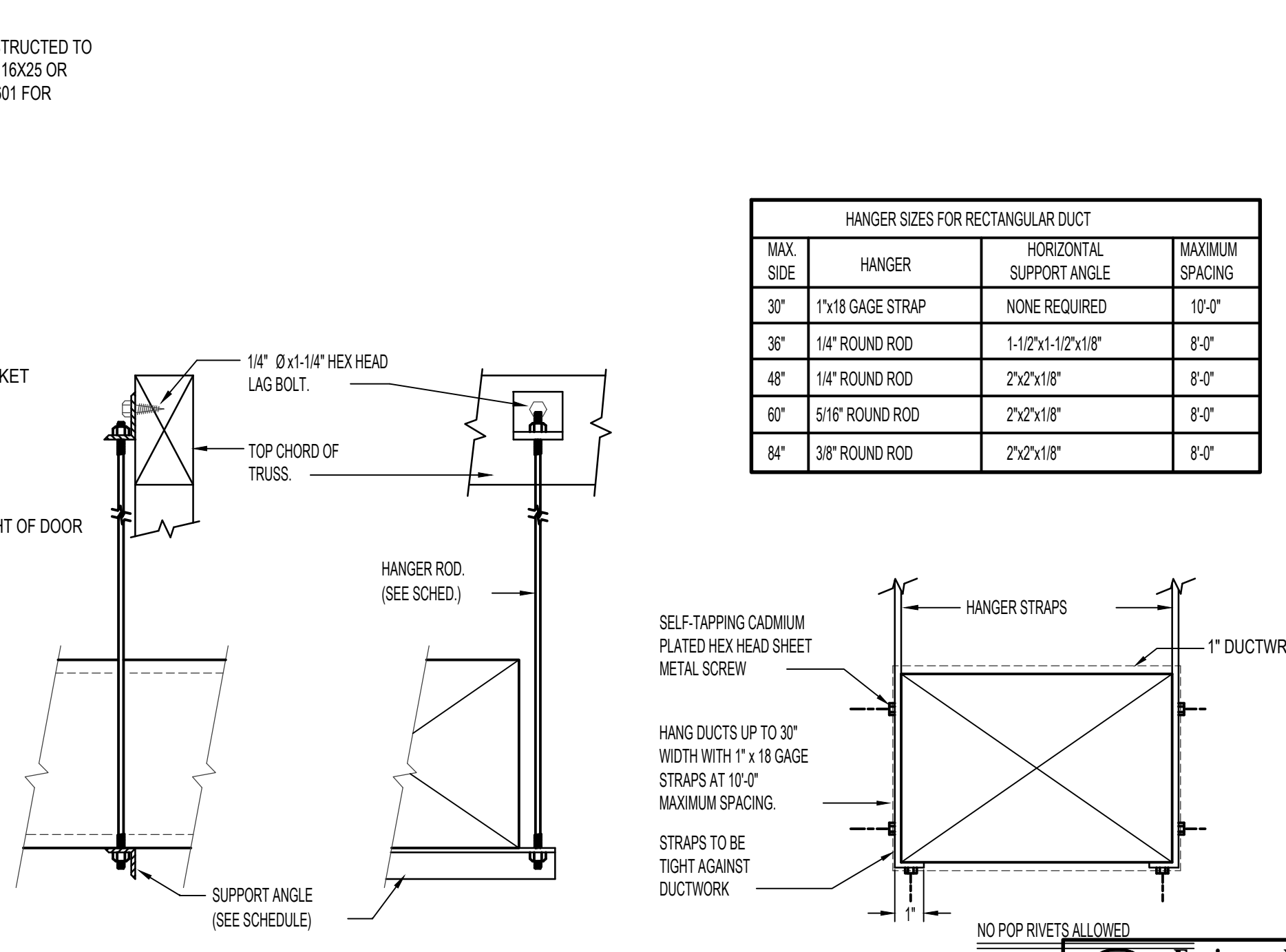
(1) TRANSVERSE REINFORCING SIZE IS DETERMINED BY DIMENSION OF SIDE TO WHICH ANGLE IS APPLIED.

METAL FASTENERS - O-MARK INSULPINS, DURO DYNIE FASTENERS OR GRIPNAILS.

GRIP NAILS SHALL BE INSTALLED BY GRIPNAIL AIR HAMMER OR BY AUTOMATIC FASTENER EQUIP.

DUCT CONSTRUCTION DETAIL

NO SCALE



DUCT STRAP HANGER DETAIL

NO SCALE

| HANGER SIZES FOR RECTANGULAR DUCT | | | |
|-----------------------------------|------------------|--------------------------|-----------------|
| MAX SIDE | HANGER | HORIZONTAL SUPPORT ANGLE | MAXIMUM SPACING |
| 30" | 1"x18 GAGE STRAP | NONE REQUIRED | 10'-0" |
| 36" | 1/4" ROUND ROD | 1-1/2"x1-1/2"x18" | 8'-0" |
| 48" | 1/4" ROUND ROD | 2"x2"x18" | 8'-0" |
| 60" | 5/16" ROUND ROD | 2"x2"x18" | 8'-0" |
| 84" | 3/8" ROUND ROD | 2"x2"x18" | 8'-0" |

Emc2 Architects Planners, PC
 1638 North Greenfield Road
 Suite 144
 Mesa, Arizona 85205
 P: 480 830 8838
 F: 480 830 3960
 www.emc2architects.com

PROFESSIONAL SEAL
 Dwayne C. Sandwick
 LICENSED PROFESSIONAL ARCHITECT
 No. 12337-H
 7-15-2022
 STATE OF ARIZONA

This work was prepared by the Architect in accordance with the provisions of the contract documents for this project. It will be under my observation, and I will be responsible for its accuracy.
 Dwayne C. Sandwick
 LICENSED PROFESSIONAL ARCHITECT
 No. 12337-H
 7-15-2022
 STATE OF ARIZONA

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 REMODEL
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 Honolulu, HI 96825-1806

Owner:
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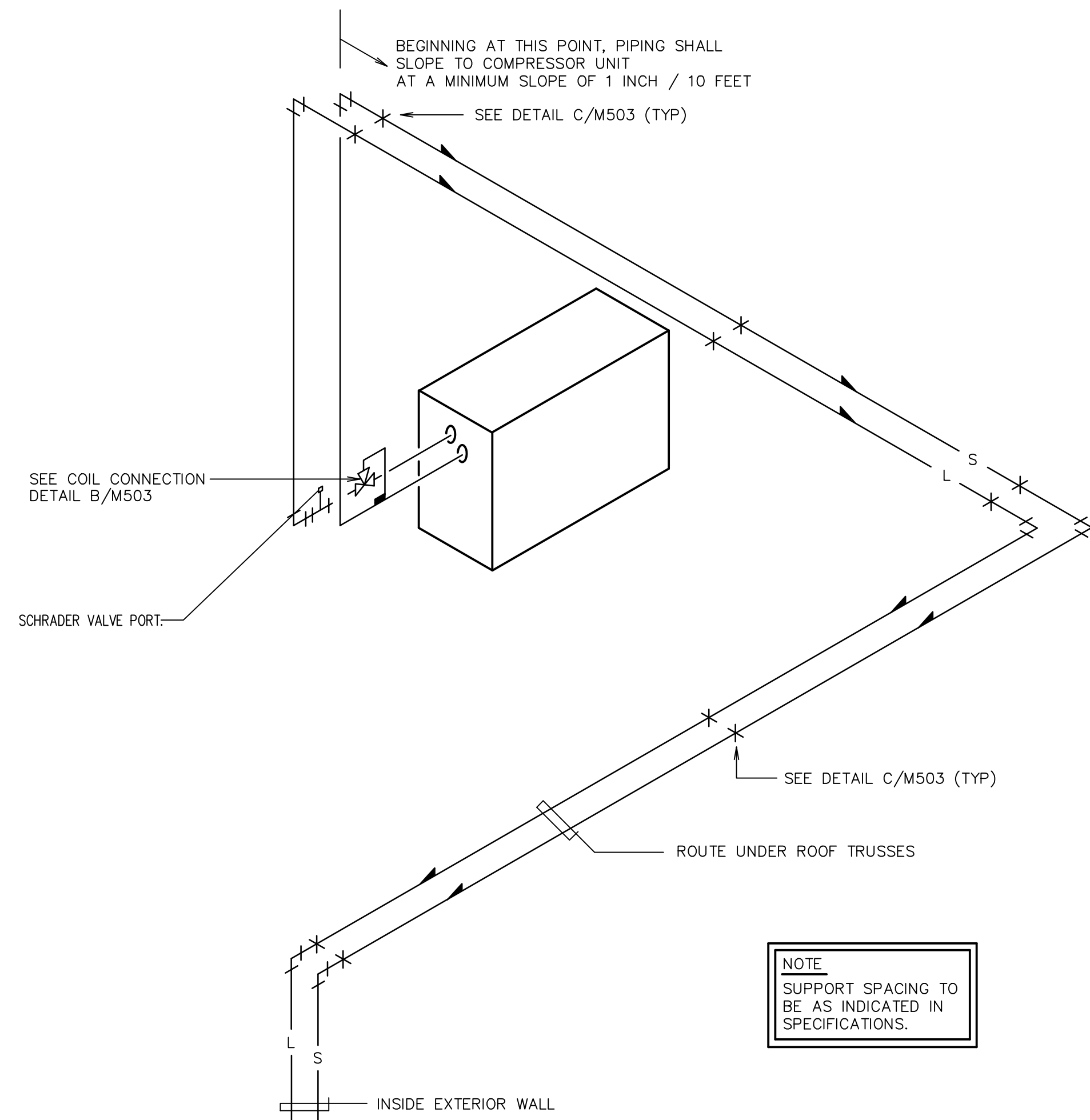
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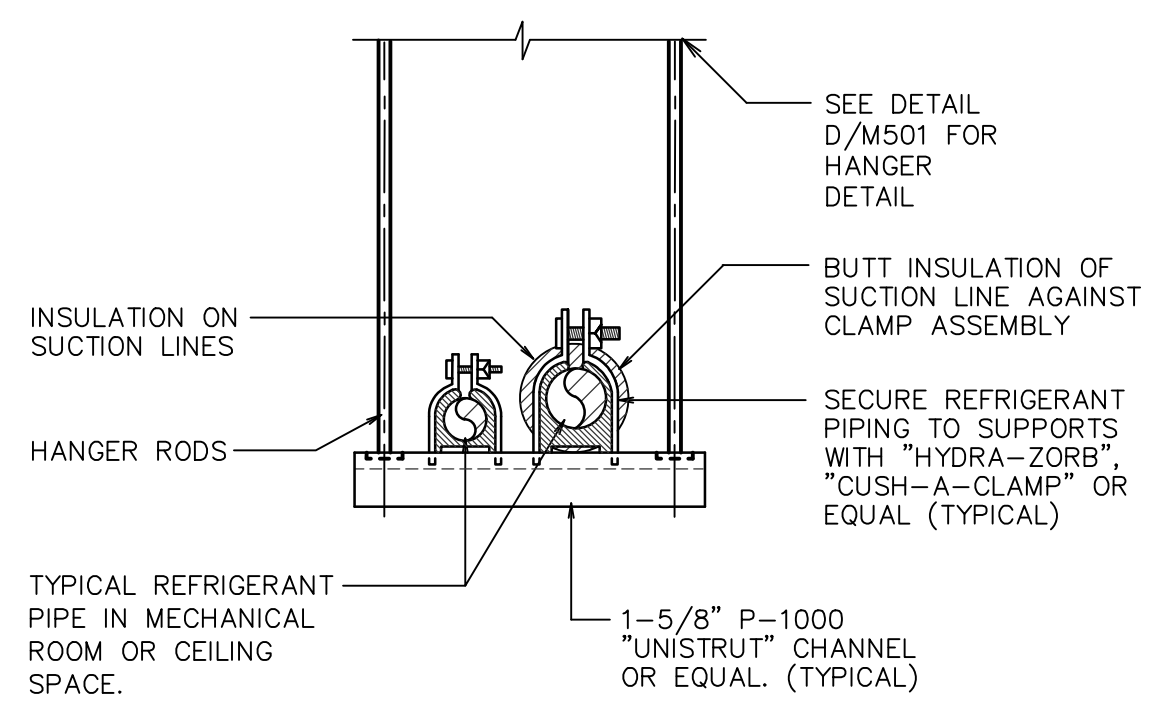
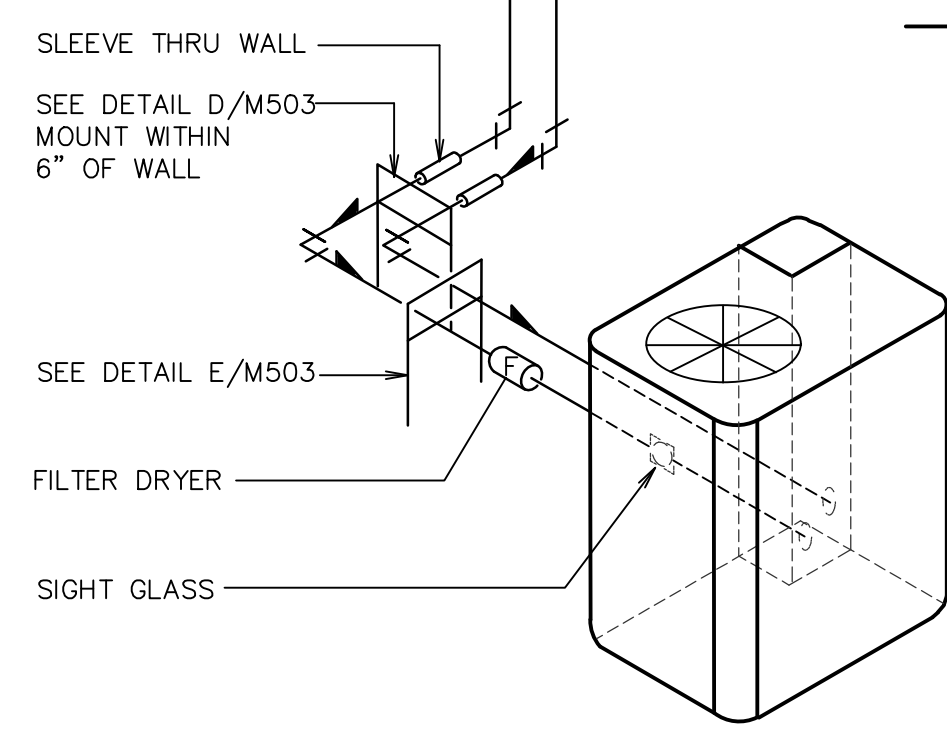
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DETAILS

Sheet:
M201

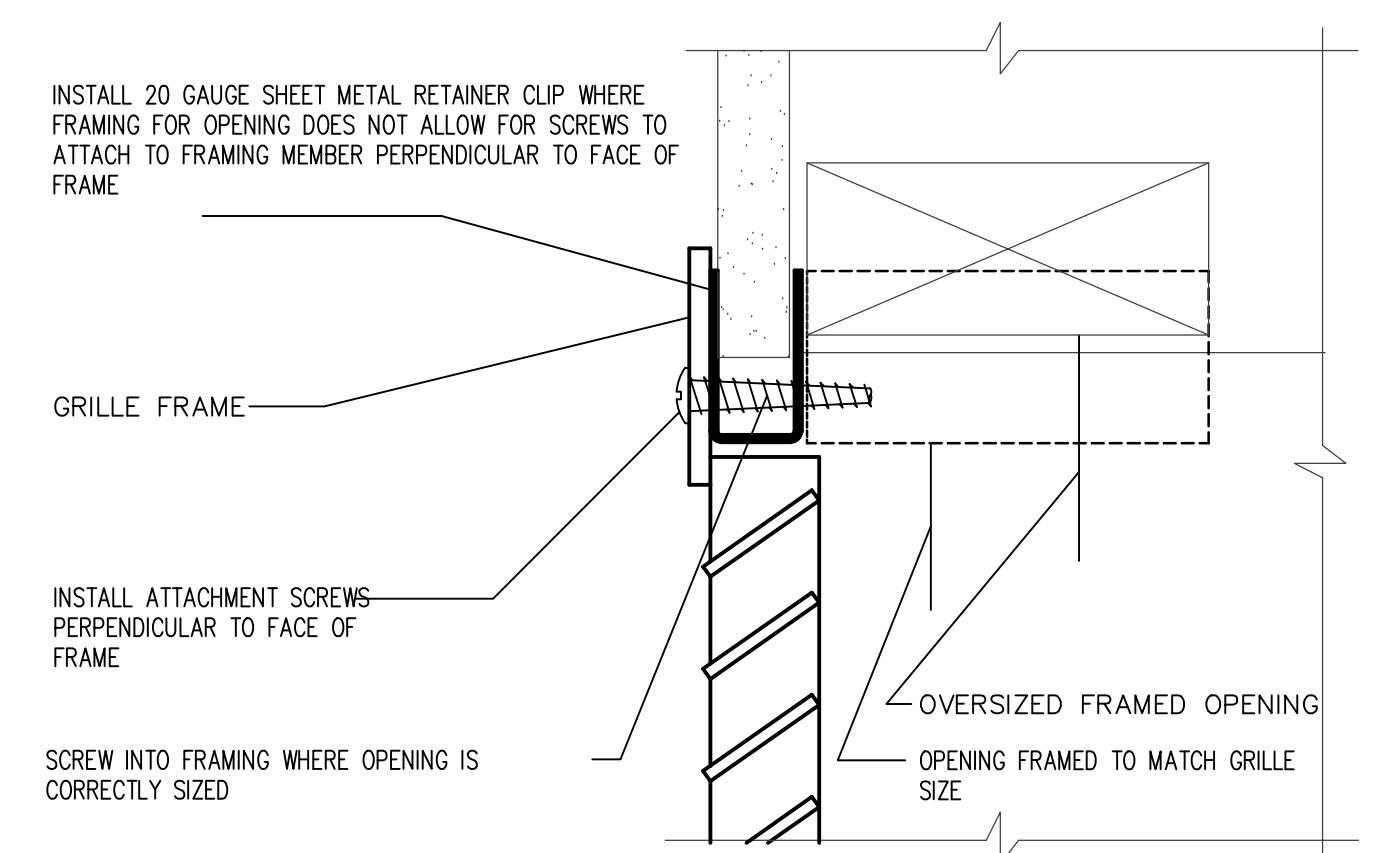
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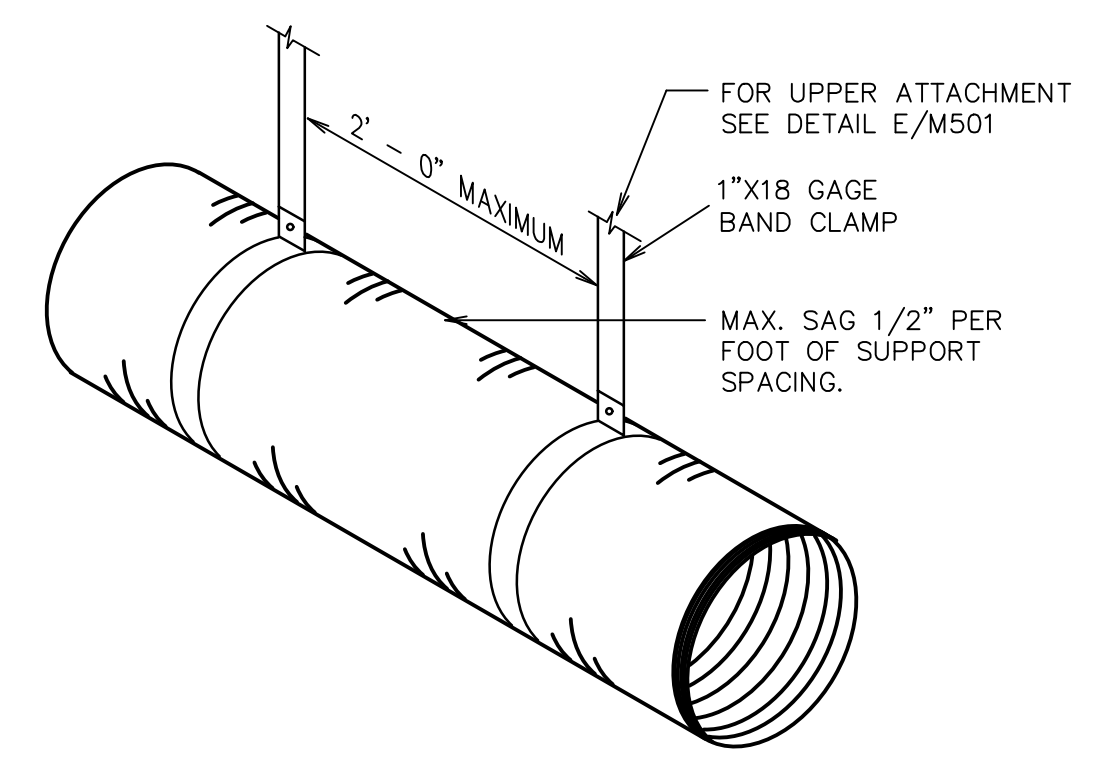
TYPICAL REFRIGERANT SCHEME
SCALE: NONE



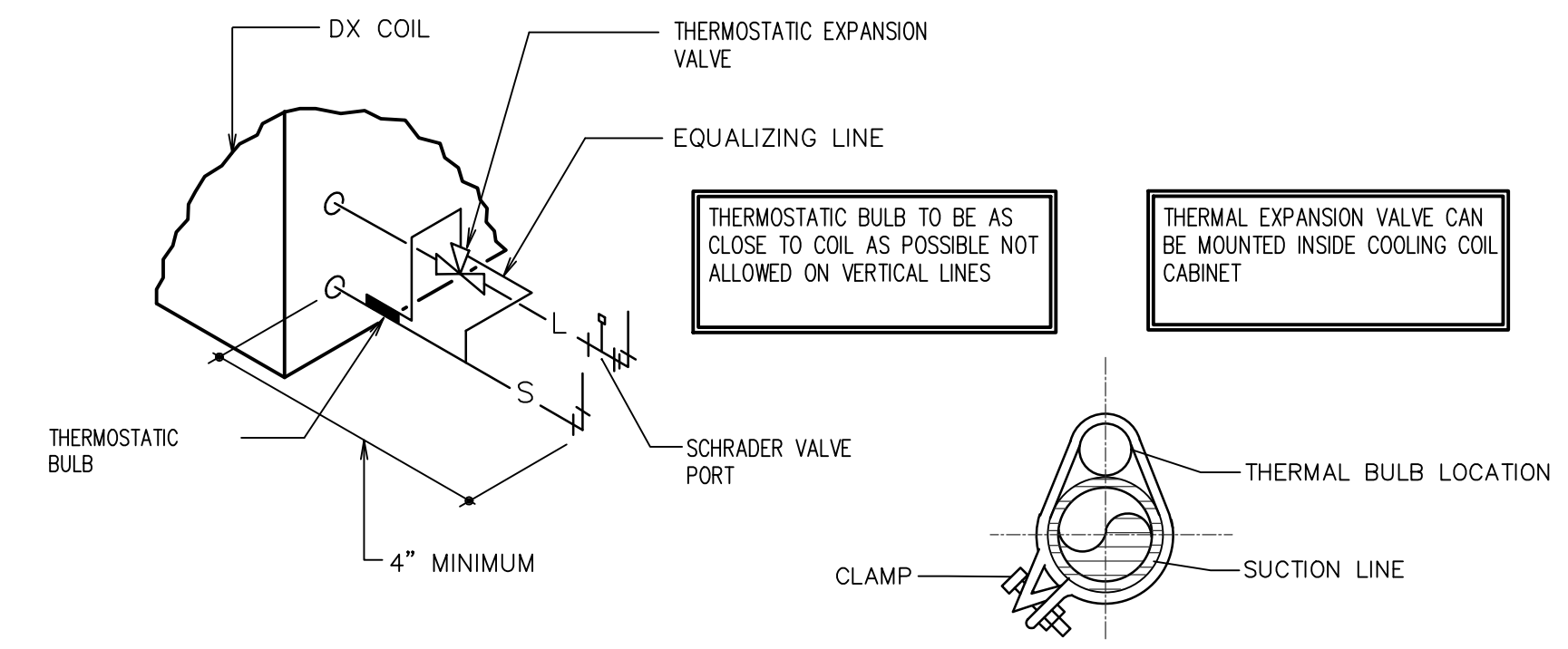
SUSPENDED REFRIGERANT PIPE SUPPORT AT CEILING
SCALE: NONE



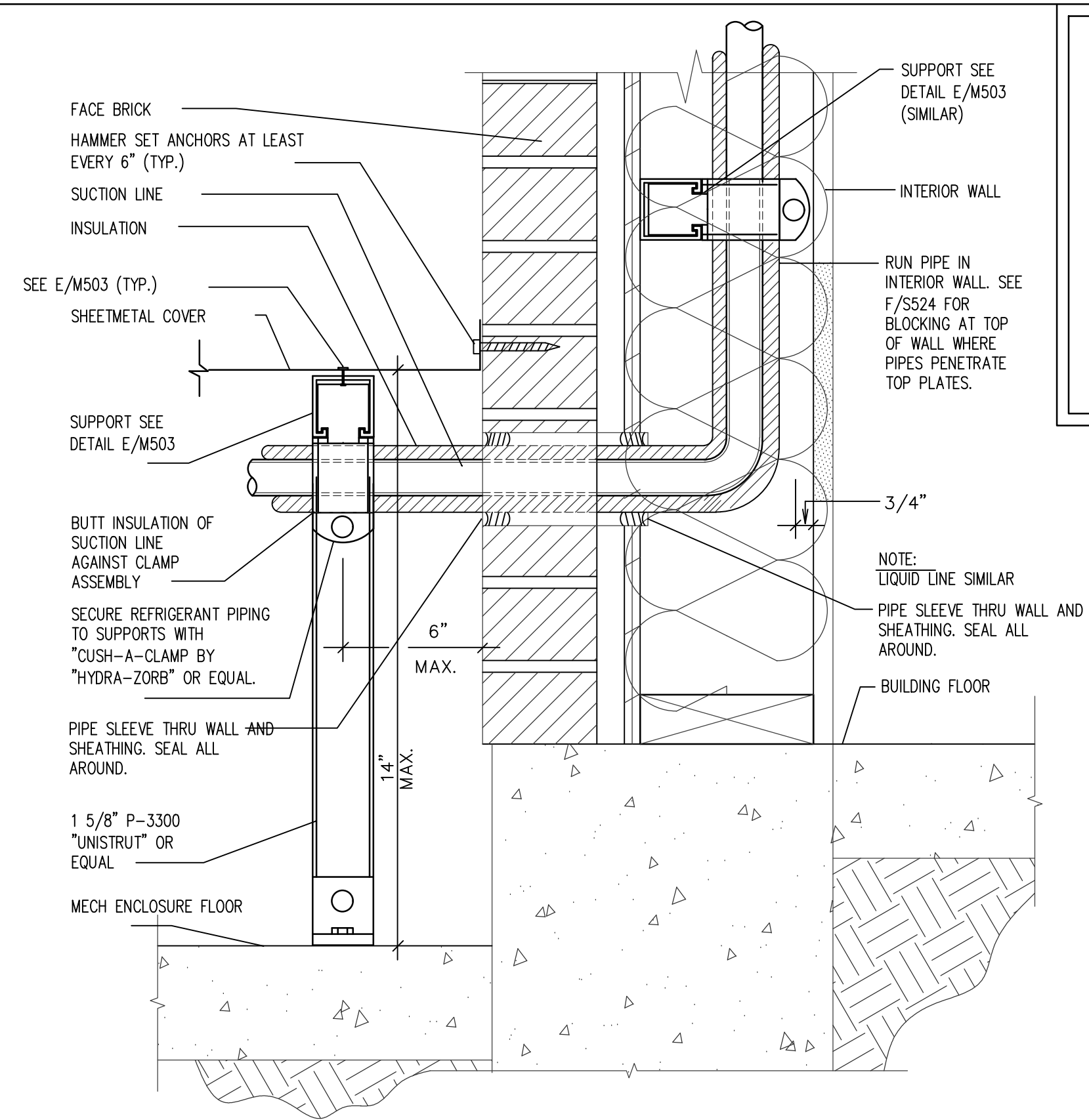
GRILLE ATTACHMENT DETAIL
SCALE: NONE



FLEXIBLE DUCT SUPPORT DETAIL
SCALE: NONE



REFRIGERANT COIL CONNECTION DETAIL
SCALE: NONE



REFRIGERANT PIPE SUPPORT AT WALL
SCALE: NONE

Emc2
Architects Planners, P.C.
1632 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 8888
F: 480 830 8966
www.emc2architects.com

DRAYNE C. SANDWELL
LICENSED PROFESSIONAL ENGINEER
No. 12333-H
7-15-2022
STATE OF HAWAII

This work was prepared by me or under my direct supervision and I am a duly licensed professional engineer in the State of Hawaii. My license number is 12333-H. My expiration date is 7-15-2022. My address is 1632 North Greenfield Road, Suite 144, Mesa, Arizona 85205. My phone number is 480-830-8888. My fax number is 480-830-8966. My email address is emc2@emc2architects.com.

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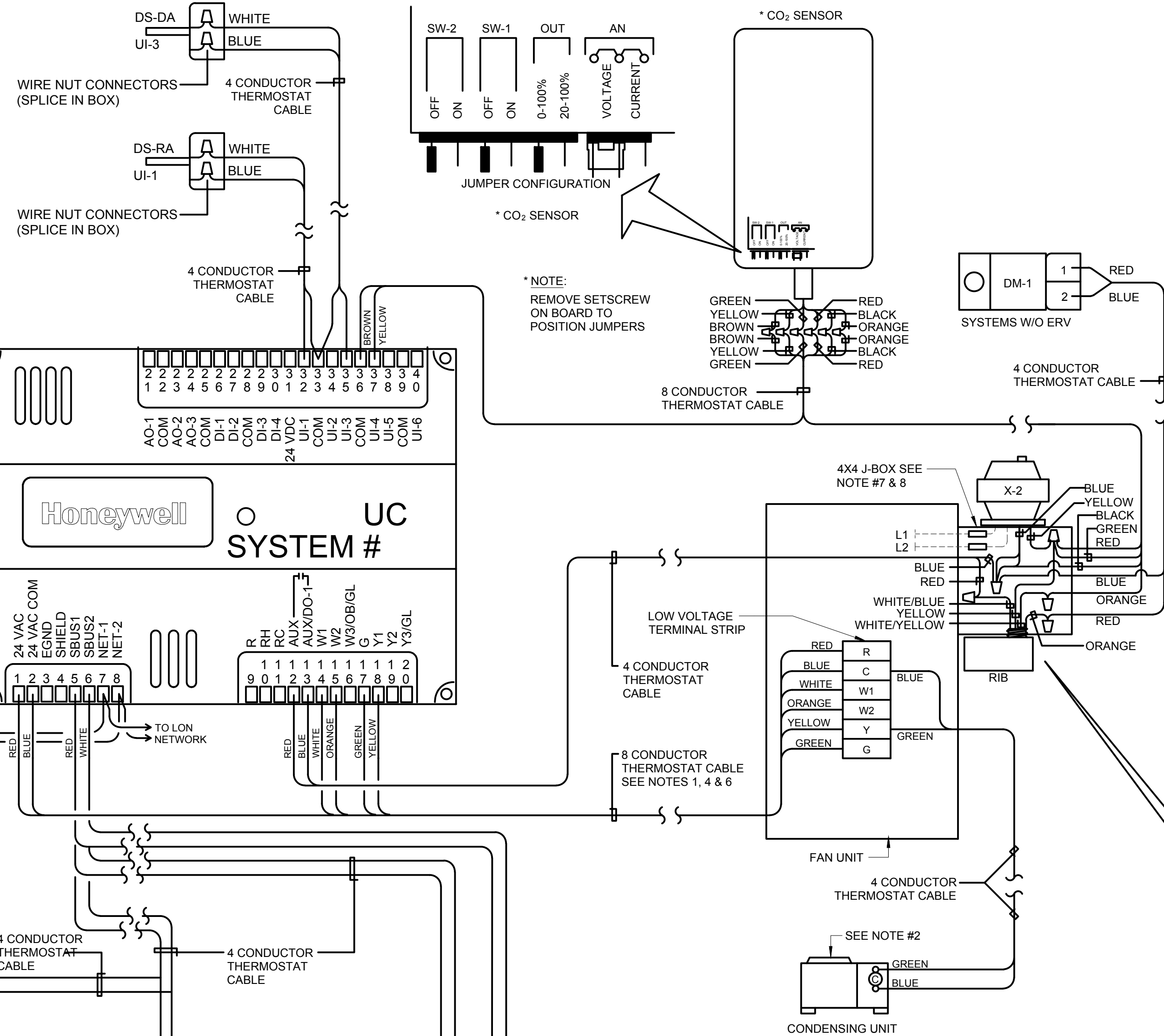
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DETAILS

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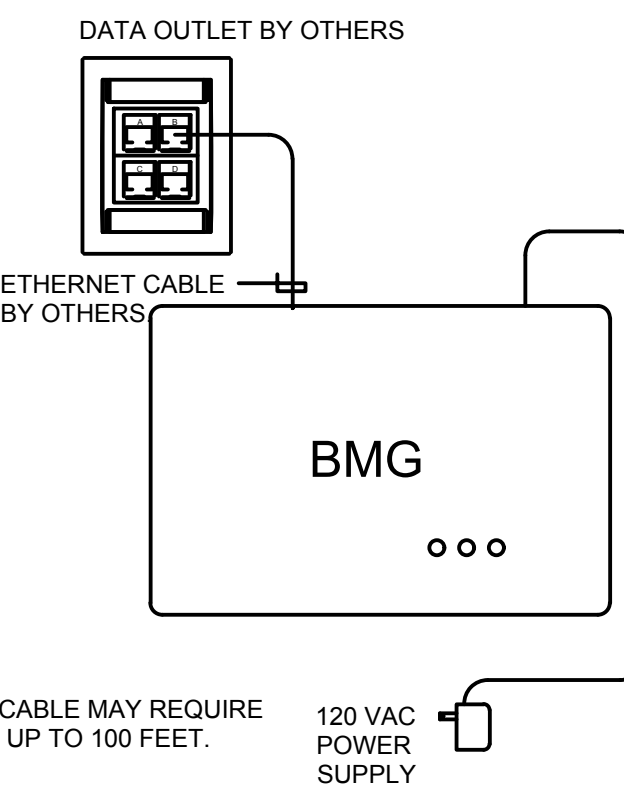
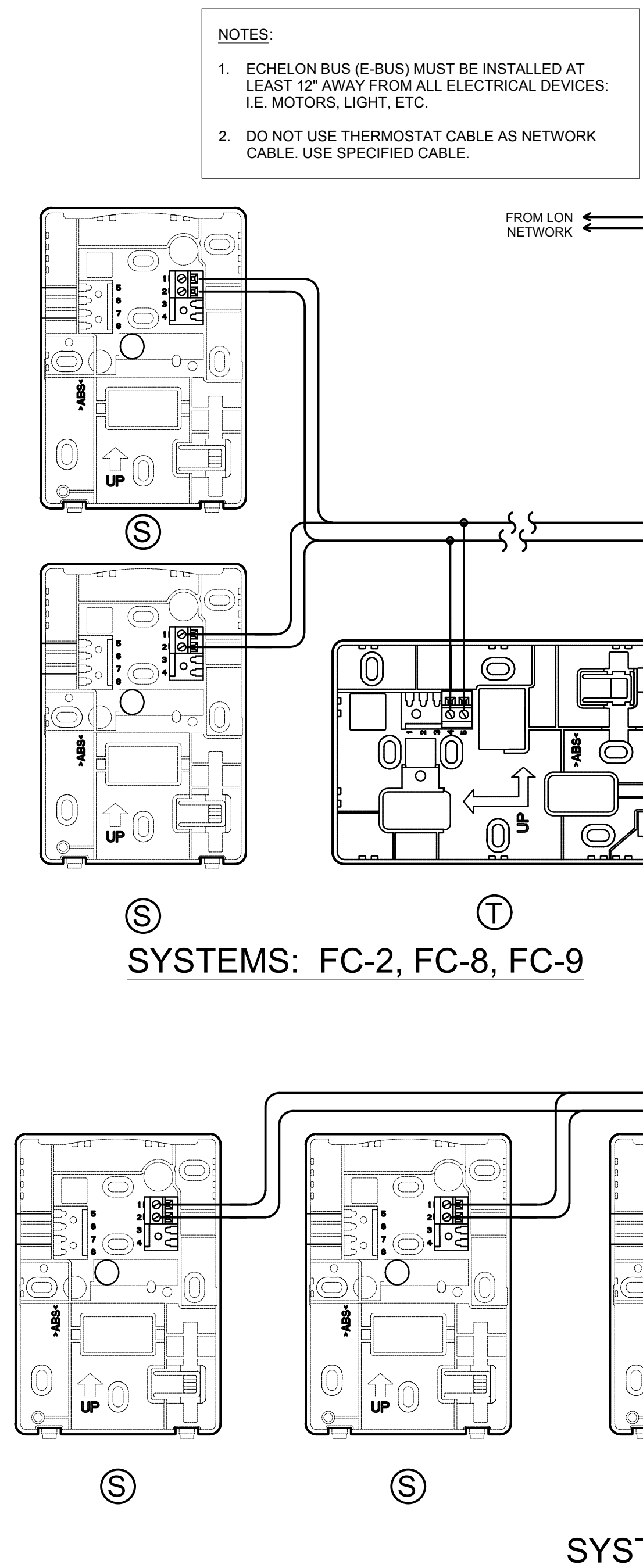
Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
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NOTES:

1. THERMOSTAT CABLE- 4, 8 OR 12 CONDUCTOR- 18 AWG SOLID COPPER WIRE INSULATED WITH HIGH DENSITY POLYETHYLENE. CONDUCTORS PARALLEL, ENCLOSED IN BROWN PVC JACKET. (NO 22 AWG CABLE ALLOWED).
2. IF COMPRESSOR UNITS HAVE THEIR OWN POWER SUPPLY IT MAY BE NECESSARY TO ADD ADDITIONAL RELAYS IN COMPRESSOR UNIT TO PROPERLY INTERFACE CONTROLS.
3. USE WIRE NUT CONNECTORS FOR SPLICING CONDUCTORS IN SPECIFIED LOCATIONS, AND TYTON TYPE CRIMP CONNECTORS FOR TERMINAL CONNECTIONS. NO TERMINAL CONNECTORS REQUIRED AT THERMOSTAT OR SENSOR.
4. DO NOT RUN ANY OTHER WIRING IN THIS CONDUIT EXCEPT THERMOSTAT CABLE.
5. VERIFY THAT FAN UNIT FAN SPEED CONTROL WIRING IS SET TO MATCH SCHEDULE SHEET AND THAT FAN OPERATES AT COOLING SPEED ONLY.
6. DO NOT SPLICE WIRE IN RUNS FROM SENSOR TO THERMOSTAT, THERMOSTAT TO FURNACE, AND THERMOSTAT TO DISCHARGE AIR SENSOR.
7. PROVIDE CHASE NIPPLE WITH PLASTIC BUSHING WHEN ATTACHING J-BOX TO EQUIPMENT.
8. PROVIDE CABLE-CLAMP SO THAT CABLES CANNOT BE PULLED OUT OF J-BOX.



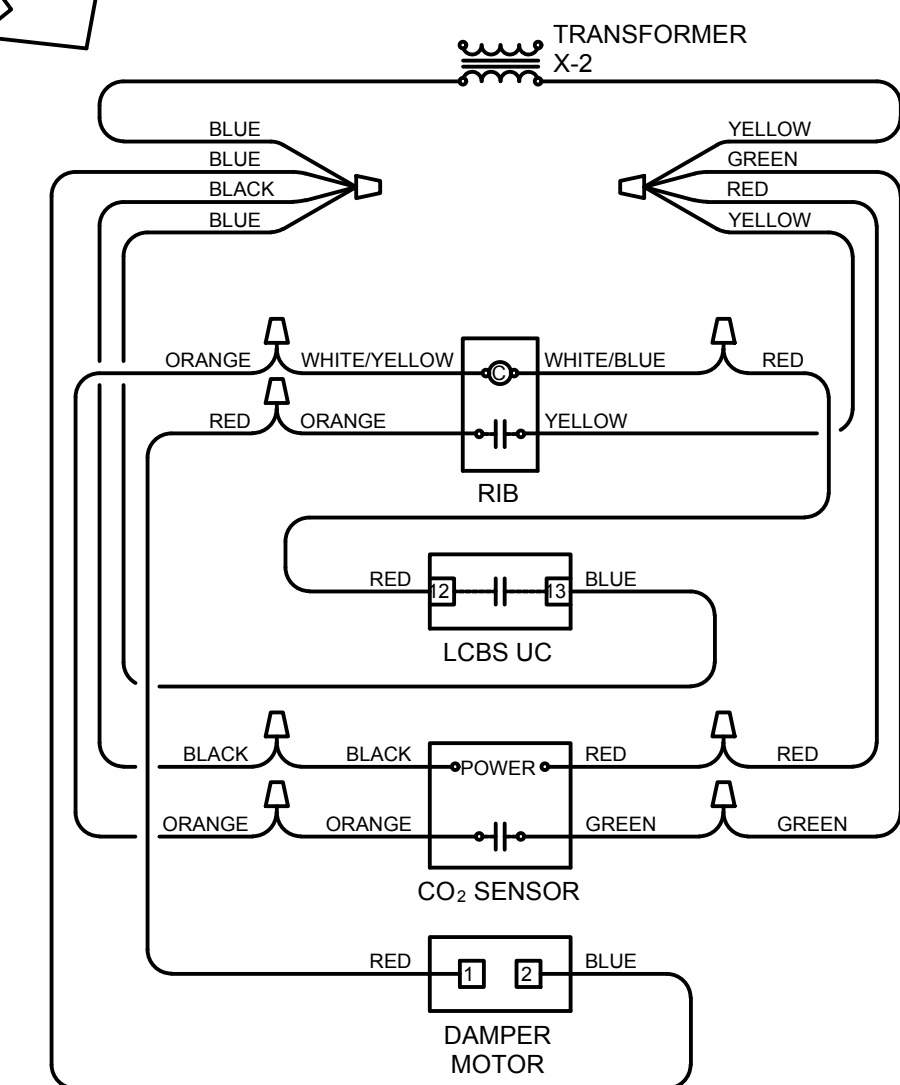
WIRING DIAGRAM
SYSTEMS: FC-1, FC-2, FC-3, FC-4, FC-5, FC-6, FC-7, FC-8, FC-9



BMG WIRING DIAGRAM

| CONTROL EQUIPMENT | | | | | |
|-------------------|---------------------------------|--|-------|---|----------------|
| MARK | DESCRIPTION | CAT. NO. (1) | MARK | DESCRIPTION | CAT. NO. (1) |
| BMG | BUILDING MANAGEMENT GATEWAY | LGW1000 (GATEWAY) WPM-8000 (WALL PLUG) | RP-6 | RELAY PANEL 24X18X6W/COVER | (2) (4) |
| UC | UNITARY CONTROLLER | YCRL64385R1000 | DM-1 | DAMPER MOTOR TWO POSITION | MS8105A1030 |
| T | THERMOSTAT WALL MODULE | LCBS WALL MODULE | DM-2 | DAMPER MOTOR 2 POS W/END SWITCH | MS8105A1130 |
| | THERMOSTAT COVER PLATE ASSEMBLY | 50002883-001 | X-1 | TRANSFORMER 120, 208, 240V/24V 75VA | AT175F1023 |
| S | REMOTE SENSOR | TR40 | X-2 | TRANSFORMER 120V/24V 50VA | AT150F1022 |
| G-1 | THERMOSTAT GUARD | (2) | SD-1 | DUCT SMOKE DETECTOR | (2) |
| DS | DUCT AIR SENSOR | C7041B2005 | SR | SMOKE RELAY 30 AMP 120V COIL | DP2030B5003 |
| CO2 | CO2 SENSOR | C7232B1006 | RIB | TWO POLE RELAY 20 AMP | RIBU1C (2) |
| | | | RIB | TWO POLE RELAY 20 AMP | RIB2401B (6) |
| | | | OAS | GLOBAL OUTDOOR AIR SENSOR | C7041F2006 (7) |
| | | | CRO | COMBINATION RELAY & THERMAL OVERLOAD DISCONNECT | (2) (4) |
| | | | E-BUS | ECHOLON NETWORK CABLE | W221P-2001B |

- (1) ALL CATALOG NUMBERS SHOWN ARE HONEYWELL UNLESS NOTED OTHERWISE.
- (2) SEE SPECIFICATIONS
- (3) PROVIDE ENCLOSURE
- (4) TO BE PURCHASED FROM AN APPROVED PER-BUILT PANEL BUILDER SEE SPECIFICATION.
- (5) SEE PLAN FOR REQUIRED SIZE AND ZONE NUMBER.
- (6) USE WITH CRO DISCONNECT FOR ELECTRIC WALL HEATER. CONTROL FROM UC.
- (7) ONLY ONE REQUIRED FOR BUILDING. MAY BE CONNECTED TO ANY CONTROLLER AT NORTH SIDE.

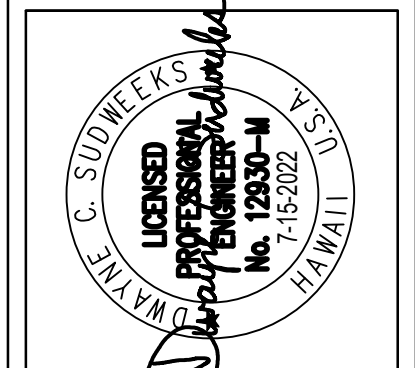


WIRING SCHEMATIC, X-2

LEGEND:

- DIVISION 26 OR FACTORY PRE-WIRED
- DIVISION 23 WIRING

Emc2 Architects Planners, PC
1635 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 3838
F: 480 830 3960
www.emc2planners.com



This work was prepared by Emc2 Architects Planners, PC in cooperation with the preparation of this project will be under my observation.
Dwayne C. Sandwick
Professional Engineer, Architects, Surveyors
License No. 12337-H
State of Hawaii
Exp. 03/31/2024
www.emc2planners.com

Project Name:
HAWAII KAI
REMODEL
HONOLULU HI STAKE
TMK: 39040040
219 Lunalilo Home Road
Honolulu, HI 96825-1806

Owner:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

| REVISIONS / SUBMISSIONS | DATE |
|-------------------------|------|
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Project Number: 1720727.00
Plan Series:

Property Number: 513-1391

Sheet Title: **CONTROLS**

Sheet: **M300**

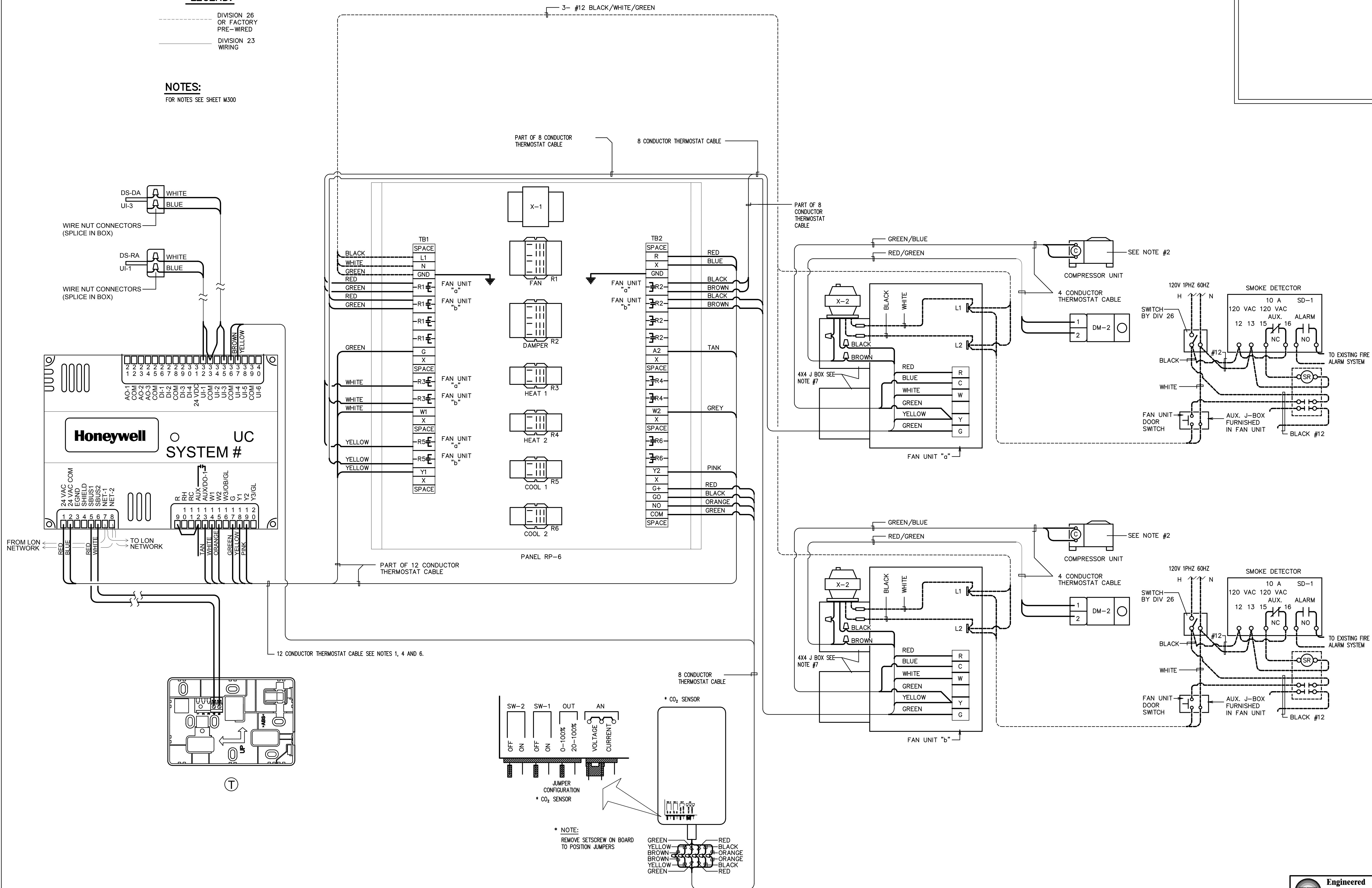
Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
1355 EAST CENTER
POCATELLO, IDAHO 83201
PHONE: (208) 233-0501
EMAIL: eso@engsystems.com
ESA JOB NUMBER: 20035

LEGEND:

- DIVISION 26 OR FACTORY PRE-WIRED
- DIVISION 23 WIRING

NOTES:

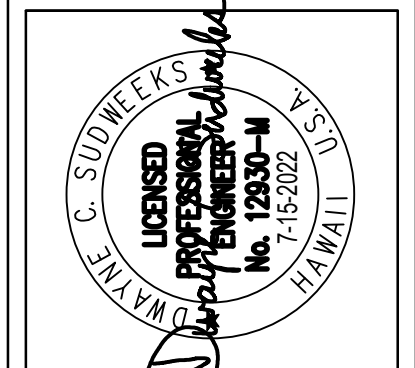
FOR NOTES SEE SHEET M300



WIRING DIAGRAM

SYSTEMS: EXISTING AH-1, AH-2. NEW FC-1, FC-3

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 1632 North Greenfield Road
 Suite 144
 Mesa, Arizona 85205
 P: 480 830 3838
 F: 480 830 3966
 www.emc2architects.com



This work was prepared by the undersigned in the course and preparation of his professional services. It will be under my observation.

Dwayne C. Sandwick
 Professional Engineer, License No. 12330-H, State of Hawaii, expires 7-15-2022.
 1632 North Greenfield Road, Suite 144, Mesa, Arizona 85205

Project Name:
HAWAII KAI
 REMODEL
 HONOLULU HI STAKE
 TMK: 39040040
 219 Lunalilo Home Road
 Honolulu, HI 96825-1806

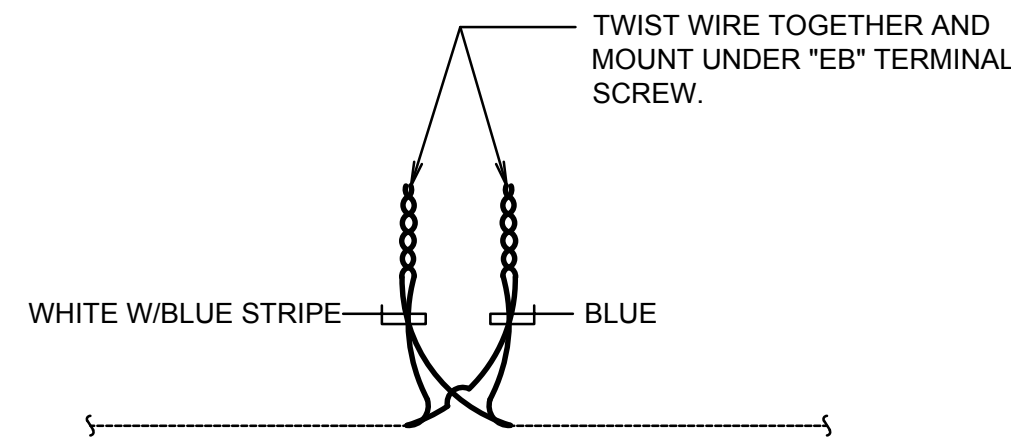
Owner:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

| REVISIONS / SUBMISSIONS | DATE |
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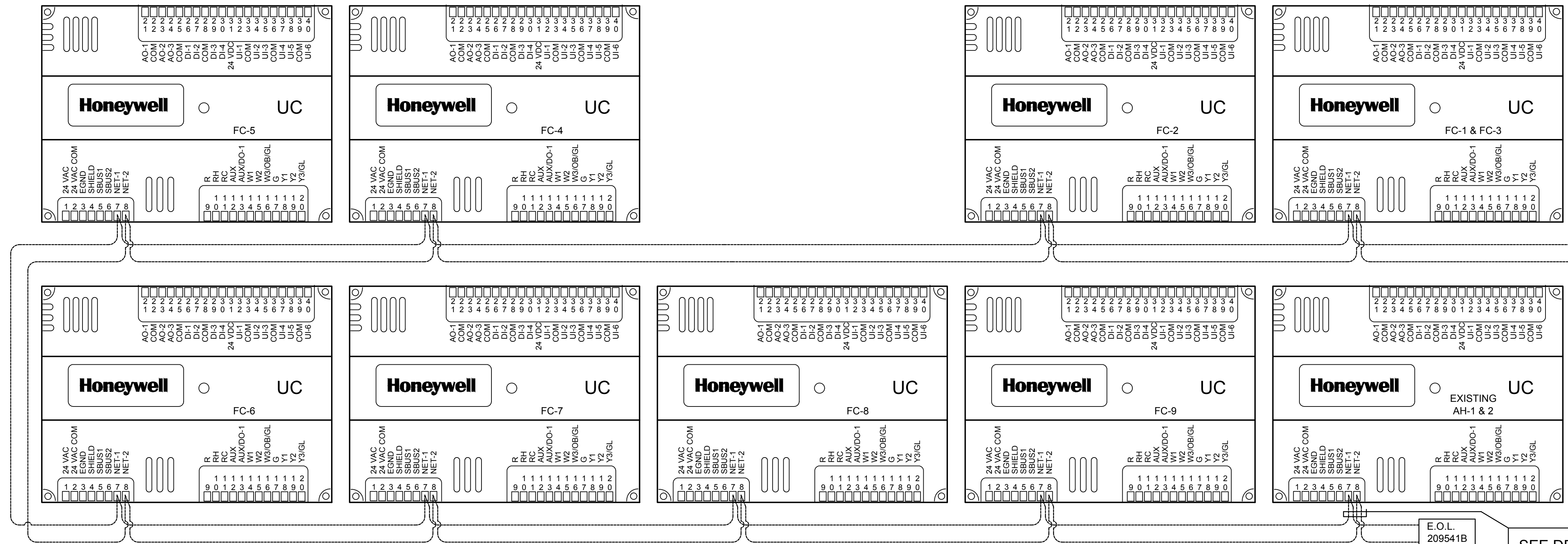
Project Number:
 1720727.00
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Engineered Systems Associates
 DWAYNE S. - DAVE H. - TANNER D.
 1355 EAST CENTER
 POCAATELLO, IDAHO 83201
 PHONE: (208) 233-0501
 EMAIL: eso@engsystems.com
 ESA JOB NUMBER: 20035

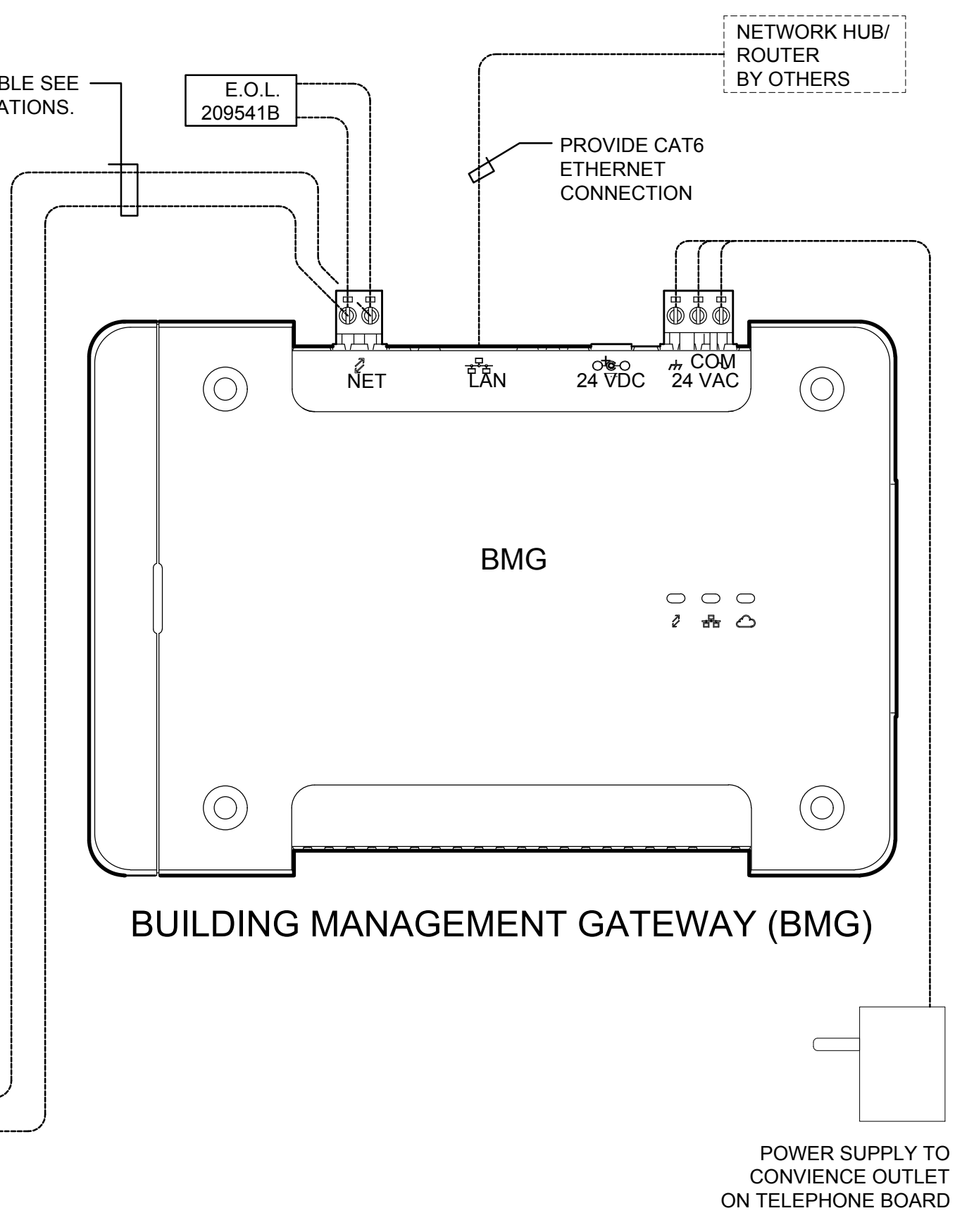
Sheet Title:
CONTROLS
 Sheet:
M301



E-BUS CONNECTION DETAIL A
NO SCALE



SEE DETAIL
A THIS
SHEET
(TYPICAL)



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1632 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 3838
F: 480 830 3966
www.emc2architects.com

PROFESSIONAL ARCHITECT
No. 12333-H
7-15-2022
HAWAII

This work was prepared by me or under my direct supervision and I am a duly licensed Professional Engineer, Architect, Surveyor, or Professional Engineer, Architect, Surveyor.
Dwayne C. Sandwell
Lic. 45222224
Professional Engineer, Architect, Surveyor
Hawaii State License No. 15113
www.dcsandwell.com

Project Name:
HAWAII KAI
REMODEL
HONOLULU HI STAKE
TMK: 39040040
219 Lunalilo Home Road
Honolulu, HI 96825-1806

Owner:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

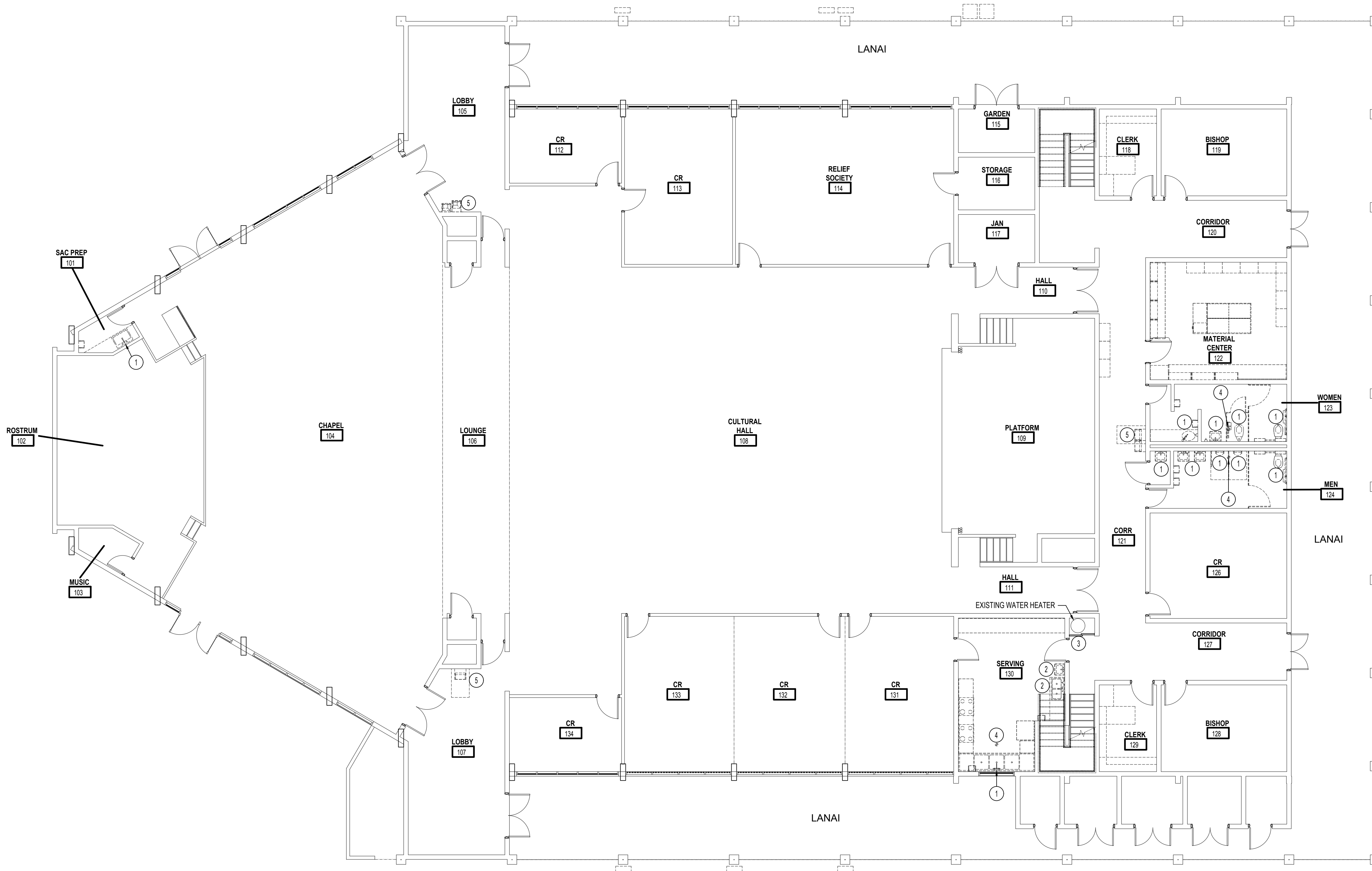
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Project Number:
1720727.00
Plan Series:
Property Number:
513-1391

Sheet Title:
CONTROLS

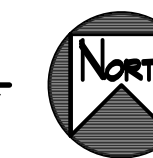
Sheet:
M302

Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
1355 EAST CENTER
POCATELLO, IDAHO 83201
PHONE: (208) 233-0501
EMAIL: esa@engsystems.com
ESA JOB NUMBER: 20035



MAIN FLOOR PLAN - PLUMBING DEMO

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



PLUMBING NOTES:

- 1 EXISTING FIXTURE TO BE REMOVED AND REPLACED AFTER NEW FLOOR/WALL WORK. ADJUST WASTE, WATER & VENT ROUGH-INS AS REQUIRED FOR NEW FIXTURES.
- 2 EXISTING FIXTURE TO BE REMOVED AND DISPOSED OF. CAP WASTE, WATER AND VENT IN WALL OR FLOOR AND ABANDON. SEE ARCHITECT PLANS FOR PATCHING.
- 3 EXISTING WATER HEATER TO REMAIN. PROTECT DURING CONSTRUCTION.
- 4 EXISTING FLOOR DRAINS TO REMAIN. PROTECT FIXTURE & REMOVE STRAINER FOR NEW FLOOR FINISH.
- 5 DRINKING FOUNTAIN LOCATION TO BE SHIFTED TO NEW LOCATION. DISPOSE OF EXISTING FIXTURE AND MOUNTING HARDWARE, & INSTALL NEW. MODIFY WASTE WATER & VENT. ROUGH IN AS REQUIRED FOR NEW FIXTURE.

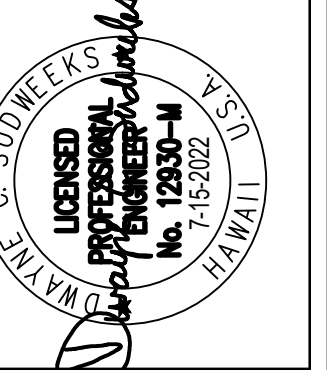
GENERAL NOTES:

- A. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS PRIOR TO BID AND CONNECTIONS ON THE JOB SITE. ALL WORK SHALL BE EXECUTED FROM MEASUREMENTS TAKEN AT THE SITE.
- B. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO INSURE PROPER CODE CLEARANCES FOR ELECTRICAL AND MECHANICAL ACCESS WHEN INSTALLING ANY EQUIPMENT SUPPLIED BY THE MECHANICAL CONTRACTOR.
- C. IT IS CRITICAL THAT THIS CONTRACTOR COORDINATE EQUIPMENT LOCATIONS WITH PIPING, DUCTWORK, ELECTRICAL CONDUIT AND BUILDING STRUCTURE TO INSURE CODE COMPLIANCE.

PLUMBING LEGEND

| SYMBOL | DESCRIPTION |
|--------|----------------------------|
| V | VENT |
| VTR | VENT THRU ROOF |
| CO | CLEANOUT |
| WCO | WALL CLEANOUT |
| COTG | CLEANOUT TO GRADE |
| — | PIPE DROP |
| — | PIPE RISE |
| — | BALL TYPE ISOLATION VALVE |
| --- | SOIL OR WASTE PIPING |
| --- | VENT LINE PIPING |
| --- | DOMESTIC COLD WATER PIPING |
| --- | FIRE SPRINKLER LINE |
| --- | DOMESTIC HOT WATER PIPING |
| --- | GAS PIPING |
| --- | CONDENSATE DRAIN PIPING |

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Architects Planners, P.C.
1635 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 8838
F: 480 830 3966
www.emc2architects.com



This work was prepared by me or under my direct supervision and I am a duly Licensed Professional Engineer in the State of Hawaii. My license No. is 45022024. My expiration date is 7/15/2024. I am a member of the Hawaii State Board of Professional Engineers, Architects, Surveyors and Planning Practitioners.

Dwayne C. Sandwick
Professional Engineer, License No. 45022024
Hawaii State Board of Professional Engineers, Architects, Surveyors and Planning Practitioners

Project Name:
HAWAII KAI
REMODEL
HONOLULU HI STAKE
TMK: 39040040
219 Lunalilo Home Road
Honolulu, HI 96825-1806

Owner:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

| NO. | REVISIONS / SUBMISSIONS | DATE |
|-----|-------------------------|------|
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Project Number:
1720727.00
Plan Series:
Property Number:
513-1391

Sheet Title:
DEMO PLUMBING MAIN LEVEL

Sheet:
P001

Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
1355 EAST CENTER
POCATELLO, IDAHO 83201
PHONE: (208) 233-0501
EMAIL: eso@engsystems.com
ESA JOB NUMBER: 20035



UPPER FLOOR PLAN - PLUMBING DEMO
SCALE: 1/8" = 1'-0"



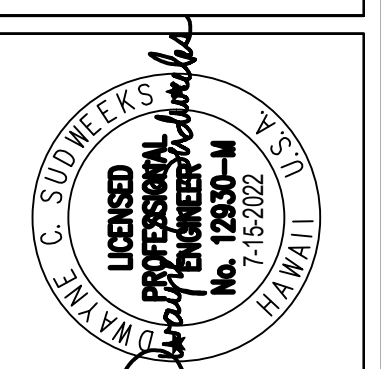
PLUMBING NOTES:

- 1 EXISTING FIXTURE TO BE REMOVED AND REPLACED AFTER NEW FLOOR/WALL WORK. ADJUST WASTE, WATER & VENT ROUGH-INS AS REQUIRED FOR NEW FIXTURES.
- 2 EXISTING FLOOR DRAINS TO REMAIN. PROTECT FIXTURE & REMOVE STRAINER FOR NEW FLOOR FINISH.

PLUMBING LEGEND

| SYMBOL | DESCRIPTION |
|--------|----------------------------|
| V | VENT |
| VTR | VENT THRU ROOF |
| CO | CLEANOUT |
| WCO | WALL CLEANOUT |
| COTG | CLEANOUT TO GRADE |
| — | PIPE DROP |
| — | PIPE RISE |
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| — | VENT LINE PIPING |
| — | DOMESTIC COLD WATER PIPING |
| F | FIRE SPRINKLER LINE |
| — | DOMESTIC HOT WATER PIPING |
| G | GAS PIPING |
| CD | CONDENSATE DRAIN PIPING |

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Architects Planners, PC
1632 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 8838
F: 480 830 3966
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Dwayne C. Sandwick
Professional Engineer, License No. 45522024
Hawaii State Board of Professional Engineers, Architects, Surveyors and Planning Engineers
www.dcsandwick.com
1/24/2022

Project Name:
HAWAII KAI
REMODEL
HONOLULU HI STAKE
TMK: 39040040
219 Lunalilo Home Road
Honolulu, HI 96825-1806

Owner:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

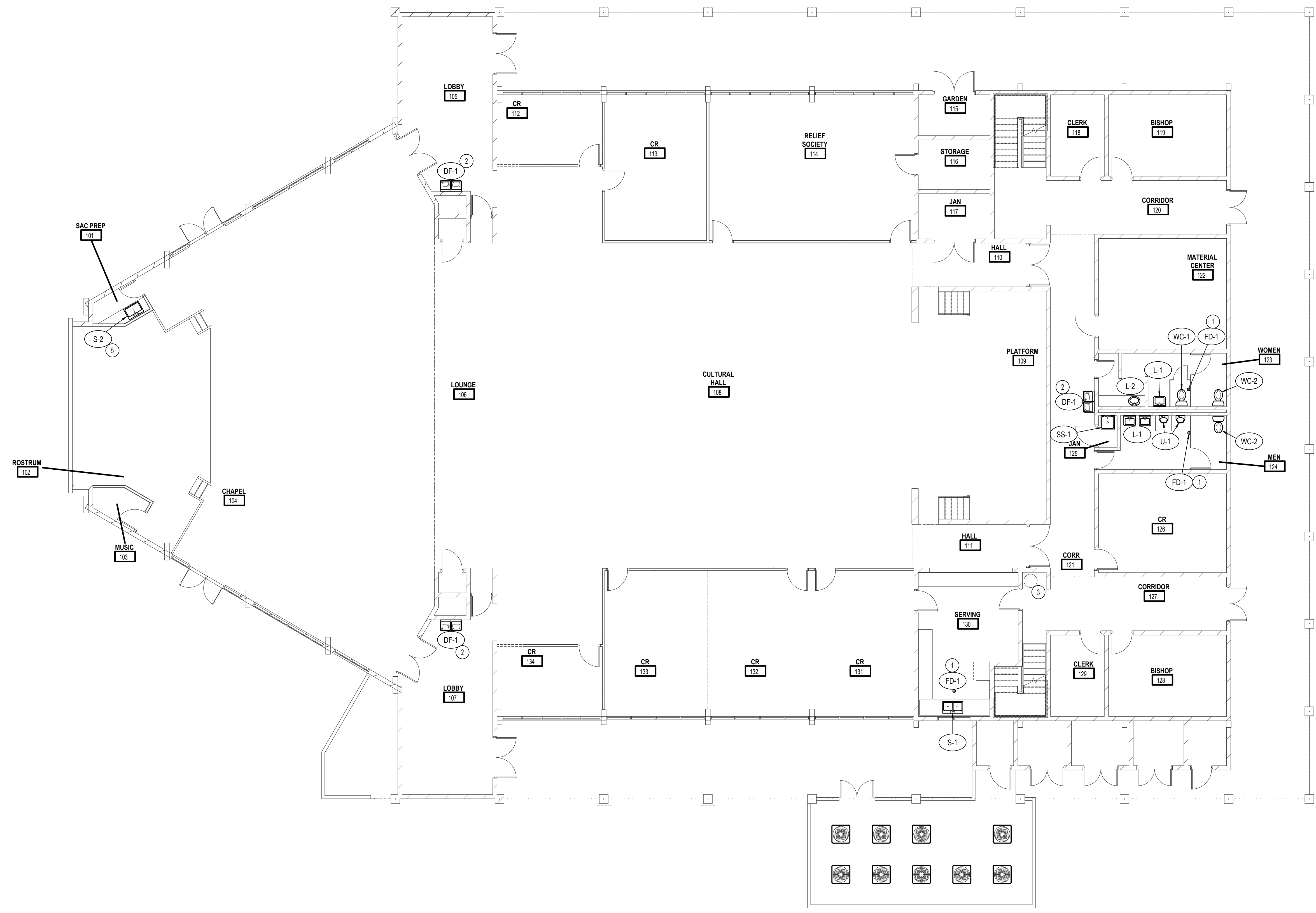
| REVISIONS / SUBMISSIONS | DATE |
|-------------------------|------|
| # | |

Project Number:
1720727.00
Plan Series:
Property Number:
513-1391

Sheet Title:
DEMO PLUMBING UPPER LEVEL

Sheet:
P002

Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
1355 EAST CENTER
POCATELLO, IDAHO 83201
PHONE: (208) 233-0501
EMAIL: eso@engsystems.com
ESA JOB NUMBER: 20035



MAIN FLOOR PLAN - PLUMBING
SCALE: 1/8" = 1'-0"



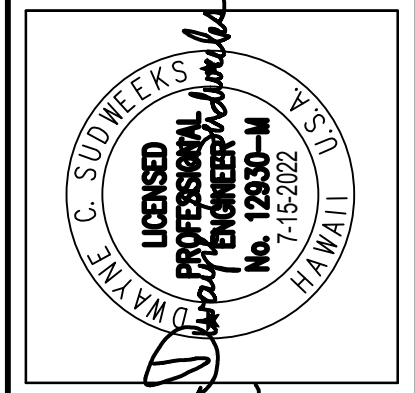
PLUMBING NOTES:

1. INSTALL NEW FLOOR DRAIN STRAINERS AFTER NEW FLOOR FINISH. MODIFY DRAIN AS REQUIRED FOR NEW FLOOR ELEVATION.
2. NEW DRINKING FOUNTAIN TO BE SHIFTED TO NEW LOCATION. INSTALL NEW MOUNTING HARDWARE. INSTALL NEW P-TRAP, FLEXIBLE RISER & 1/4 TURN STOP VALVE.
3. EXISTING WATER HEATER TO REMAIN. PROTECT DURING CONSTRUCTION.

PLUMBING LEGEND

| SYMBOL | DESCRIPTION |
|--------|----------------------------|
| V | VENT |
| VTR | VENT THRU ROOF |
| CO | CLEANOUT |
| WCO | WALL CLEANOUT |
| COTG | CLEANOUT TO GRADE |
| — | PIPE DROP |
| — | PIPE RISE |
| — | BALL TYPE ISOLATION VALVE |
| --- | SOIL OR WASTE PIPING |
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| --- | DOMESTIC COLD WATER PIPING |
| --- | FIRE SPRINKLER LINE |
| --- | DOMESTIC HOT WATER PIPING |
| G | GAS PIPING |
| CD | CONDENSATE DRAIN PIPING |

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1632 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 8838
F: 480 830 3966
www.emc2architects.com



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Dwayne C. Sandwick
Professional Engineer, License No. 455232524
Hawaii State Board of Professional Engineers, Architects, Surveyors, and Planning Engineers
www.dcsandwick.com

Project Name:
HAWAII KAI
REMODEL
HONOLULU HI STAKE
TMK: 39040040
219 Lunalilo Home Road
Honolulu, HI 96825-1806

Owner:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

| REVISIONS / SUBMISSIONS | DATE |
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Project Number:
1720727.00
Plan Series:
Property Number:
513-1391

Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
1355 EAST CENTER
POCATELLO, IDAHO 83201
PHONE: (208) 233-0501
EMAIL: eso@engsystems.com
ESA JOB NUMBER: 20035

Sheet Title:
PLUMBING MAIN LEVEL
Sheet:
P101



UPPER FLOOR PLAN - PLUMBING

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



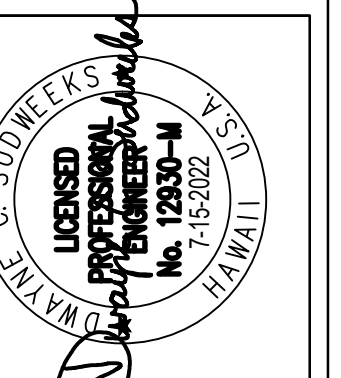
PLUMBING NOTES:

1. INSTALL NEW FLOOR DRAIN STRAINERS AFTER NEW FLOOR FINISH.
2. NEW DRINKING FOUNTAIN TO BE SHIFTED TO NEW LOCATION. INSTALL NEW MOUNTING HARDWARE. INSTALL NEW P-TRAP, FLEXIBLE RISER & 1/4 TURN STOP VALVE.

PLUMBING LEGEND

| SYMBOL | DESCRIPTION |
|--------|----------------------------|
| V | VENT |
| VTR | VENT THRU ROOF |
| CO | CLEANOUT |
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Architects Planners, PC
1632 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 8888
F: 480 830 8966
www.emc2planners.com



This work was prepared by me or under my direct supervision and I am a duly licensed Professional Engineer, architect, surveyor, or land surveyor.
Dwayne C. Sandwick
Lic. No. 45523282
Professional Engineer, architect, surveyor
1/14/2024 (10/15/24)

Project Name:
HAWAII KAI
REMODEL
HONOLULU HI STAKE
TMK: 39040040
219 Lunalilo Home Road
Honolulu, HI 96825-1806

Owner:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

| REVISIONS / SUBMISSIONS | DATE |
|-------------------------|------|
| # | |

Project Number:
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Plan Series:
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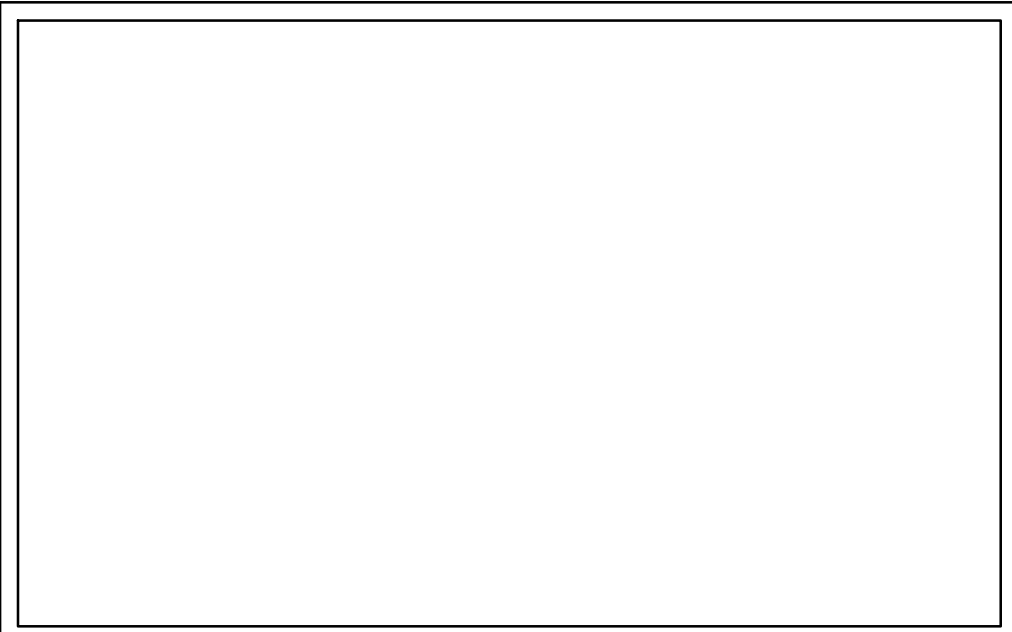
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PLUMBING UPPER LEVEL

Sheet:
P102

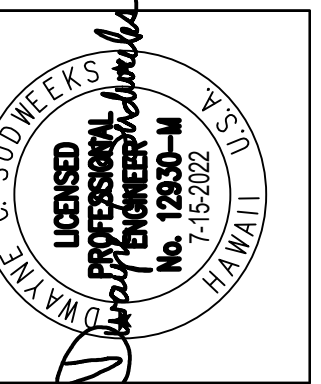
Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
1355 EAST CENTER
POCATELLO, IDAHO 83201
PHONE: (208) 233-0501
EMAIL: eso@engsystems.com
ESA JOB NUMBER: 20035

| PLUMBING FIXTURE SCHEDULE | | | | | | | |
|---------------------------|-------------------|-----------|--------|--------|------|------|---|
| MARK | FIXTURE | PIPE SIZE | | | | | REMARKS |
| | | TRAP | WASTE | VENT | C.W. | H.W. | |
| DF-1 | DRINKING FOUNTAIN | 1-1/2" | 1-1/2" | 1-1/2" | 1/2" | - | ELECTRIC BI-LEVEL (ADA APPROVED) WITH BOTTLE FILLER |
| FD-1 | FLOOR DRAIN COVER | 2" | 2" | 2" | - | - | REPLACE EXISTING STRAINER |
| SS-1 | SERVICE SINK | 2" | 2" | 2" | 1/2" | 1/2" | |
| L-1 | LAVATORY | 1-1/4" | 1-1/4" | 1-1/2" | 1/2" | 1/2" | COUNTER TOP ① |
| L-2 | LAVATORY | 1-1/4" | 1-1/4" | 1-1/2" | 1/2" | 1/2" | SELF SUPPORTING 20"X18", SEE ARCHITECTURAL ELEVATIONS |
| S-1 | SERVING AREA SINK | 1-1/2" | 1-1/2" | 1-1/2" | 1/2" | 1/2" | TWO COMPARTMENT |
| S-2 | SACRAMENT SINK | 1-1/2" | 1-1/2" | 1-1/2" | 1/2" | 1/2" | SINGLE COMPARTMENT |
| U-1 | ADA URINAL | INT. | 3" | 2" | 3/4" | - | FLUSH VALVE, WALL HUNG, HEU (HIGH EFFICIENCY URINAL) |
| WC-1 | WATER CLOSET | INT. | 4" | 2" | 1/2" | - | FLUSH TANK, HET (HIGH EFFICIENCY TOILET) |
| WC-2 | WATER CLOSET | INT. | 4" | 2" | 1/2" | - | FLUSH TANK, 18" RIM HEIGHT (ADA APPROVED), HET |

① WHEN MOUNTED PER ARCHITECTURAL ELEVATIONS, ADA ACCESSIBILITY REQUIREMENTS ARE SATISFIED.



Emc2
Architects Planners, P.C.
1632 North Greenfield Road
Suite 144
Mesa, Arizona 85205
P: 480 830 3838
F: 480 830 3966
www.emc2planners.com



This work was prepared by me or under my direct supervision and I am a duly Licensed Professional Engineer in the State of Hawaii. My license number is 12333-H. My expiration date is 7-15-2022.
Dwayne C. Sankulala
Professional Engineer, License No. 12333-H, State of Hawaii
Exp. 05/20/2024
1234567890
1234567890
1234567890

Project Name:
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HONOLULU HI STAKE
TMK: 39040040
219 Lunalilo Home Road
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Owner:
JESUS CHRIST
THE CHURCH OF
OF LATTER-DAY SAINTS

| # | REVISIONS/ SUBMISSIONS | DATE |
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Project Number:
1720727.00
Plan Series:
Property Number:
513-1391

Sheet Title:
SCHEDULE

Sheet:
P200

Engineered Systems Associates
DWAYNE S. - DAVE H. - TANNER D.
1355 EAST CENTER
POCATELLO, IDAHO 83201
PHONE: (208) 233-0501
EMAIL: eso@engsystems.com
ESA JOB NUMBER: 20035