

Castle Dale UT Stake

Project No. 504-8931-21010101

HVAC Upgrade Castle Dale Emery SR Seminary

915 N. Center Street
Castle Dale, Utah 84513

Price UT FM Group
5601 E. Highway 40
Ft. Duchesne, Utah 84066
(435) 724-2318

Project For

THE CHURCH OF
JESUS CHRIST
OF LATTER-DAY SAINTS

DRAWING INDEX

M000	COVER SHEET
MD101	MECHANICAL DEMOLITION FLOOR PLAN
M101	MECHANICAL FLOOR PLAN
M301	LARGE SCALE MECHANICAL PLANS & SECTIONS
M401	MECHANICAL PIPING PLAN AND DETAILS
M501	MECHANICAL DETAILS
M502	MECHANICAL DETAILS
M601	MECHANICAL SCHEDULES
ME101	AUTOMATIC TEMPERATURE CONTROLS
ME701	AUTOMATIC TEMPERATURE CONTROLS
ME702	AUTOMATIC TEMPERATURE CONTROLS
EG001	ELECTRICAL LEGEND AND NOTES
EG501	ELECTRICAL SCHEDULES
ED101	ELECTRICAL DEMOLITION PLAN
EP101	ELECTRICAL POWER PLAN
A101	ARCHITECTURAL FLOOR PLANS, SCHEDULES, & DETAILS
F101	FURNISHINGS PLAN

ARCHITECTURAL CONSULTANT

KNELL ARCHITECTS, P.C. (ROGER KNELL)
45 EAST 300 NORTH
PROVO, UTAH 84606
(801) 373-6134 knellarch@gmail.com

ELECTRICAL ENGINEER

VBFA CONSULTING ENGINEERS (LEWIS WONG)
181 EAST 5600 SOUTH
MURRAY, UTAH 84107
(801) 530-3148 lwong@vbfa.com

MECHANICAL ENGINEER

VBFA CONSULTING ENGINEERS (JOHN ALEXANDER)
181 EAST 5600 SOUTH
MURRAY, UTAH 84107
(801) 530-3148 jalexander@vbfa.com

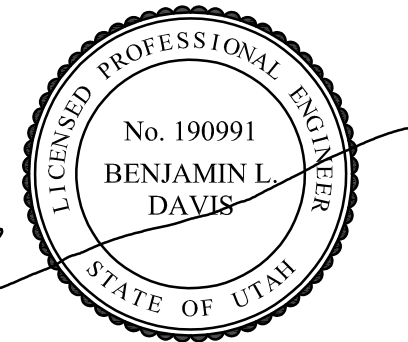
PROJECT ENGINEER

VBFA CONSULTING ENGINEERS
181 EAST 5600 SOUTH
MURRAY, UTAH 84107
(801) 530-3148 VBFA.COM



WWW.VBFA.COM

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F



Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.

© Van Boerum & Frank Assoc., 2014

CASTLE DALE EMERY SR SEMINARY
CASTLE DALE UTAH STAKE
HVAC UPGRADE
915 NORTH CENTER STREET, CASTLE DALE, UT 84513

REVISIONS

NO.	DESCRIPTION	DATE

VBFA PROJECT #: 22038
CHECKED BY: JTA
DRAWN BY: JTA
CURRENT ISSUE DATE: MAR 2022

SHEET CONTENTS

COVER SHEET

M000

GENERAL NOTES

- EXISTING DUCTWORK AND EQUIPMENT SHOWN FOR CONTRACTOR'S REFERENCE. FIELD DETERMINE EXACT SIZE, ELEVATION, AND LOCATION OF EXISTING ITEMS, INCLUDING THEIR RELATIONSHIP WITH INTENDED WORK PRIOR TO STARTING ANY WORK.
- PATCH AND REPAIR ALL EXISTING SURFACES DAMAGED BY NEW CONSTRUCTION TO MATCH EXISTING.
- SAW CUT OR CORE DRILL ALL NEW PENETRATIONS THROUGH EXISTING MASONRY CONSTRUCTION.
- IF CONTRACTOR ENCOUNTERS MATERIAL THAT MAY CONTAIN ASBESTOS, HE SHALL IMMEDIATELY STOP WORK IN THIS AREA AND NOTIFY THE OWNER.
- DEMOLITION - GENERAL:
 - REMOVAL OF EQUIPMENT, PIPING, OR DUCTWORK TO INCLUDE REMOVAL OF ALL RELATED APPURTENANCES SUCH AS WIRING, CONDUIT, SUPPORTS, ETC. AND MODIFICATIONS REQUIRED FOR A COMPLETE OPERATING SYSTEM.
 - REMOVE BRANCH CONDUIT AND WIRING COMPLETELY, TERMINATE AT JUNCTION BOX.
 - PATCH AND REPAIR ALL EXISTING SURFACES (WALL, ROOF, FLOOR, CEILING, ETC.) TO MATCH EXISTING.
- REMODEL - GENERAL:
 - ALL NEW CONDUIT, PIPING, DUCT, EQUIPMENT, AND APPURTENANCES TO BE CONCEALED UNLESS OTHERWISE NOTED.
 - EXISTING SURFACES (WALL, ROOF, FLOOR, CEILING, ETC.) TO BE REMOVED AS REQUIRED AND REPLACE TO MATCH EXISTING.



VBFA
WWW.VBFA.COM

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F



LICENSED PROFESSIONAL ENGINEER
No. 190991
BENJAMIN L. DAVIS
STATE OF UTAH

Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
• Van Boerum & Frank Assoc., 2014

KEYED NOTES

- REMOVE EXISTING GAS-FIRED FURNACE AND ASSOCIATED DX COOLING COIL FOR REPLACEMENT.
- REMOVE EXISTING AIR-COOLED CONDENSING UNIT AND RELATED REFRIGERANT PIPING AND CONTROLS FOR REPLACEMENT.
- REMOVE EXISTING RETURN AIR DUCT FOR REPLACEMENT.
- REMOVE EXISTING MAIN SUPPLY AIR DUCT TO EXTENT SHOWN. REFER TO SHEET M101 FOR RECONNECTION.
- REMOVE PORTION OF EXISTING UNDERGROUND SUPPLY AIR DUCT TO EXTENT SHOWN. REFER TO SHEET M101 FOR CAPPING ENDS OF EXISTING DUCTS.
- REMOVE PORTION OF EXISTING UNDERGROUND RETURN AIR DUCT TO EXTENT SHOWN. REFER TO SHEET M101 FOR NEW UNDERGROUND RETURN AIR DUCT INSTALLATION AND CONNECTIONS.
- REMOVE EXISTING CEILING DIFFUSER AND RELATED BRANCH DUCT BACK TO MAIN SUPPLY FOR REPLACEMENT.
- REMOVE EXISTING COMBUSTION AIR DUCT.
- REMOVE EXISTING ZONING DAMPERS AND RELATED ACTUATORS IN THEIR ENTIRETY.
- REMOVE EXISTING ZONING PANEL, EQUIPMENT INTERFACE MODULE, THERMOSTATS, REMOTE SENSORS, AND ALL ASSOCIATED WIRING.
- REMOVE EXISTING ZONE THERMOSTAT OR REMOTE SENSOR FOR REPLACEMENT WITH NEW ZONE THERMOSTAT OR NEW REMOTE SENSOR.
- REMOVE EXISTING REDLINK GATEWAY FOR REPLACEMENT WITH HONEYWELL "LCS" BUILDING MANAGEMENT GATEWAY.
- REMOVE PORTION OF EXISTING GAS PIPING AS SHOWN FOR REPLACEMENT WITH LARGER SIZE PIPING.
- REMOVE EXISTING FLOOR RETURN AIR GRILLE FOR REPLACEMENT.
- EXISTING OUTSIDE AIR INTAKE GRILLE AND ASSOCIATED PLENUM TO REMAIN.
- REMOVE EXISTING OUTSIDE AIR DUCT AND CONTROLS IN ITS ENTIRETY FROM OUTSIDE AIR PLENUM.
- CLEAN ALL DEBRIS FROM EXISTING UNDERGROUND DUCTWORK USING EXISTING AND NEW DUCT OPENINGS. REPORT ANY EXISTING OBSTRUCTIONS TO ENGINEER.
- REMOVE EXISTING LINKAGE STYLE MINIMUM OUTSIDE AIR ACTUATOR FOR REPLACEMENT WITH DIRECT CONNECTED ACTUATOR.
- REMOVE AND RE-INSTALL EXISTING RETURN AIR FLOOR GRILLE FOR CARPET REPLACEMENT.

CASTLE DALE EMERY SR SEMINARY
CASTLE DALE UTAH STAKE
HVAC UPGRADE
915 NORTH CENTER STREET, CASTLE DALE, UT 84513

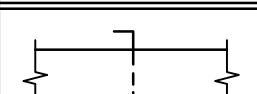

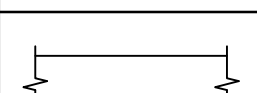
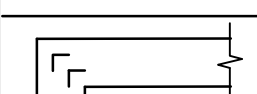


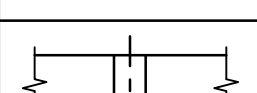
REVISIONS

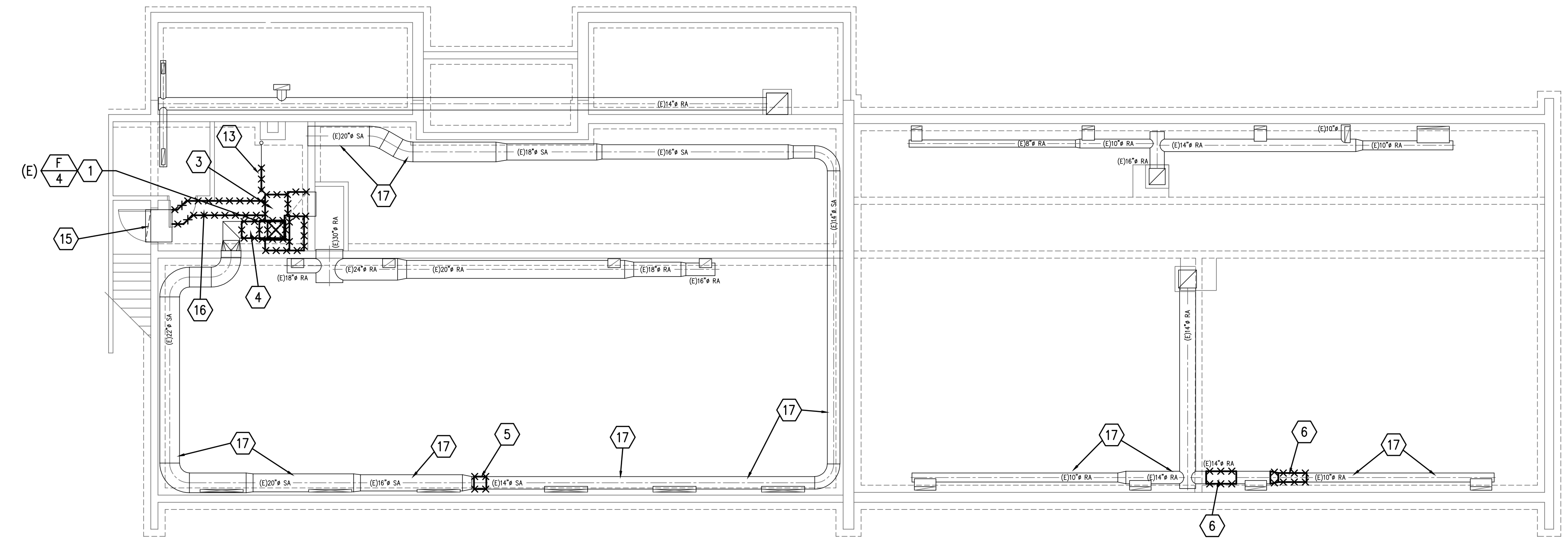
VBFA PROJECT #: 22038
CHECKED BY: JTA
DRAWN BY: JTA
CURRENT/ISSUE DATE: MAR 2022

SHEET CONTENTS
**MAIN LEVEL
DEMOLITION
PLAN**

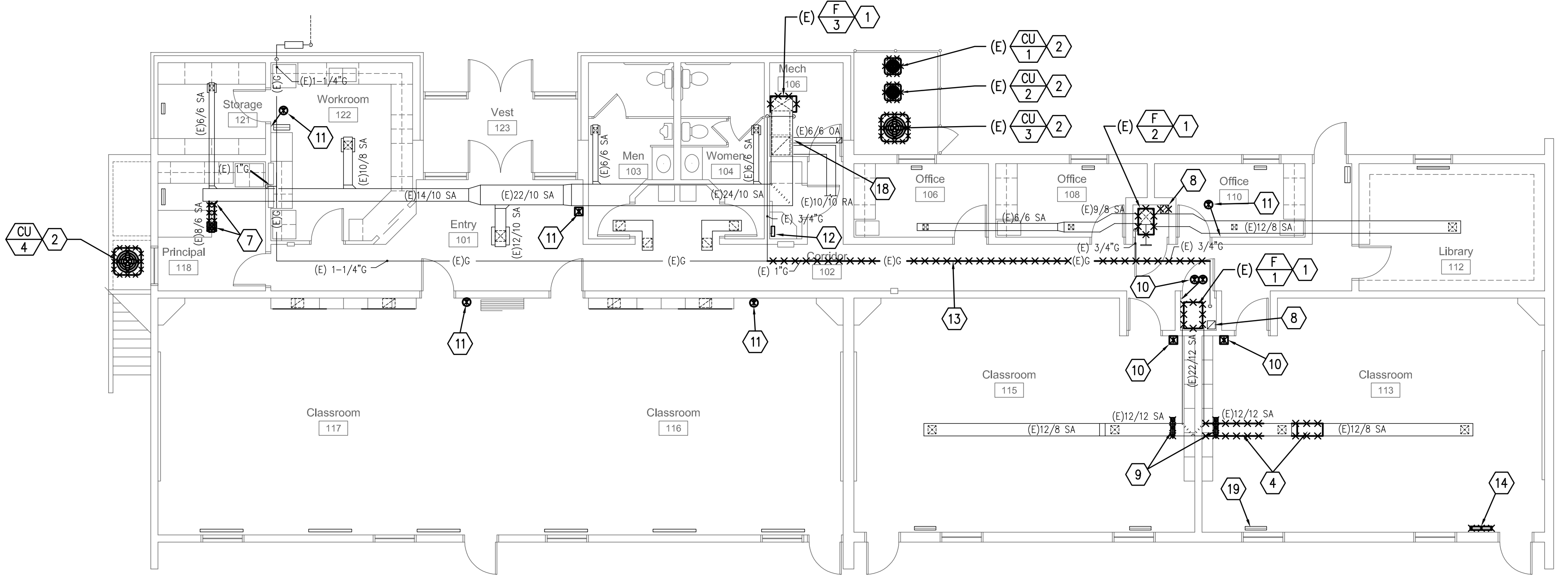
MD101

LEGEND

SYMBOL	DESCRIPTION
	MANUAL VOLUME DAMPER
	EXISTING DUCT TO BE REMOVED
	EXISTING DUCT TO REMAIN
	SINGLE THICKNESS TURNING VANES
	DUCT TRANSITION
	ACCESS DOOR
	MOTORIZED DAMPER
SA	SUPPLY AIR
RA	RETURN AIR
OA	OUTSIDE AIR



1 MECHANICAL DEMOLITION FOUNDATION PLAN
SCALE: 1/8" = 1'-0"
0' 8' 16'



2 MECHANICAL DEMOLITION FLOOR PLAN
SCALE: 1/8" = 1'-0"
0' 8' 16'

DESIGN CONDITIONS	OUTSIDE	INSIDE
WINTER	-10°F	70°F
SUMMER	94°F db, 64°F wb	75°F db, 60°F wb

D

C

B

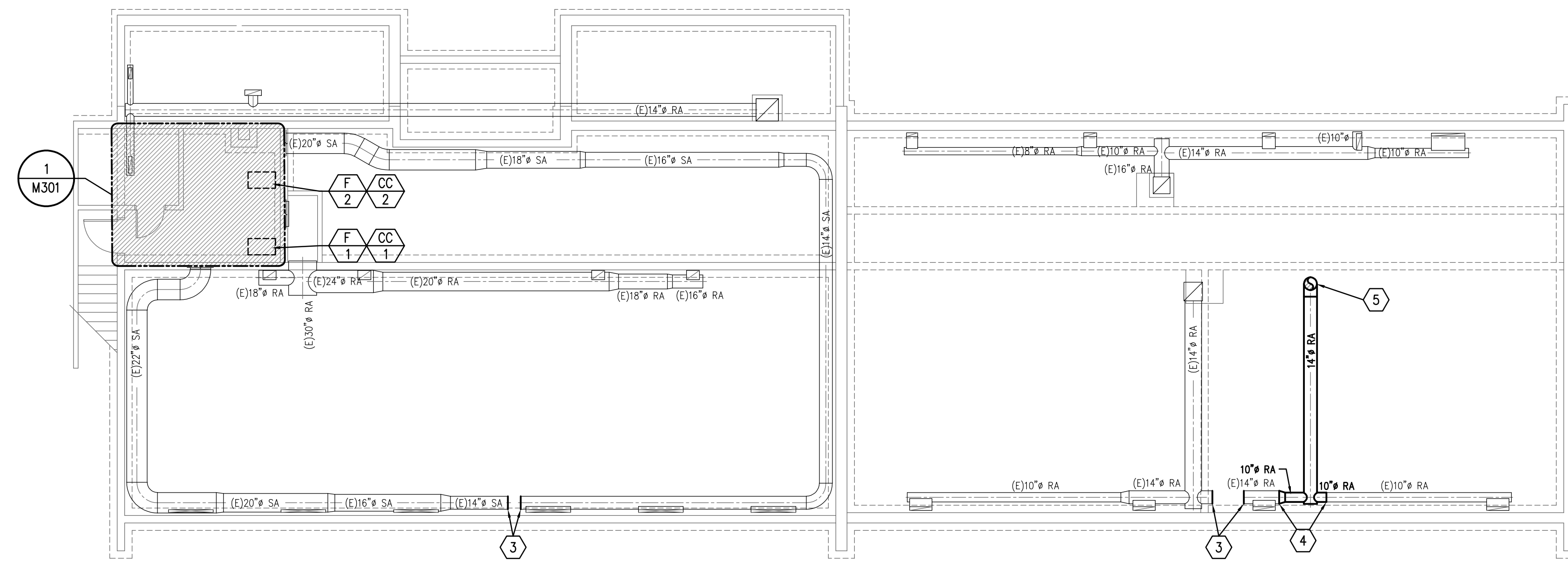
A

D

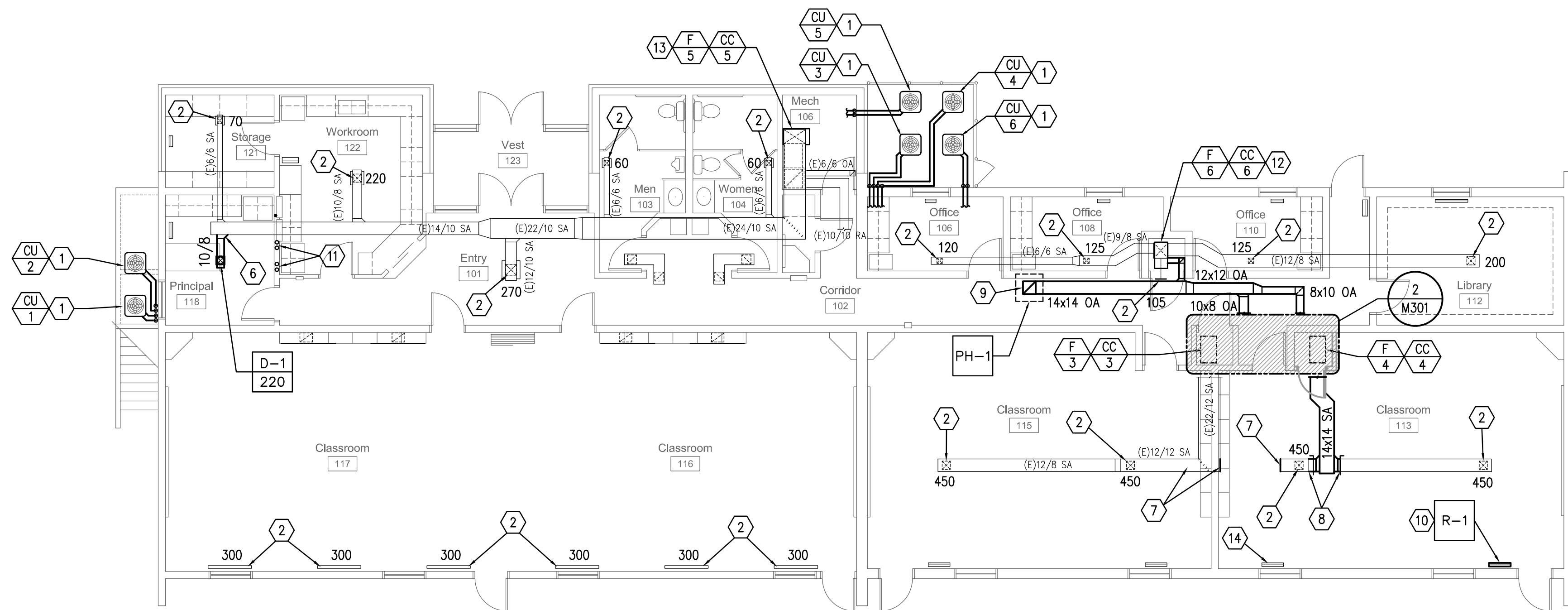
C

B

A



MECHANICAL FOUNDATION PLAN
 SCALE: 1/8" = 1'-0"
 0' 8' 16'



MECHANICAL FLOOR PLAN
 SCALE: 1/8" = 1'-0"
 0' 8' 16'

KEYED NOTES

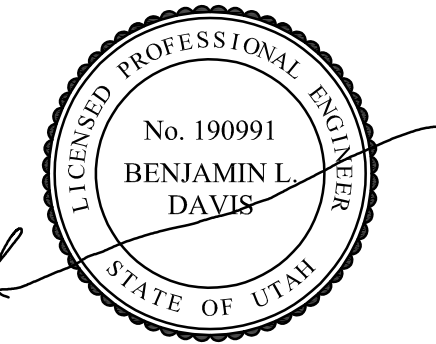
- NEW AIR-COOLED CONDENSING UNIT AND REFRIGERANT PIPING. FIELD VERIFY EXACT LOCATIONS TO MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. REFER TO SHEET M501 FOR REFRIGERANT PIPING SCHEME AND DETAILS.
- RE-BALANCE EXISTING OUTLET TO VOLUME NOTED.
- CAP EXISTING BELOW GRADE DUCTS AIR TIGHT TO PROVIDE TWO SEPARATE SYSTEMS.
- CONNECT NEW BELOW GRADE MAIN SUPPLY AIR DUCT TO EXISTING BRANCH DUCTS. TRANSITION AS REQUIRED.
- 14" SUPPLY DUCT UP TO BOTTOM OF MIXED AIR PLENUM ABOVE. REFER TO 2/M301 FOR CONTINUATION.
- CONNECT NEW LARGER SIZE BRANCH SUPPLY DUCT WITH MANUAL BALANCING DAMPER TO EXISTING MAIN SUPPLY DUCT FOR INSTALLATION OF NEW LARGER CEILING DIFFUSER.
- CAP EXISTING SUPPLY AIR DUCT AIR TIGHT TO PROVIDE TWO SEPARATE SYSTEMS.
- CONNECT NEW MAIN SUPPLY AIR DUCT TO EXISTING BRANCH DUCTS. TRANSITION AS REQUIRED.
- 14X14 UNLINED AND WRAPPED OUTSIDE AIR DUCT UP THROUGH ROOF TO NEW INTAKE PENTHOUSE ON ROOF. COORDINATE EXACT LOCATION WITH EXISTING STRUCTURE. LOCATE PENTHOUSE 10'-0" MIN. AWAY FROM ANY FURNACE OR PLUMBING VENT.
- INSTALL NEW FLOOR RETURN AIR GRILLE AT EXISTING OPENING. REFURBISH EXISTING DUCT OPENING AS REQUIRED FOR GRILLE INSTALLATION.
- ROUTE NEW PVC VENT AND COMBUSTION AIR PIPING UP INSIDE WALL TO ROOF CONCENTRIC VENT. FIELD VERIFY EXACT LOCATIONS AND ROUTING.
- INSTALL NEW GAS-FIRED FURNACE AND DX COOLING COIL. PROVIDE LINED MIXED AIR PLENUM WITH FILTER RACK (C/M301) BELOW FURNACE. RECONNECT EXISTING MAIN SUPPLY AIR DUCT TO NEW COIL OUTLET.
- INSTALL NEW GAS-FIRED FURNACE AND DX COIL AT EXISTING MIXED AIR PLENUM. PROVIDE NEW EXTERNAL FILTER RACK AT BOTTOM INTAKE OF NEW FURNACE. REFER TO DETAIL C/M301 (SIMILAR). RECONNECT EXISTING MAIN SUPPLY AIR DUCT TO NEW COIL OUTLET.
- REMOVE AND RE-INSTALL FLOOR RETURN AIR GRILLE FOR CARPET REPLACEMENT.



VBFA

WWW.VBFA.COM

181 East 5600 South
 Murray, UT 84107
 801.530.3148 T
 801.530.3150 F



Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
 • Van Boerum & Frank Assoc., 2014

CASTLE DALE EMERY SR SEMINARY
 CASTLE DALE UTAH STAKE
HVAC UPGRADE
 915 NORTH CENTER STREET, CASTLE DALE, UT 84513

REVISIONS

VBFA PROJECT #: 22038
 CHECKED BY: JTA
 DRAWN BY: JTA
 CURRENT/ISSUE DATE: MAR 2022

SHEET CONTENTS
 MAIN LEVEL
 MECHANICAL
 PLAN

M101

1

2

3

4

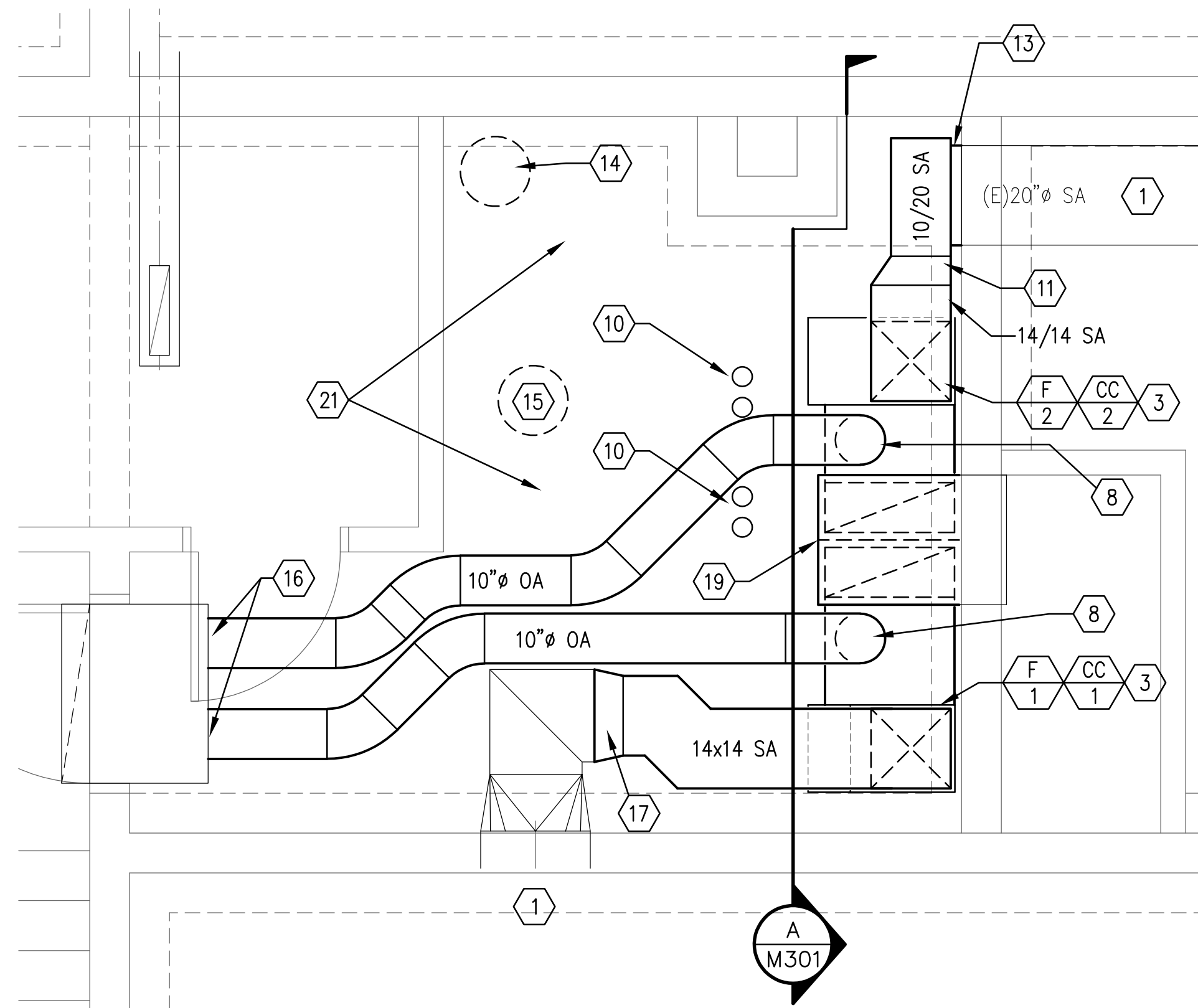
5

D

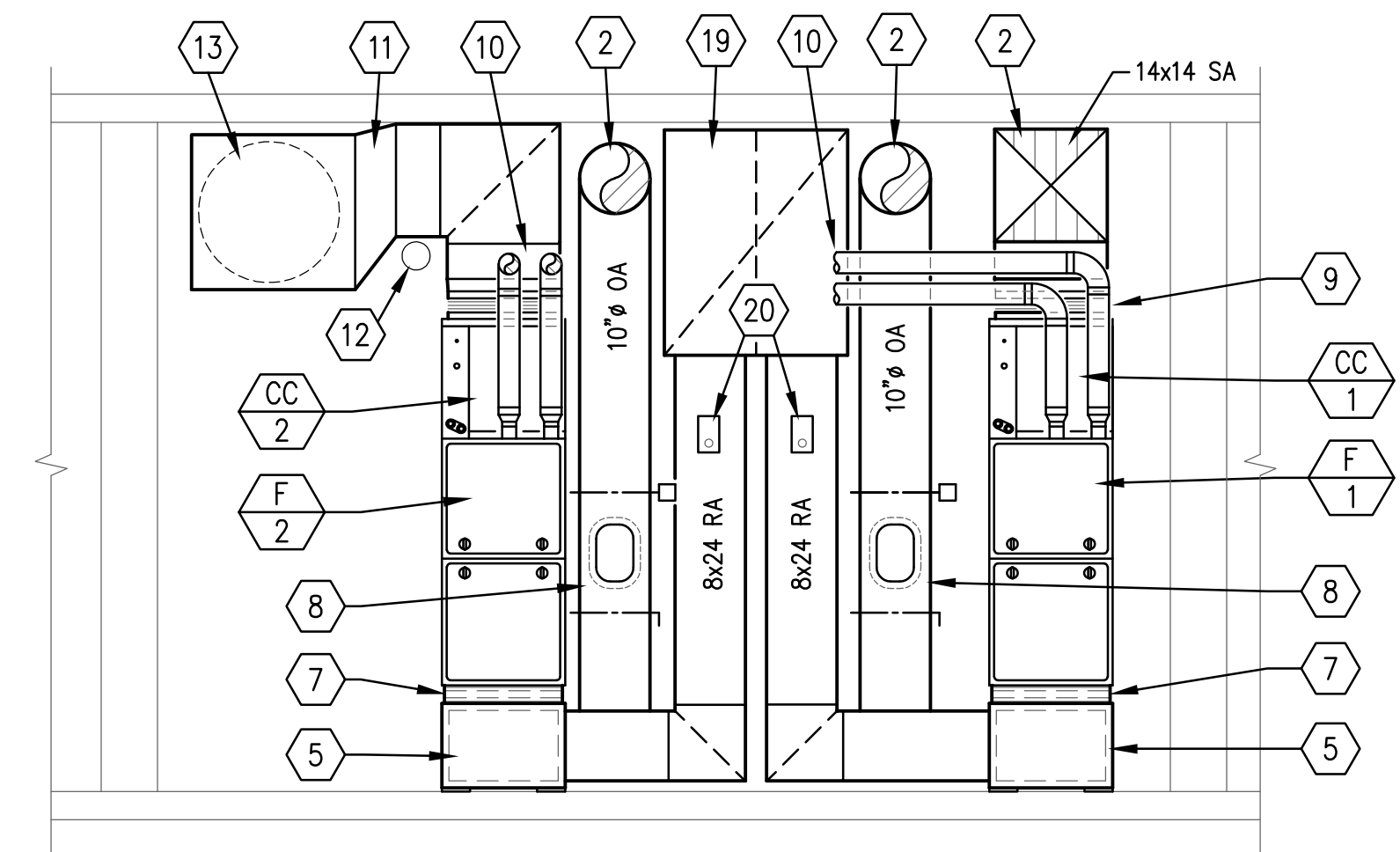
C

B

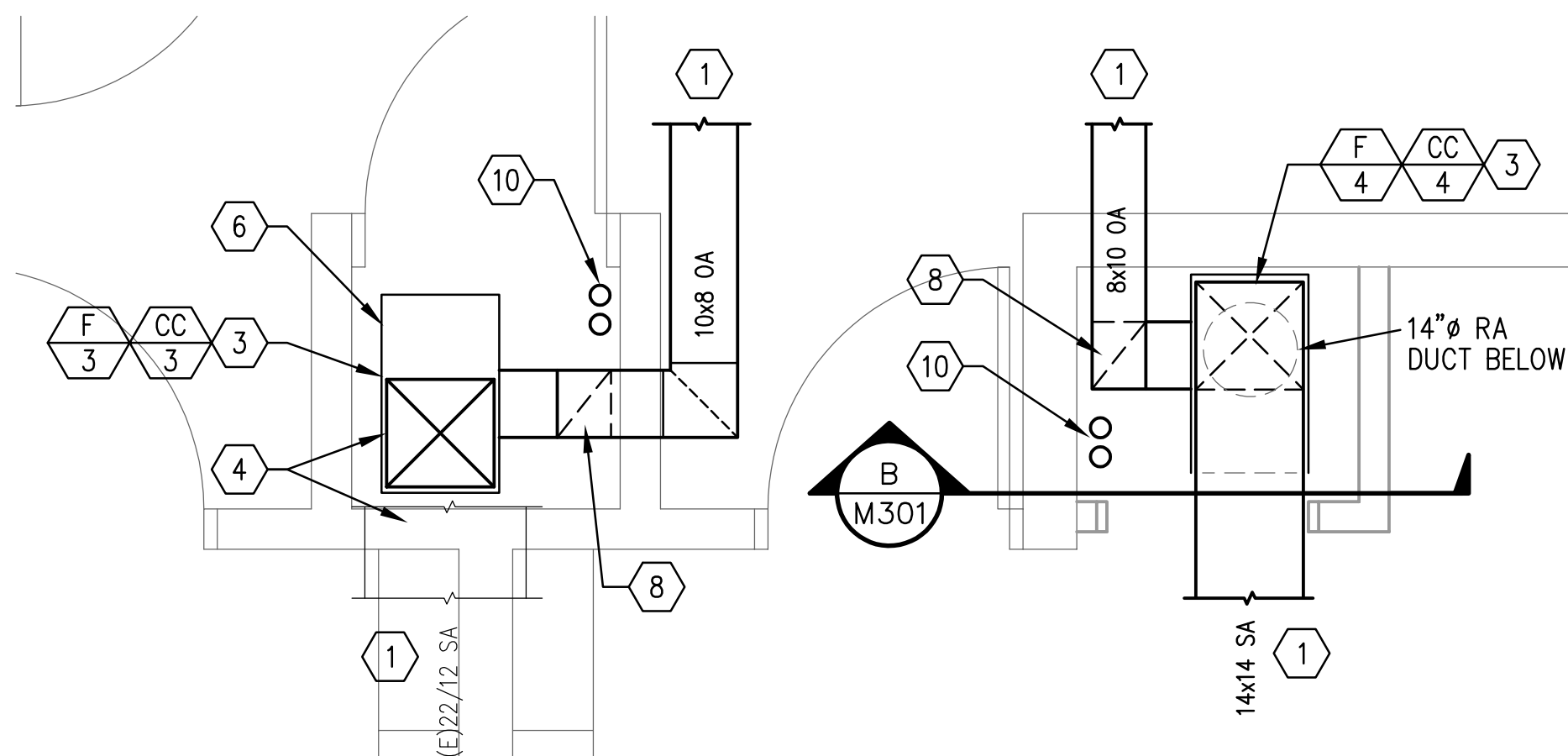
A



1 ENLARGED MECHANICAL PLAN
 M301 SCALE: 1/2" = 1'-0"
 0' 2' 4'

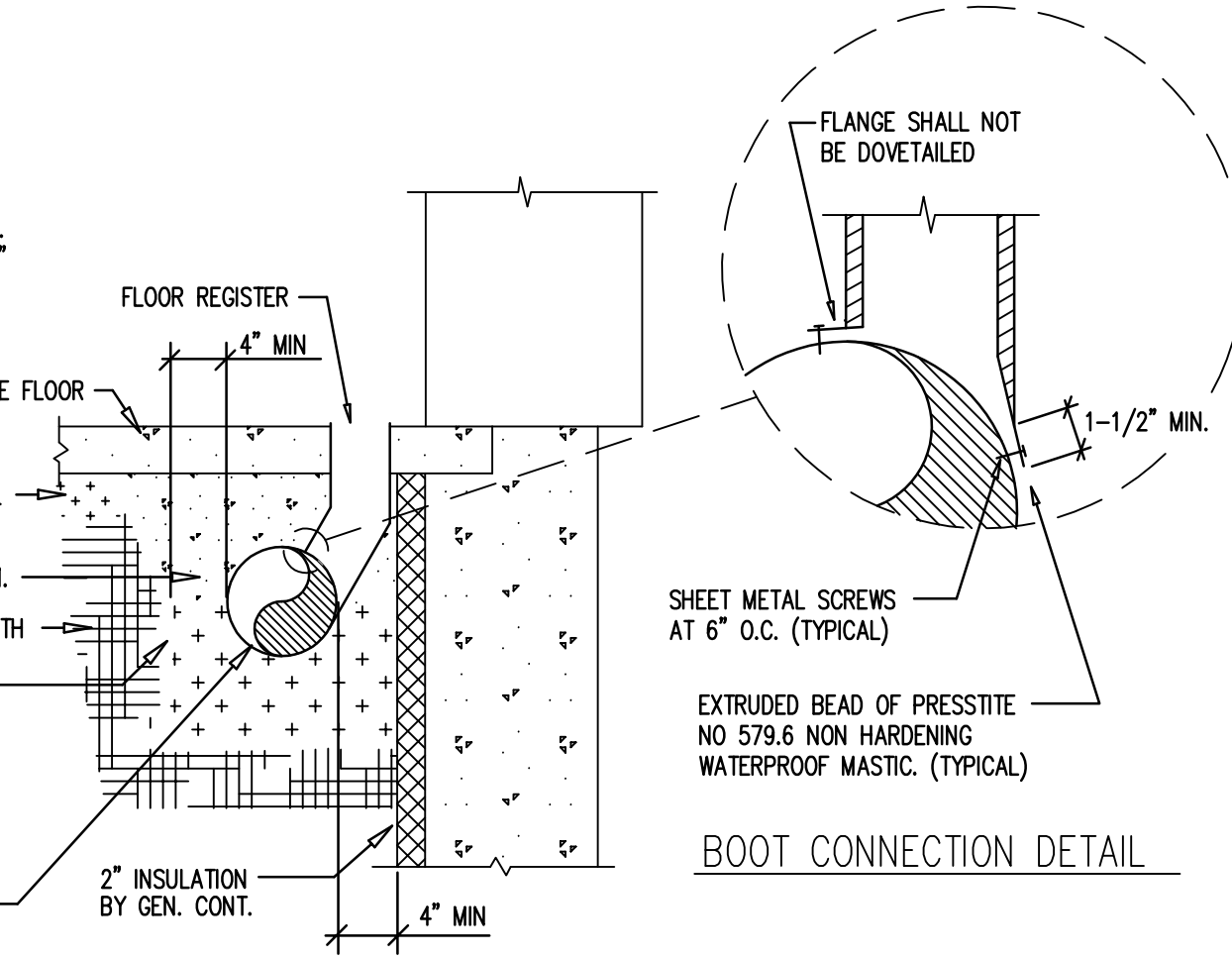


A MECHANICAL ROOM SECTION
 M301 SCALE: 1/2" = 1'-0"
 0' 2' 4'

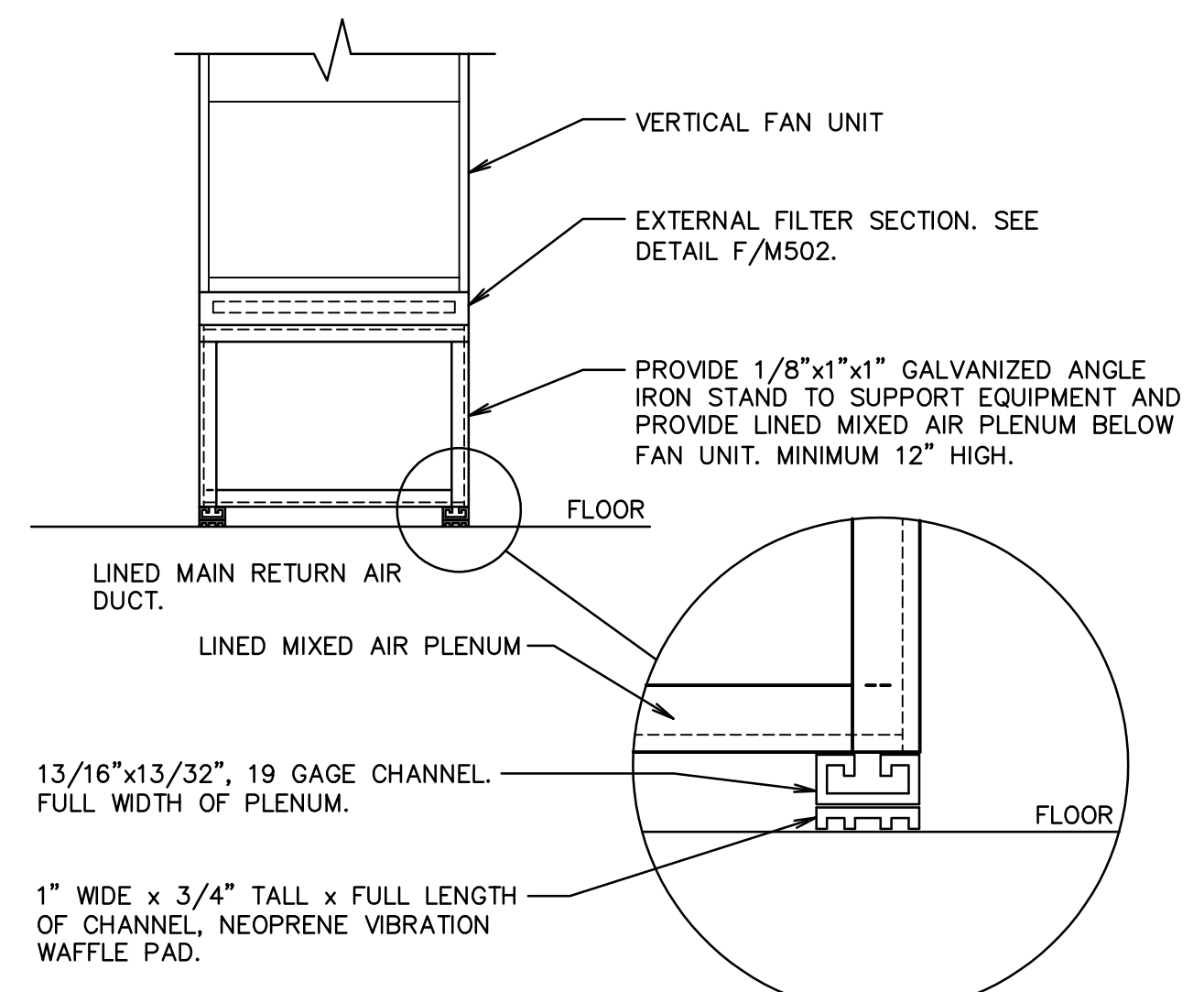


2 ENLARGED MECHANICAL PLAN
 M301 SCALE: 1/2" = 1'-0"
 0' 2' 4'

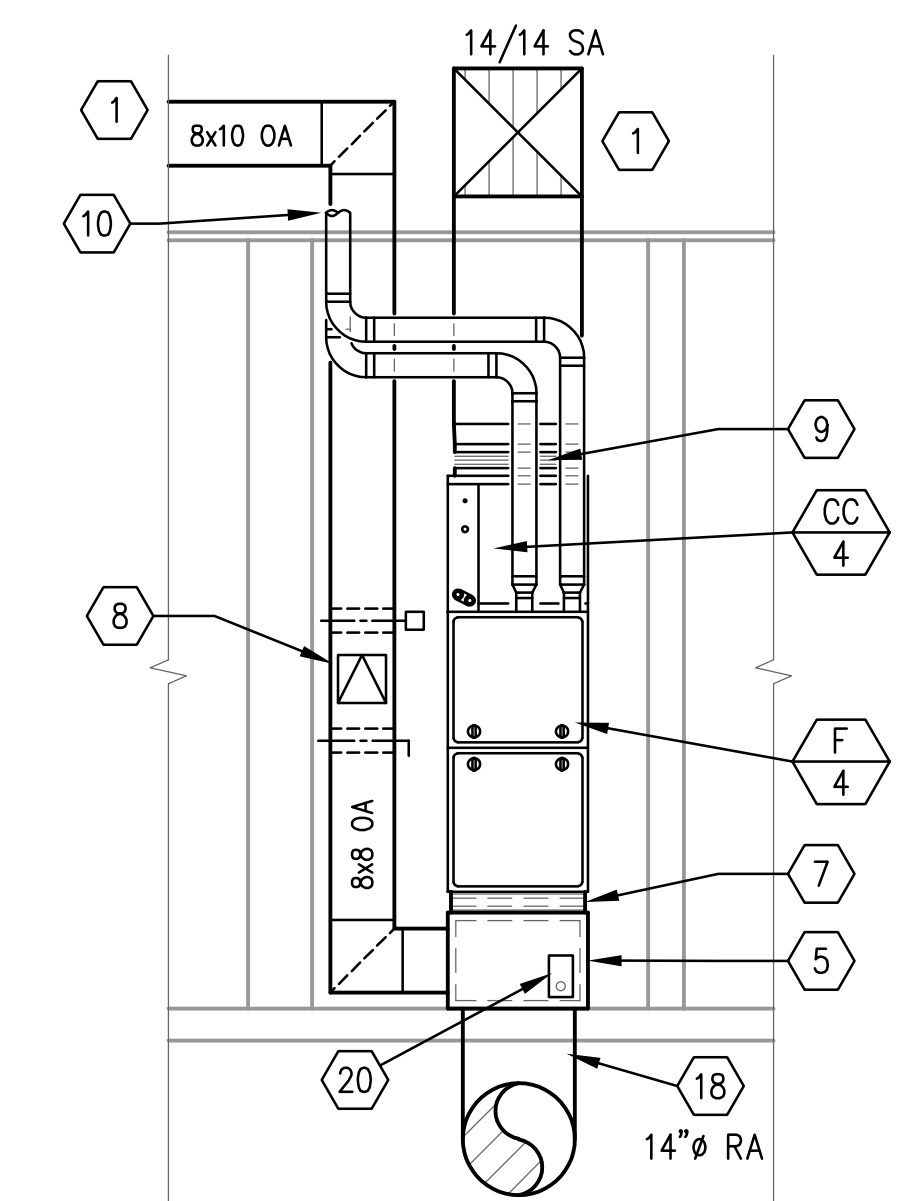
NOTE:
 DETAIL APPLIES TO DUCTS WITH A DIA. LARGER THAN 12". IF DUCT DIA. IS 12" OR LESS, DO NOT PLACE CONCRETE OVER TOP HALF OF DUCT BUT USE PEA GRAVEL OR SAND.



D UNDERFLOOR DUCT & BOOT CONNECTION DETAIL
 M301 NO SCALE (SIMILAR)



C VERTICAL FURNACE PLENUM/SUPPORT DETAIL
 M301 NO SCALE



B MECHANICAL ROOM SECTION
 M301 SCALE: 1/2" = 1'-0"
 0' 2' 4'

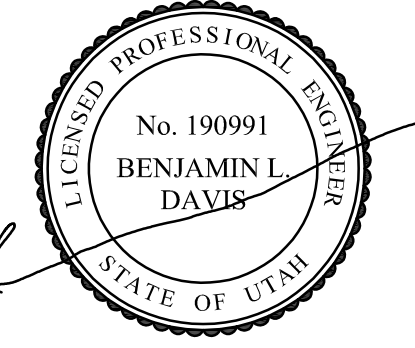
KEYED NOTES

- SEE SHEET M101 FOR CONTINUATION.
- SEE LARGE SCALE PLAN, THIS SHEET, FOR CONTINUATION.
- INSTALL NEW GAS-FIRED FURNACE AND DX COOLING COIL. PROVIDE LINED MIXED AIR PLENUM WITH FILTER RACK (C/M301) BELOW FURNACE.
- CONNECT NEW MAIN SUPPLY DUCT FROM COOLING COIL DISCHARGE TO EXISTING MAIN SUPPLY AIR DUCT. TRANSITION AS REQUIRED.
- PROVIDE MIXED AIR PLENUM BELOW NEW FURNACE. REFER TO DETAIL C/M301.
- LOCATE NEW FURNACE AND MIXED AIR PLENUM OVER EXISTING RETURN AIR OPENING AT FLOOR.
- EXTERNAL FILTER RACK. TYPICAL. REFER TO DETAIL F/M502.
- UNLINED AND WRAPPED MINIMUM OUTSIDE AIR DUCT. DROP FOR CONNECTION TO MAIN RETURN AIR DUCT OR TO MIXED AIR PLENUM BELOW FURNACE. REFER TO DETAIL G/M502 FOR OUTSIDE AIR CONTROLS.
- FLEXIBLE CONNECTION, TYPICAL.
- FURNACE VENT AND COMBUSTION AIR PIPING UP THROUGH ROOF. REFER TO DETAIL D/M502. FIELD VERIFY EXACT ROUTING AND LOCATION WITH EXISTING STRUCTURE AND 10' MIN AWAY FROM ANY OA INTAKE LOCATION. EXISTING PVC PIPING AND TERMINATION MAY BE RE-USED IF IT COMPLIES WITH NEW EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
- TRANSITION MAIN SUPPLY AIR DUCT AS REQUIRED TO AVOID EXISTING WASTE LINE AT THIS LOCATION. FIELD VERIFY EXACT DUCT SIZING REQUIRED.
- EXISTING WASTE LINE LOCATION.
- CONNECT EXISTING 20" SA DUCT TO NEW MAIN SUPPLY AIR DUCT (20x10). FIELD VERIFY EXACT SIZE OF MAIN SA DUCT WITH SPACE AVAILABLE AROUND EXISTING WASTE PIPING.
- LOCATION OF EXISTING DOMESTIC WATER HEATER AND MAIN WATER HEADER. PROTECT DURING ALL CONSTRUCTION ACTIVITIES.
- LOCATION OF EXISTING SUMP PUMP. RE-ROUTE PUMPED DISCHARGE PIPING TO EXISTING WASTE PIPING AS REQUIRED TO PROVIDE SPACE FOR NEW MAIN SUPPLY AIR DUCT SERVING F-2.
- CONNECT NEW MINIMUM OUTSIDE AIR DUCT TO EXISTING OA PLENUM ABOVE DOOR.
- CONNECT NEW MAIN SUPPLY AIR DUCT TO EXISTING SUPPLY DUCT AT THIS POINT. TRANSITION AS REQUIRED.
- NEW UNDERGROUND RETURN AIR DUCT. PROVIDE 90° RADIUS ELBOW UP THROUGH FLOOR ONTO MIXED AIR PLENUM BELOW FURNACE. REFER TO DETAIL D/M301 FOR BELOW GRADE DUCT INSTALLATION.
- PROVIDE LINED RETURN AIR PLENUM OVER EXISTING OPENING IN CONCRETE WALL. PROVIDE SHEET METAL PARTITION DOWN CENTER TO SEPARATE RETURN AIR STREAMS. 26"Wx32"Hx26"D (FIELD VERIFY).
- CO2 SENSOR. REFER TO ATC SHEETS. INSTALL IN RETURN AIR ONLY, UPSTREAM OF MINIMUM OA DUCT CONNECTION. TYPICAL FOR EACH FURNACE SYSTEM.
- CLEAN MECHANICAL ROOM FLOOR AND PAINT ENTIRE FLOOR WITH LATEX, LOW GLOSS, GRAY PAINT (MPI PRODUCT 60).



WWW.VBFA.COM

181 East 5600 South
 Murray, UT 84107
 801.530.3148 T
 801.530.3150 F



Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
 • Van Boerum & Frank Assoc., 2014

CASTLE DALE EMERY SR SEMINARY
 CASTLE DALE UTAH STAKE
HVAC UPGRADE
 915 NORTH CENTER STREET, CASTLE DALE, UT 84513

REVISIONS

NO.	DESCRIPTION

VBFA PROJECT #: 22038
 CHECKED BY: JTA
 DRAWN BY: JTA
 CURRENT ISSUE DATE: MAR 2022

SHEET CONTENTS
LARGE SCALE MECHANICAL PLANS & SECTIONS

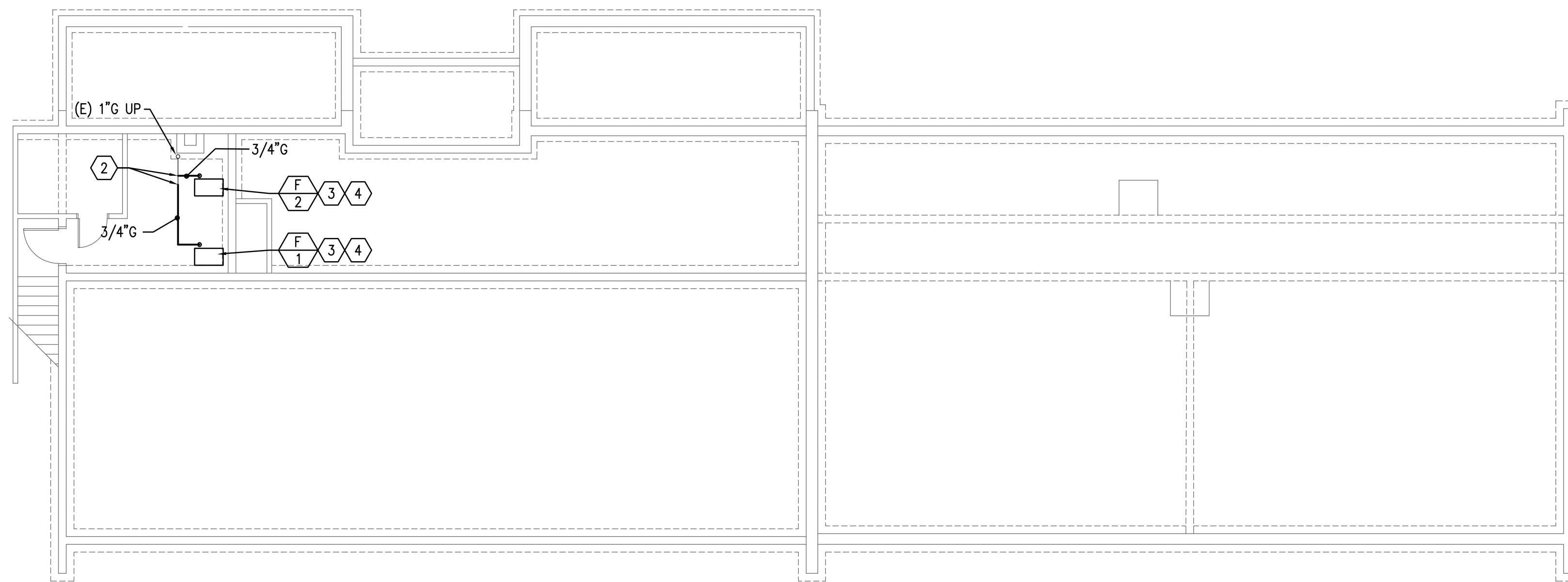
M301

D

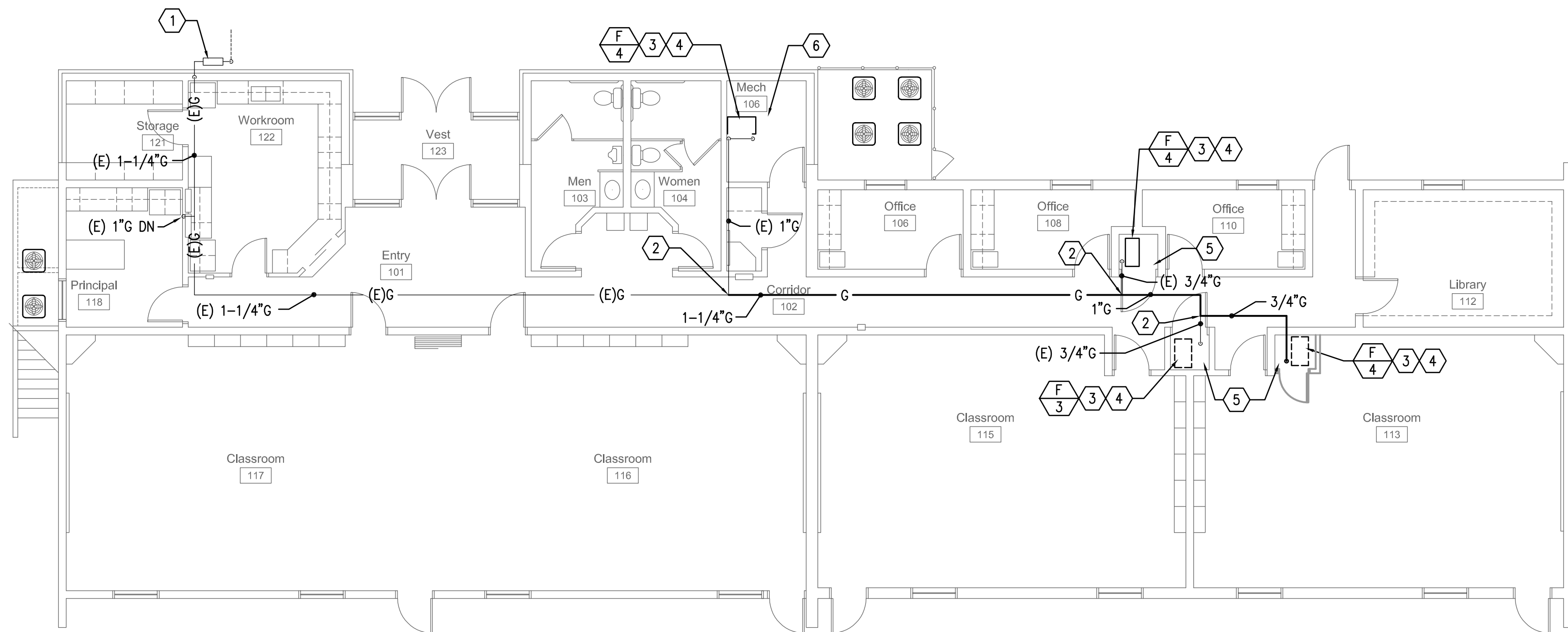
C

B

A



1 MECHANICAL PIPING FOUNDATION PLAN
 M401 SCALE: 1/8" = 1'-0"
 0' 8' 16'



2 MECHANICAL PIPING FLOOR PLAN
 M401 SCALE: 1/8" = 1'-0"
 0' 8' 16'

KEYED NOTES

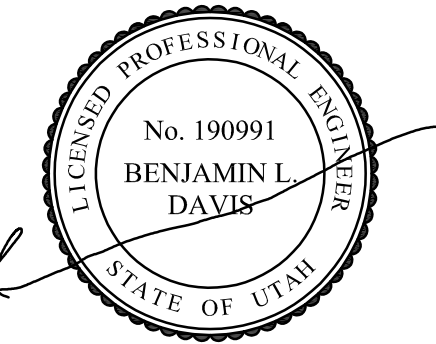
1. LOCATION OF EXISTING GAS METER.
2. CONNECT NEW GAS LINE SIZE FROM THIS POINT.
3. PROVIDE NEW SHUT-OFF VALVE AND FLEXIBLE CONNECTION TO GAS-FIRED FURNACE. REFER TO DETAIL C/M601.
4. PROVIDE NEW CONDENSATE DRAINAGE FROM NEW FURNACE AND DX COOLING COIL. REFER TO DETAIL A/M601.
5. PROVIDE NEW CONDENSATE PUMP. SEE SPECIFICATIONS. ROUTE PUMP DISCHARGE ABOVE CEILING (BELOW INSULATION) TO ABOVE MECHANICAL ROOM 106. DROP DOWN IN CORNER AND ROUTE TO EXISTING FLOOR DRAIN.
6. ROUTE ALL PUMPED CONDENSATE TO FLOOR DRAIN AT THIS LOCATION. VERIFY ALL PIPING ABOVE CEILING IS LOCATED AGAINST CEILING (BELOW ALL CEILING INSULATION).



VBFA

WWW.VBFA.COM

181 East 5600 South
 Murray, UT 84107
 801.530.3148 T
 801.530.3150 F



Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
 • Van Boerum & Frank Assoc., 2014

CASTLE DALE EMERY SR SEMINARY
 CASTLE DALE UTAH STAKE
HVAC UPGRADE
 915 NORTH CENTER STREET, CASTLE DALE, UT 84513

REVISIONS

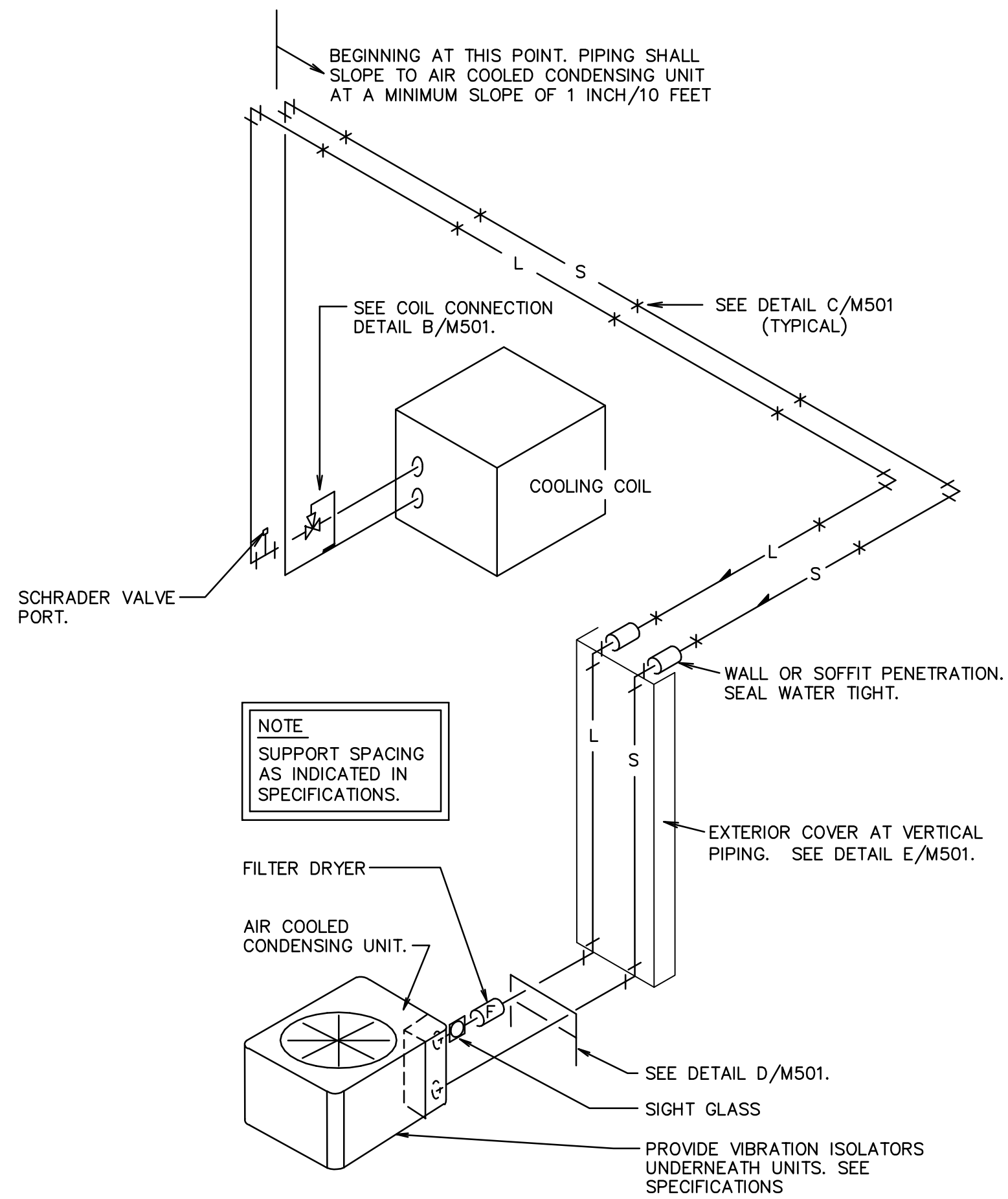
VBFA PROJECT #:	22038
CHECKED BY:	JTA
DRAWN BY:	JTA
CURRENT/ISSUE DATE:	MAR 2022

SHEET CONTENTS

**MECHANICAL
 PIPING FLOOR
 PLAN**

M401

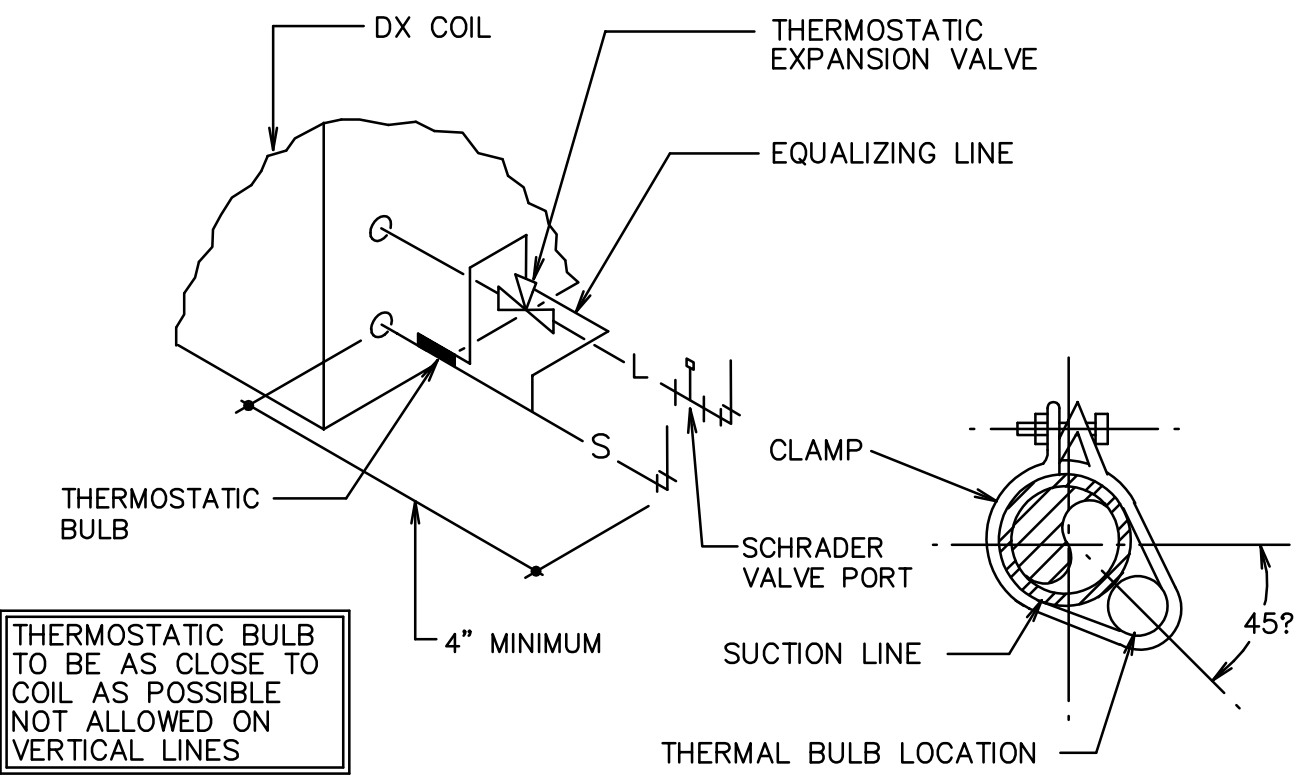
D



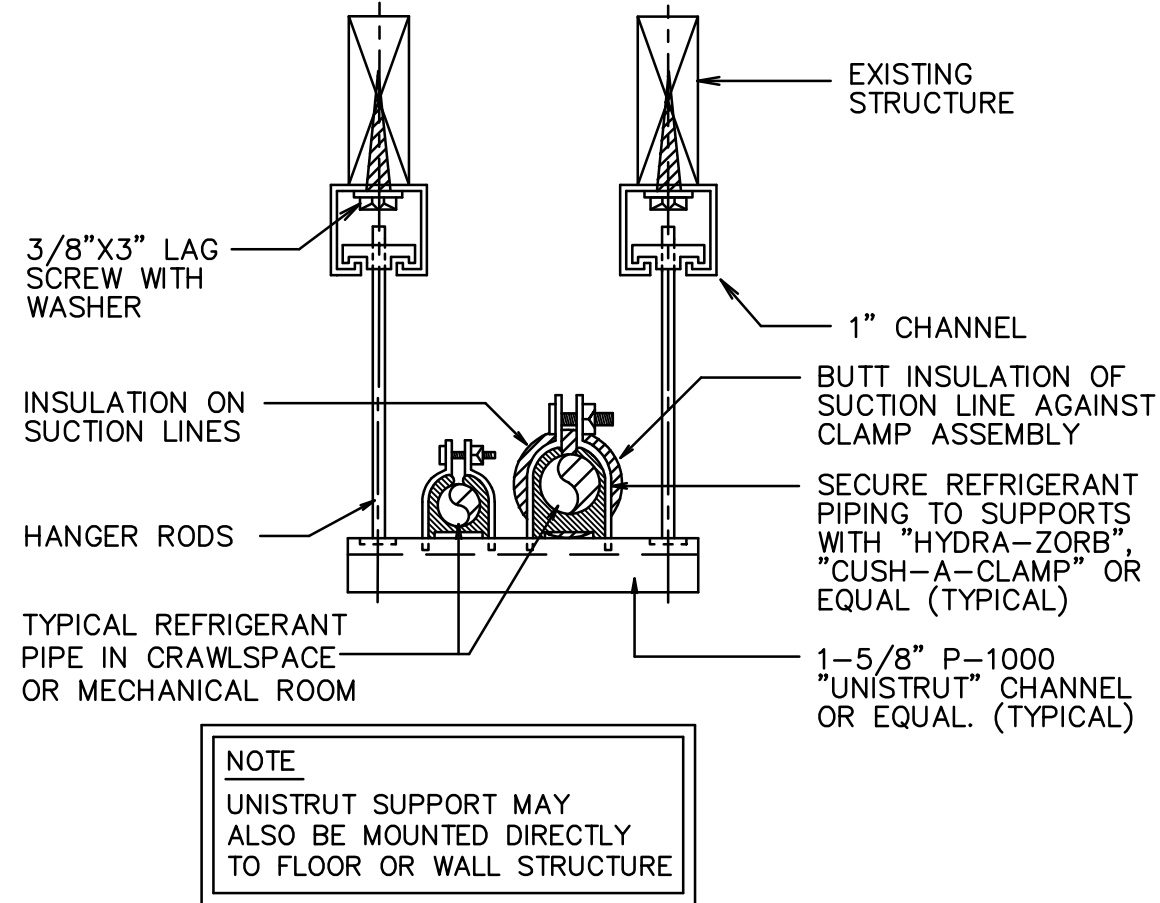
A REFRIGERANT SCHEME
M501 NO SCALE

REFRIGERANT LINE SIZES			
UNIT	LIQUID	SUCTION	REMARKS
CU 1	3/8"	5/8"	2.0 TON
CU 2	3/8"	5/8"	2.0 TON
CU 3	3/8"	5/8"	2.0 TON
CU 4	3/8"	5/8"	2.0 TON
CU 5	3/8"	5/8"	2.0 TON
CU 6	3/8"	5/8"	1.5 TON

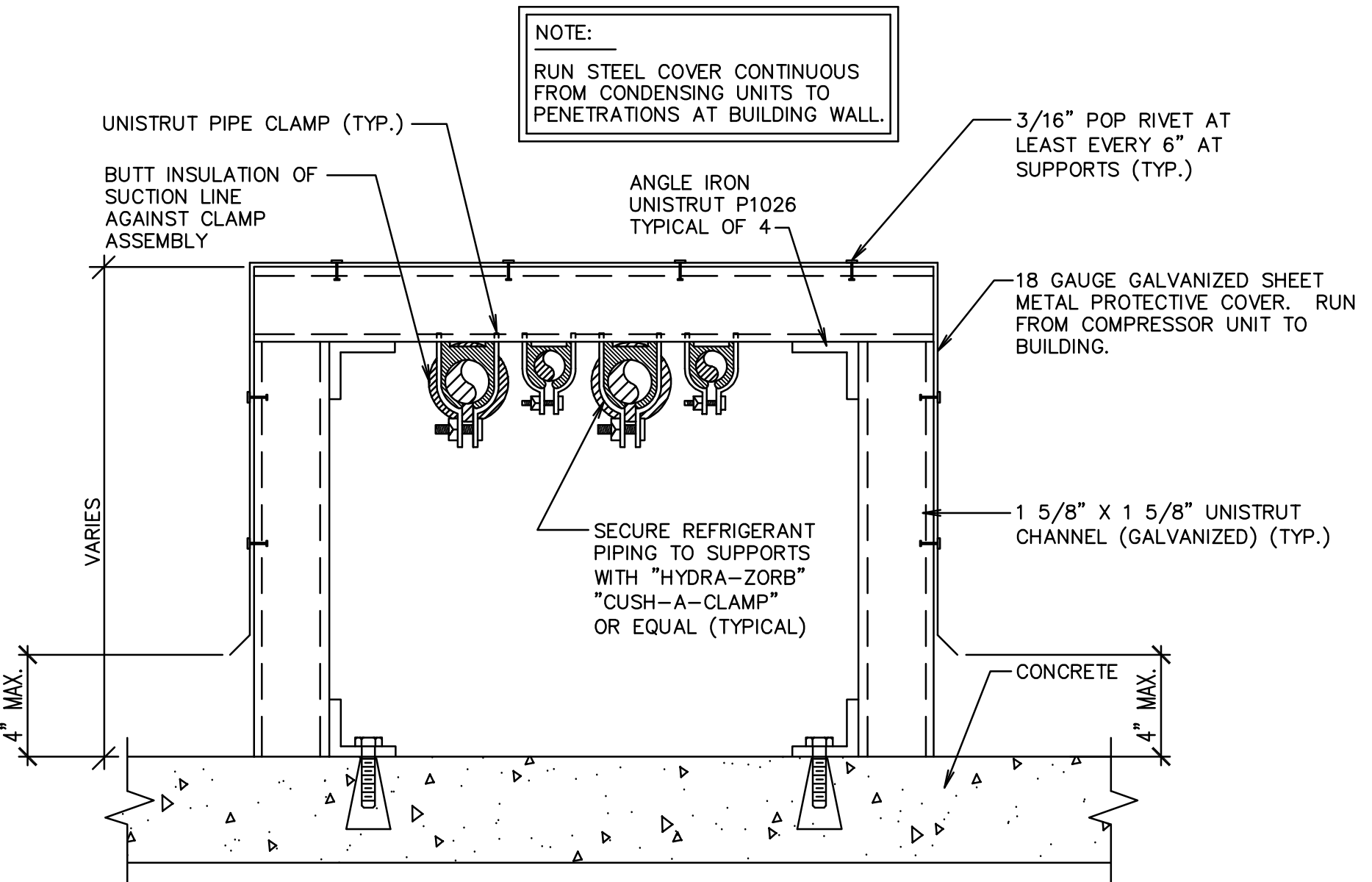
REFRIGERANT PIPING LEGEND	
SYMBOL	DESCRIPTION
	EXPANSION VALVE. SEE DETAIL B/M501
	MOISTURE INDICATING SIGHT GLASS
	FILTER DRIER
	PIPE SUPPORT. SEE DETAIL C/M501
	EXTERIOR PIPE SUPPORT. SEE DETAIL D/M501
	TRAP. ONE PIECE FACTORY FABRICATED
	DIRECTION OF SLOPE DOWN
	SUCTION LINE
	LIQUID LINE
	SCHRADER VALVE PORT



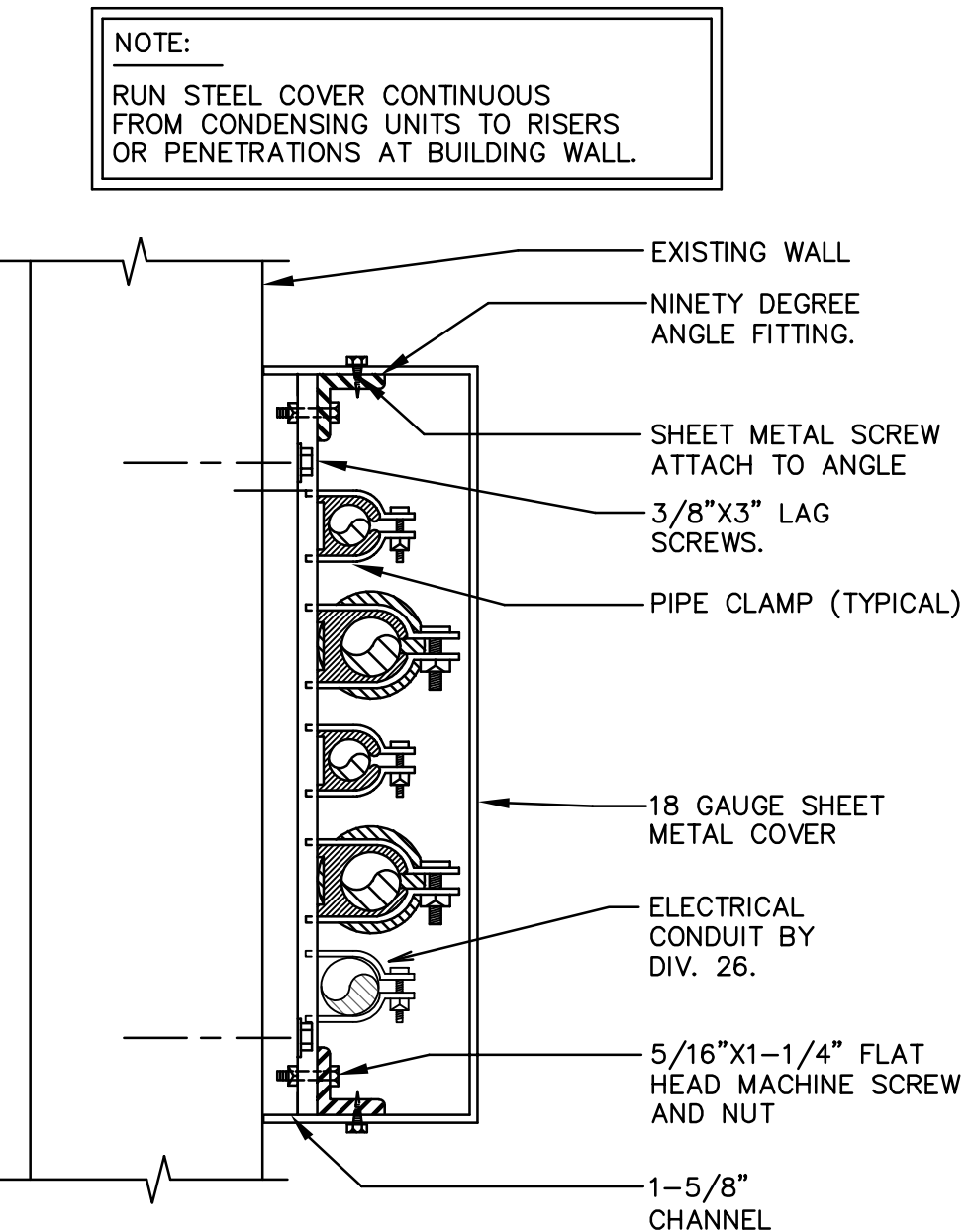
B REFRIGERANT COIL CONNECTION DETAIL
M501 NO SCALE



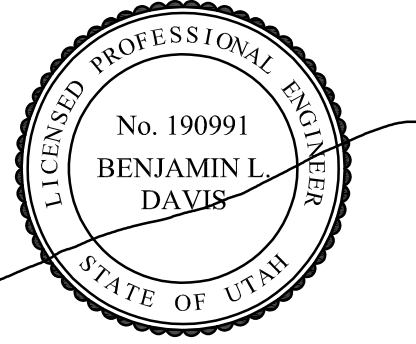
C REFRIGERANT PIPE SUPPORT AT CRAWLSPACE
M501 NO SCALE



D EXTERIOR REFRIGERANT PIPE SUPPORT DETAIL
M501 NO SCALE



E EXTERIOR REFRIGERANT PIPE WALL SUPPORT
M501 NO SCALE



Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
Van Boerum & Frank Assoc., 2014

CASTLE DALE EMERY SR SEMINARY
CASTLE DALE UTAH STAKE
HVAC UPGRADE
915 NORTH CENTER STREET, CASTLE DALE, UT 84513

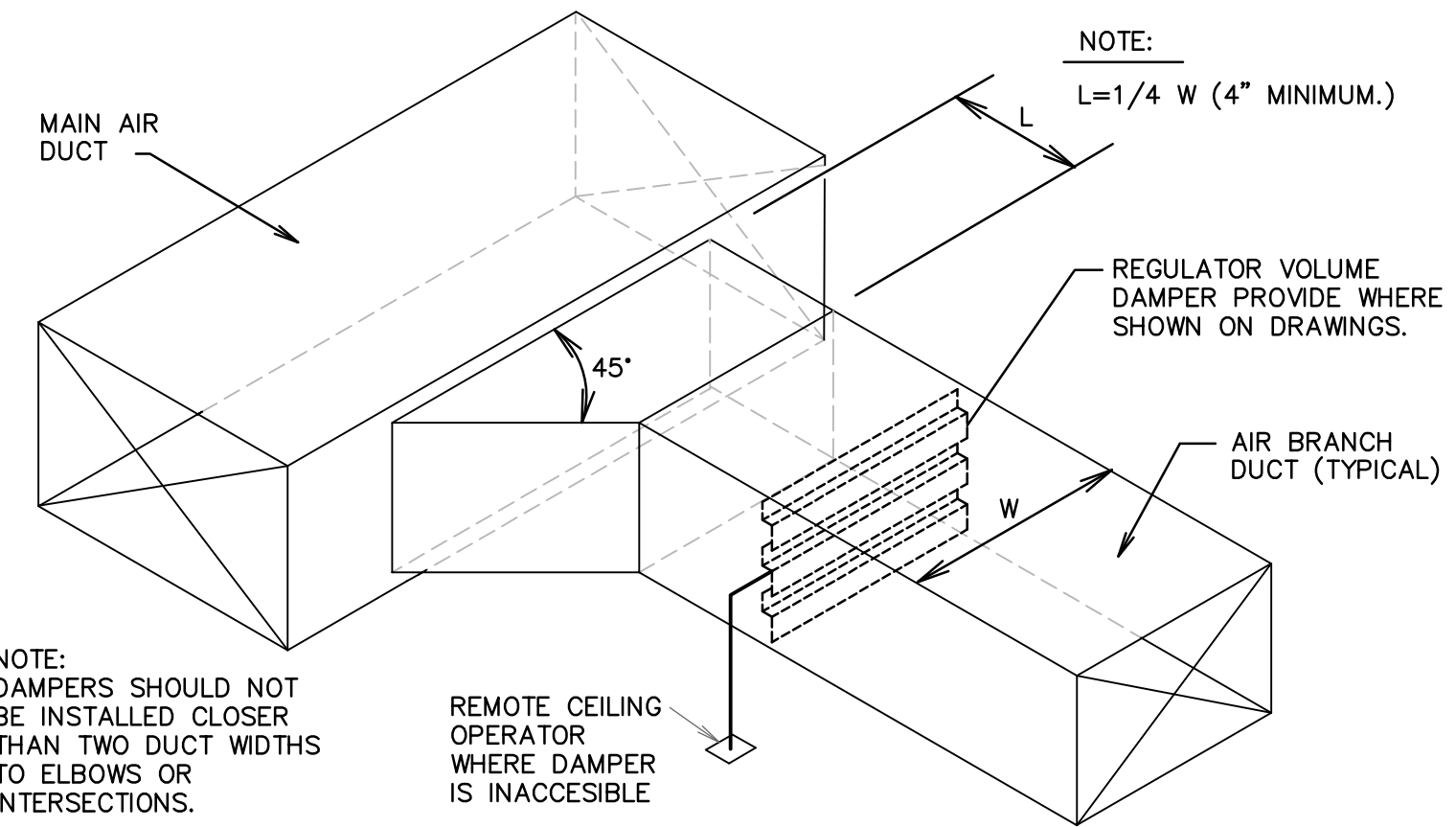
REVISIONS	

VBFA PROJECT #: 22038
CHECKED BY: JTA
DRAWN BY: JTA
CURRENT ISSUE DATE: MAR 2022

SHEET CONTENTS
MECHANICAL DETAILS

1

2



A SUPPLY OR RETURN AIR DUCT BRANCH CONNECTION DETAIL
M502 NO SCALE

3

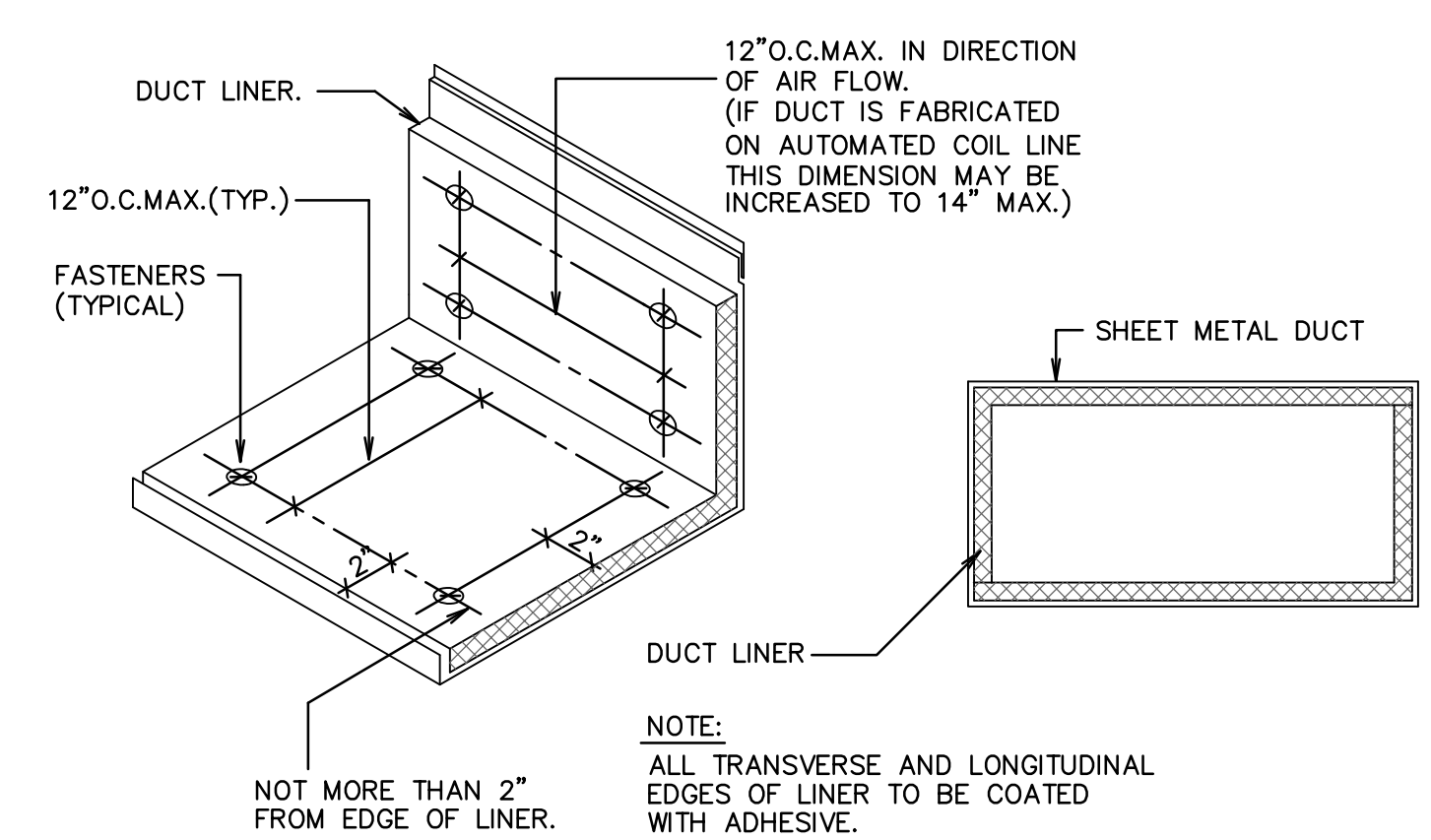
4

DIMENSION OF LONGEST SIDE, INCHES	SHEET METAL GAGE (ALL FOUR SIDES)	TRANSVERSE REINFORCING (1)					
		AT JOINTS					
		MIN. H. IN.	DRIVE SLIP PLAIN S SLIP	HEMME S SLIP	ALTE R'NT BAR SLIP	REIN- FORCED BAR SLIP	
UP THRU 12	26	NONE REQUIRED	1	26	26	24	24
13 - 18	24	NONE REQUIRED	1	24	24	24	24
19 - 30	24	1"x1"x1/8" @ 60 IN	1	-	24	24	24
31 - 36	22	1"x1"x1/8" @ 60 IN	1	-	-	22	22

(1) TRANSVERSE REINFORCING SIZE IS DETERMINED BY DIMENSION OF SIDE TO WHICH ANGLE IS APPLIED.
(2) LONGITUDINAL JOINTS TO BE PITTSBURG OR SNAP LOCK TYPE.

B DUCT CONSTRUCTION DETAIL
M502 NO SCALE

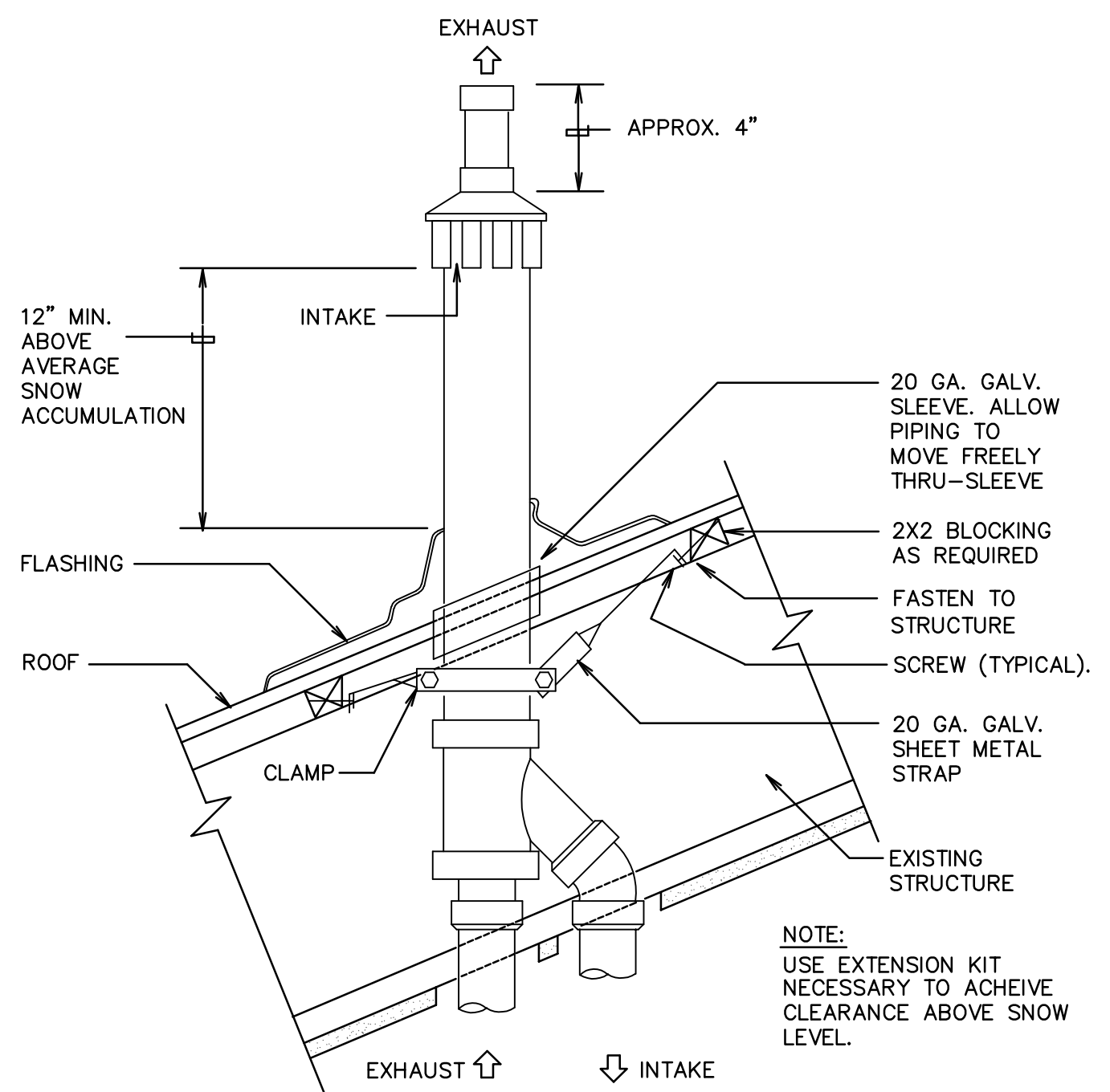
5



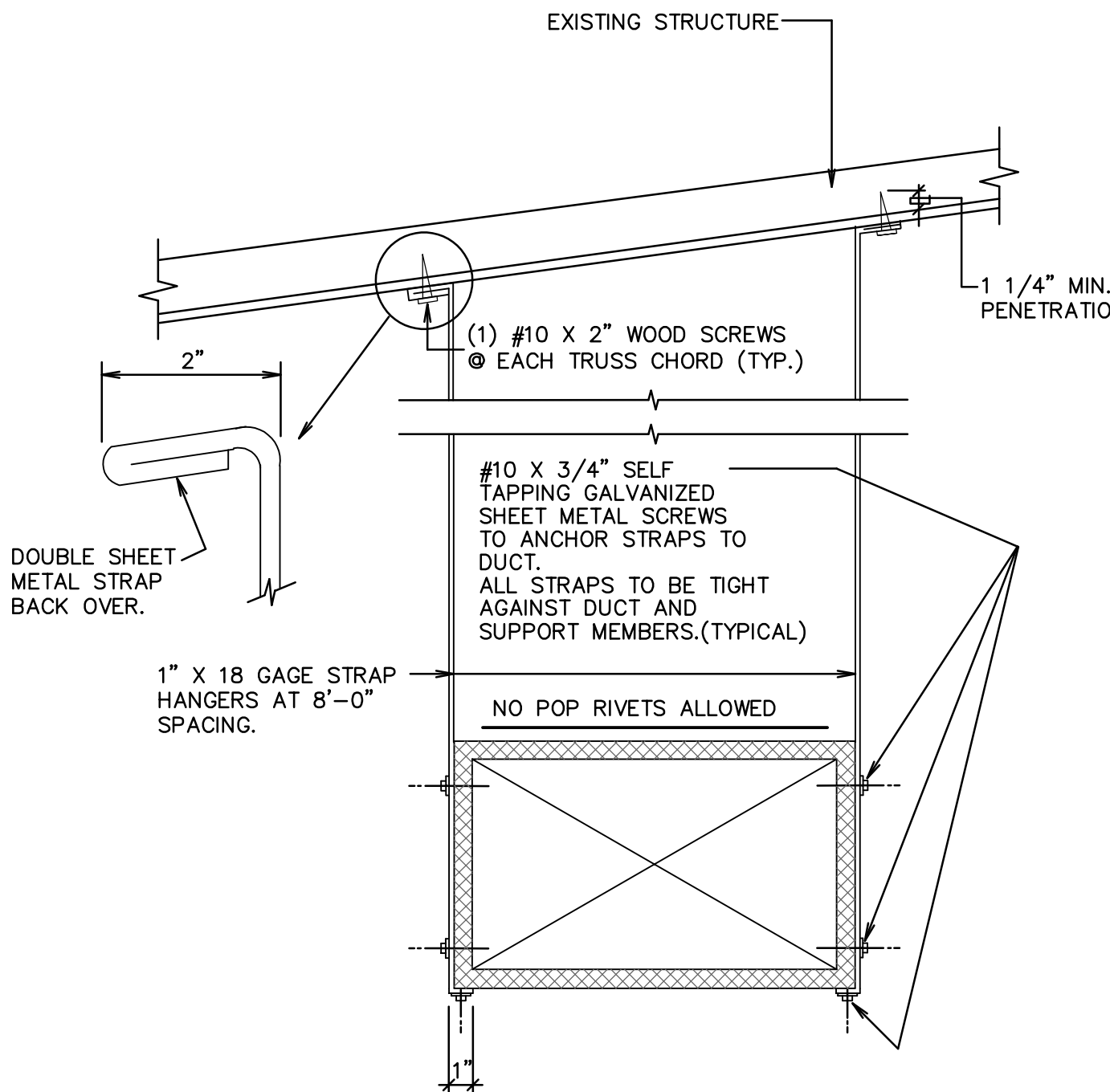
C DUCT LINER DETAIL
M502 NO SCALE

D

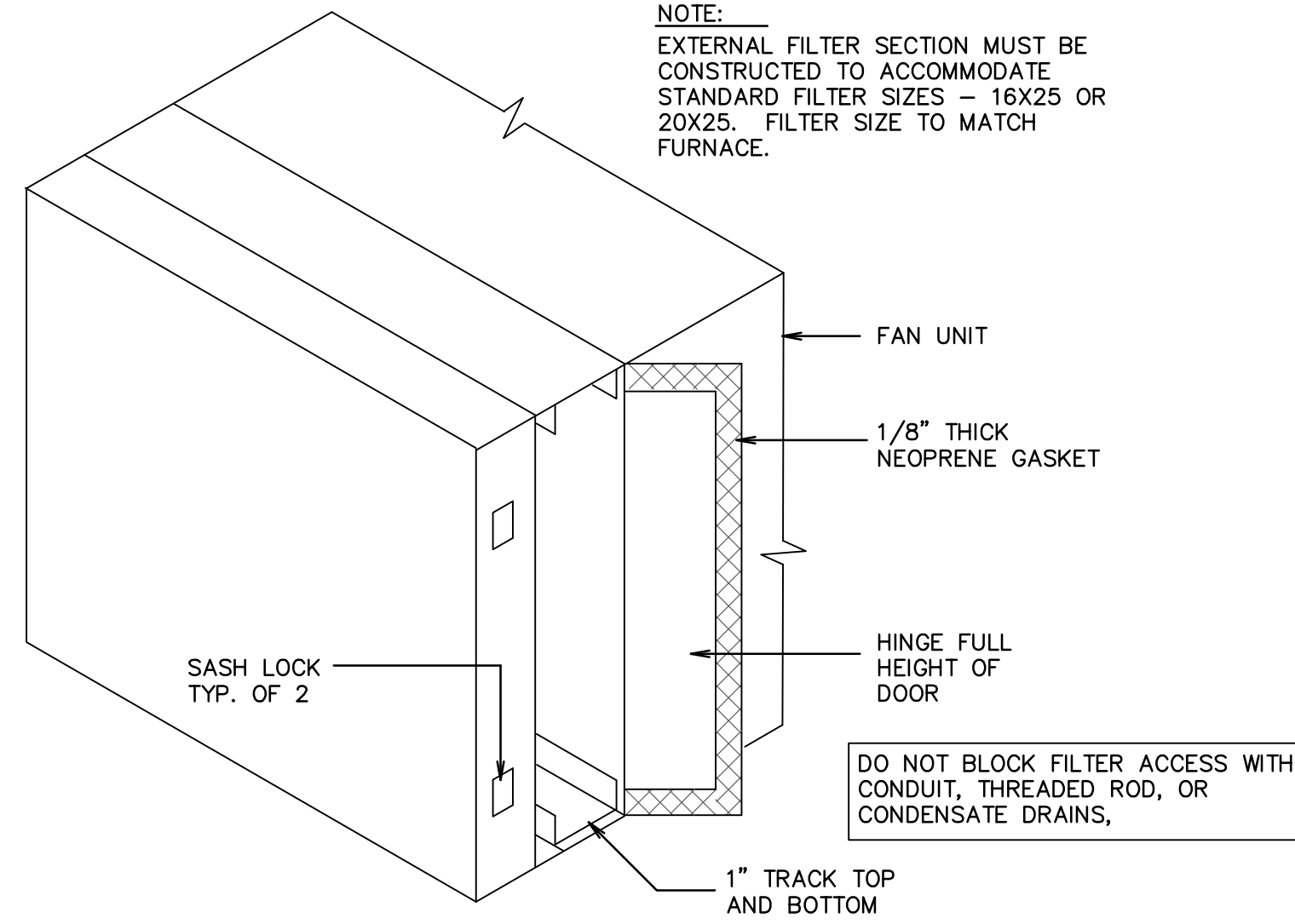
C



D CONCENTRIC ROOF TERMINATION DETAIL (SIMILAR)
M502 NO SCALE



E DUCT STRAP HANGER DETAIL
M502 NO SCALE

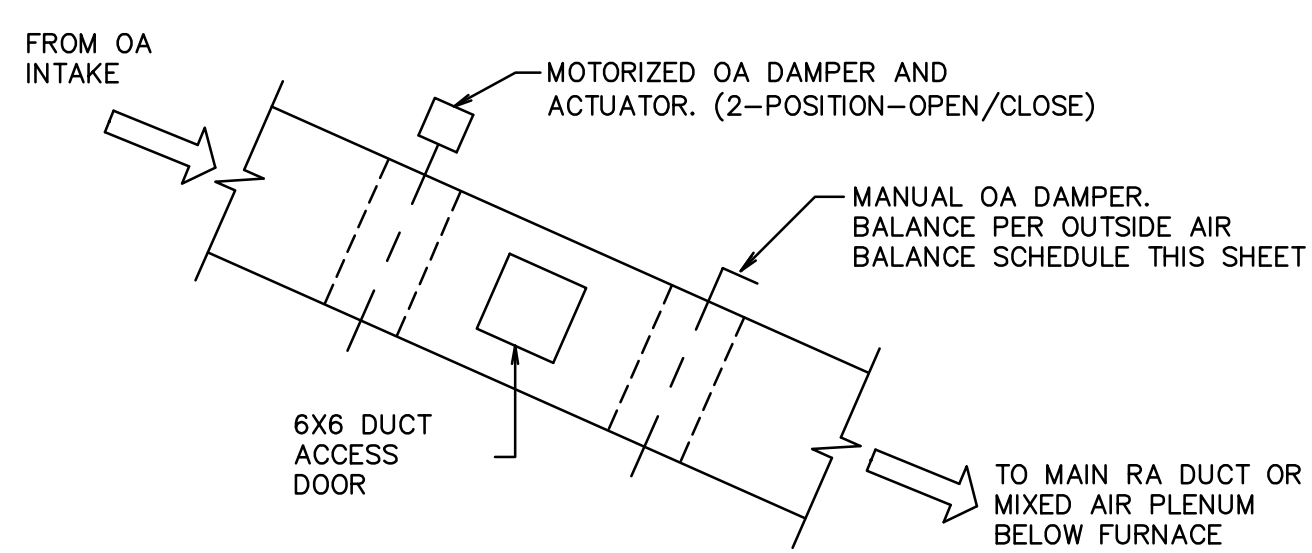


F EXTERNAL FILTER SECTION DETAIL
M502 NO SCALE

B

A

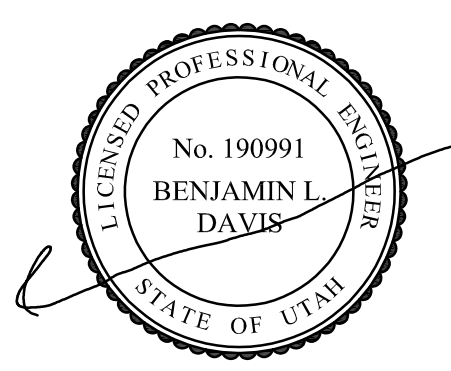
OUTSIDE AIR BALANCE SCHEDULE								
MARK	BALANCE TO CFM	DUCT SIZE	MARK	BALANCE TO CFM	DUCT SIZE	MARK	BALANCE TO CFM	DUCT SIZE
F1	230	10"φ	F3	230	10x8	F5	130	(E)10x10
F2	230	10"φ	F4	230	10x8	F6	80	6X6



G OUTSIDE AIR DUCT DETAIL
M502 NO SCALE



181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F



Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
Van Boerum & Frank Assoc., 2014

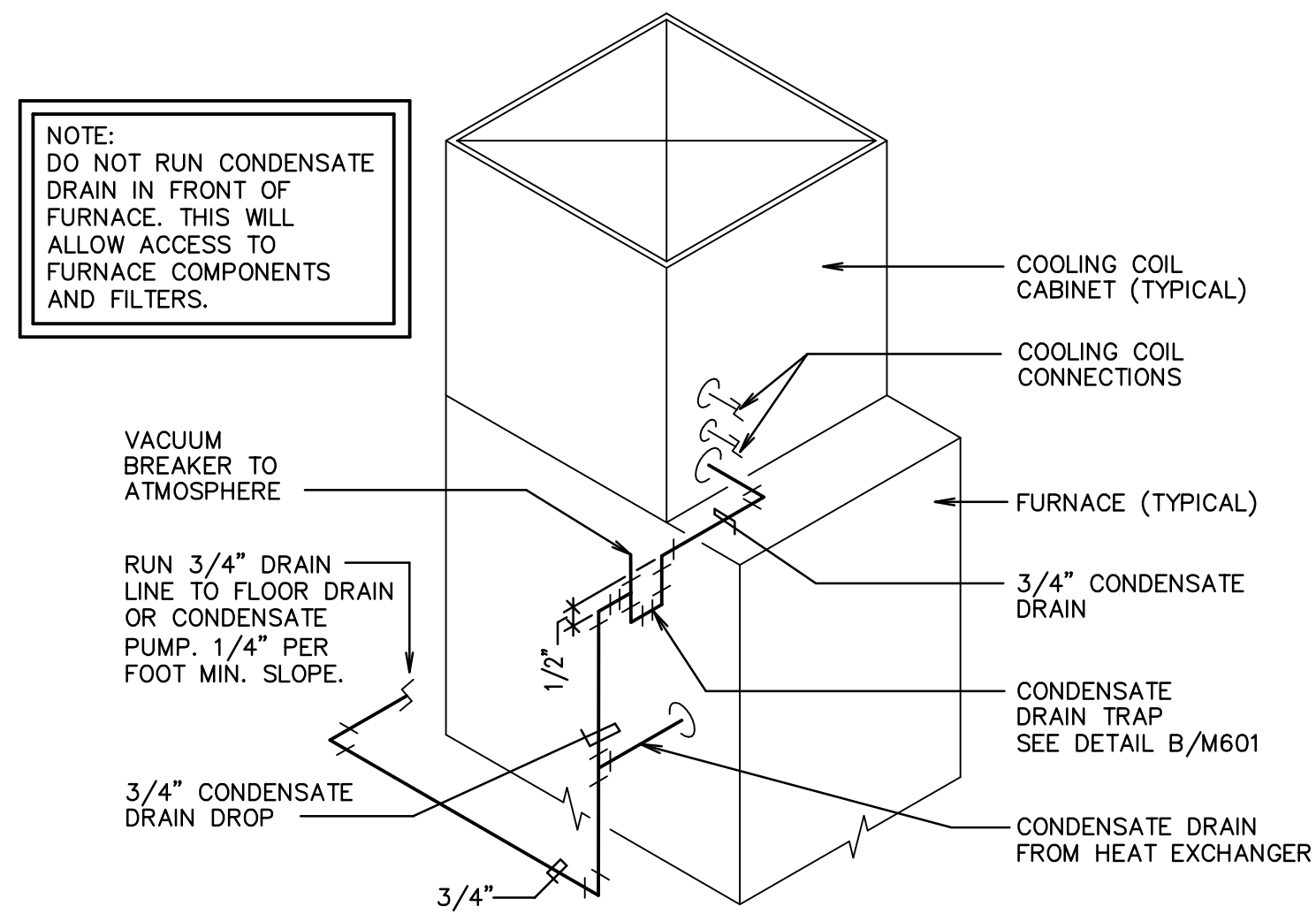
CASTLE DALE EMERY SR SEMINARY
CASTLE DALE UTAH STAKE
HVAC UPGRADE
915 NORTH CENTER STREET, CASTLE DALE, UT 84513

REVISIONS	

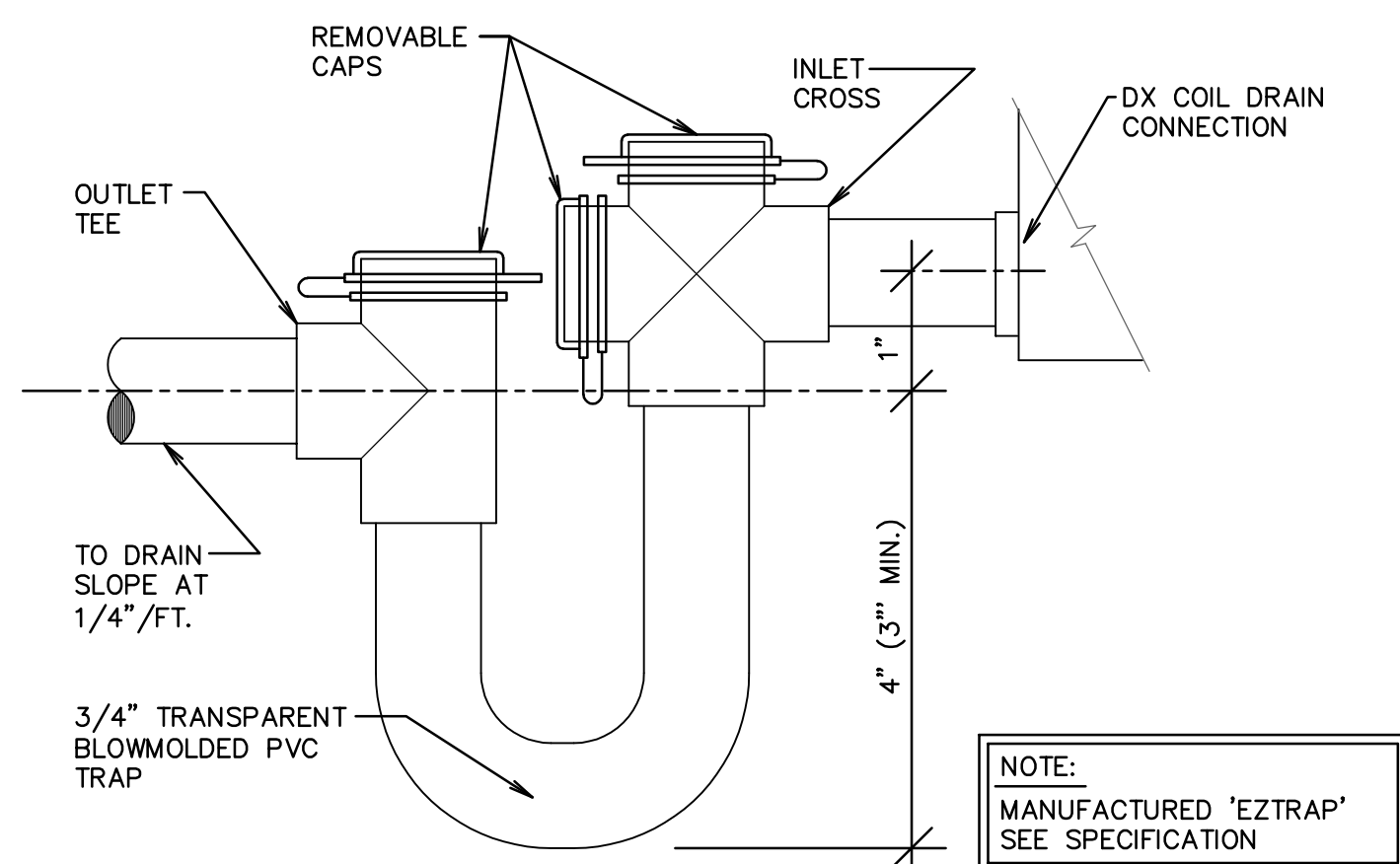
VBFA PROJECT #: 22038
CHECKED BY: JTA
DRAWN BY: JTA
CURRENT ISSUE DATE: MAR 2022

SHEET CONTENTS
MECHANICAL DETAILS

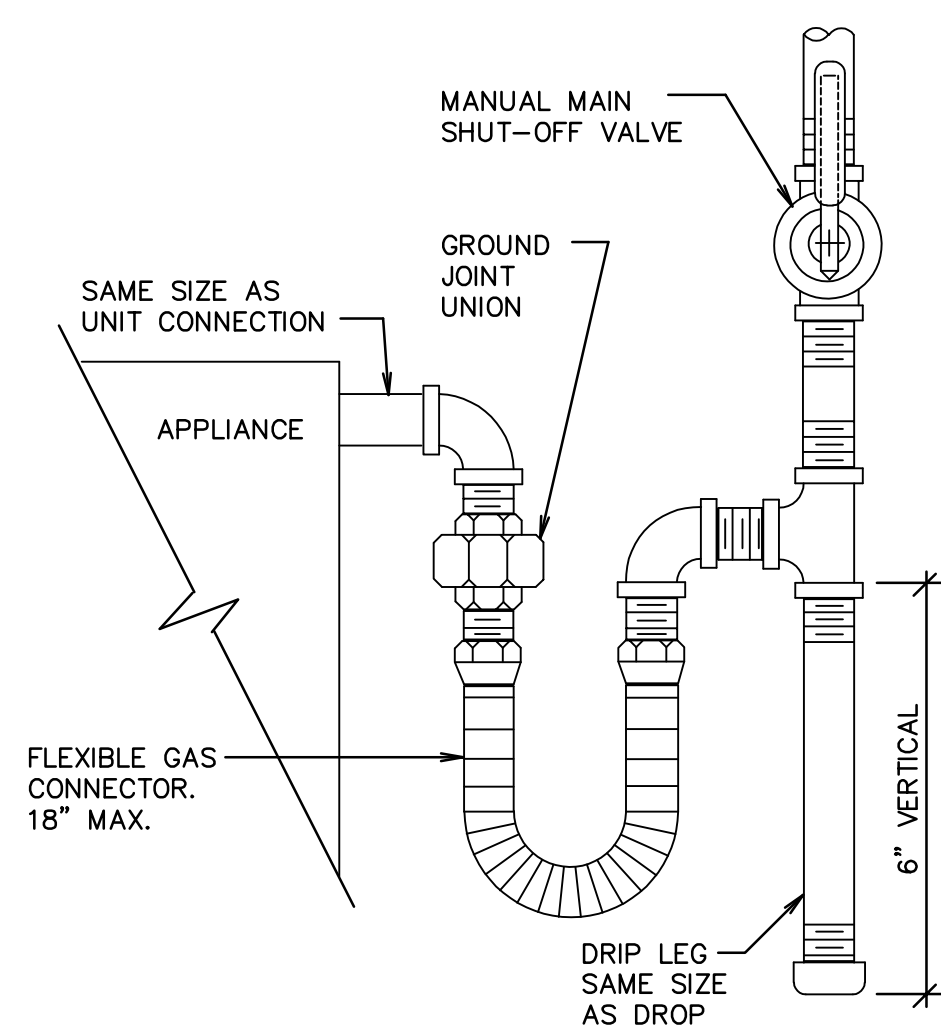
M502



A CONDENSATE DRAIN TRAP DETAIL
M601 NO SCALE



B COOLING COIL CONDENSATE DRAIN DETAIL
M601 NO SCALE



C GAS LINE CONNECTION DETAIL
M601 NO SCALE

DIFFUSER SCHEDULE

MARK	C.F.M. RANGE	DIFFUSER SIZE	NECK CONN.	BLOW	PATTERN	AIR DIST./SIDE	
						A (%)	B (%)
D-1	220	9x9	9x9	4 WAY	A B	25	25

REGISTER, LOUVER & GRILLE SCHEDULE

MARK	TYPE	SERVICE	CFM RANGE	NOMINAL SIZE	REMARKS
R-1	FLOOR	RETURN AIR	100	24X4	
PH1	PENTHOUSE	OUTSIDE AIR	540	14X14	

- ① MAXIMUM NC=25
- ② SHALL BE TITUS TDC TYPE 6 OR EQUAL BY OTHER APPROVED MANUFACTURERS. (SEE SPECIFICATIONS)
- ③ SEE SPECIFICATION FOR APPROVED MANUFACTURER.
- ④ FINISH SHALL BE ANODIZED ALUMINUM.
- ⑤ PROVIDE ALUMINUM BIRD SCREENS. REFER TO SPECIFICATIONS.
- ⑥ FINISH COLOR TO MATCH ROOF COLOR OR ADJACENT PENTHOUSE COLOR.
- ⑦ VERIFY EXACT SIZE OF EXISTING OPENING PRIOR TO ORDERING GRILLE.

FURNACE SCHEDULE

MARK	NO. REQ'D	MIN. REQ'D OUTPUT BTU/HR	MINIMUM A.C.F.M.	EXT. S.P. IN. W.G.	MOTOR				REMARKS	
					H.P.	HERTZ	VOLTS	SPEED		
F1	1	58,000/38,000	900	0.80	0.50	1	60	115		59TN6B060C17
F2	1	58,000/38,000	900	0.80	0.50	1	60	115		59TN6B060C17
F3	1	58,000/38,000	900	0.80	0.50	1	60	115		59TN6B060C17
F4	1	58,000/38,000	900	0.80	0.50	1	60	115		59TN6B060C17
F5	1	58,000/38,000	900	0.80	0.50	1	60	115		59TN6B060C17
F6	1	58,000/38,000	900	0.80	0.33	1	60	115		59SC5B026E14

- ① SEA LEVEL CAPACITY.
- ② FURNACE MARKS CORRESPOND WITH CONDENSING UNIT AND COOLING COIL MARKS.
- ③ 2-STAGE HEATING W/VARIABLE SPEED, ECM MOTOR.
- ④ FIXED-SPEEDS, CONSTANT TORQUE ECM MOTOR.
- ⑤ CARRIER MODEL LISTED. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.
- ⑥ SET FAN MOTOR SPEED TAP TO LOWEST POSSIBLE SETTING REQUIRED TO ACHIEVE DESIGN AIRFLOW.

COOLING COIL SCHEDULE

MARK	NO. REQ'D	CALCULATED LOAD TOT. MBH	COND. ENT. EVAP. SEN. MBH	COND. ENT. EVAP. DB F	COND. ENT. EVAP. WB F	A.C.F.M.	MAX. PR. DR. IN. W.G.	S.C.F.M.	REMARKS
CC1	1	17.7	17.7	81.9	63.7	900	0.16	731	CNPVP1917
CC2	1	17.7	17.7	82.0	63.7	900	0.16	731	CNPVP1917
CC3	1	16.2	16.2	81.7	63.6	900	0.16	731	CNPVP1917
CC4	1	18.0	18.0	82.1	63.8	900	0.16	731	CNPVP1917
CC5	1	19.0	18.0	79.3	62.8	900	0.16	731	CNPVP1917
CC6	1	11.8	11.8	78.9	62.6	675	0.18	548	CNPVP1814

- ① COMPLETE WITH FACTORY COIL BOX AND COIL
- ② CARRIER MODEL LISTED. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.
- ③ WET COIL
- ④ SITE ELEVATION = 5660 FEET (0.812 CFM TRANSMISSION FACTOR)
- ⑤ COOLING COIL MARKS CORRESPOND WITH FURNACE AND CONDENSING UNIT MARKS.

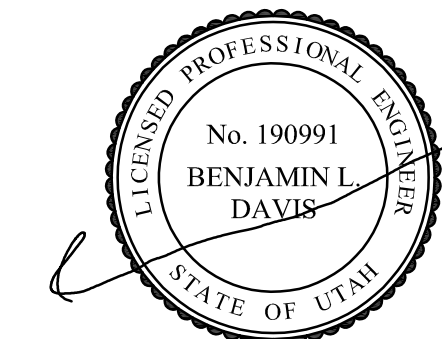
AIR COOLED CONDENSING UNIT SCHEDULE

MARK	NO. REQ'D	AREA SERVED	MIN. SIZE (TONS)	COMPRESSOR RATED LOAD AMPS	MCA	MOC	REMARKS
CU1	1	WEST CLASSROOM	2.0	10.9	14.3	25	24ABB324 ① ④ ⑤
CU2	1	WEST CENTER CLASSROOM	2.0	10.9	14.3	25	24ABB324 ① ④ ⑤
CU3	1	EAST CENTER CLASSROOM	2.0	10.9	14.3	25	24ABB324 ① ④ ⑤
CU4	1	EAST CLASSROOM	2.0	10.9	14.3	25	24ABB324 ① ④ ⑤
CU5	1	FOYER, PRINCIPAL, & WORKROOM	2.0	10.9	14.3	25	24ABB324 ① ④ ⑤
CU6	1	OFFICES & LIBRARY	1.5	9.0	11.8	20	24ABB318 ① ④ ⑤

- ① REFRIGERANT R-410a; 40F SUCTION TEMPERATURE.
- ② AT DESIGN CONDITIONS AND 94° ENTERING AIR TEMPERATURE TO CONDENSER.
- ③ CONDENSING UNIT MARKS CORRESPOND WITH FURNACE AND COOLING COIL MARKS.
- ④ CARRIER MODEL LISTED. SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.
- ⑤ ELECTRICAL CHARACTERISTICS: 208V/1 PHASE/60 HZ.
- ⑥ ELECTRICAL RATING FOR SCHEDULED CARRIER UNIT. COORDINATE ACTUAL RATING OF UNIT PROVIDED WITH DIVISION 26.

NOTES:

- 1- THE MECHANICAL CONTRACTOR SHALL VERIFY MOTOR VOLTAGES WITH THE ELECTRICAL DRAWINGS BEFORE ORDERING MOTORIZED EQUIPMENT & CONTROLS. MOTOR NAME PLATE VOLTAGE SHALL BE NEMA STANDARD 200 VOLT FOR 208 VOLT THREE PHASE SYSTEM AND SHALL BE NEMA STANDARD 230 VOLT FOR 240 VOLT THREE PHASE OR SINGLE PHASE SYSTEM. STARTER HEATERS INSTALLED SHALL BE COORDINATED WITH THE NAME PLATE DATA.
- 2- S.C.F.M. LISTED IS STANDARD AIR. A.C.F.M. IS ACTUAL SITE CFM.



Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
Van Boerum & Frank Assoc., 2014

CASTLE DALE EMERY SR SEMINARY
 CASTLE DALE UTAH STAKE
HVAC UPGRADE
 915 NORTH CENTER STREET, CASTLE DALE, UT 84513

REVISIONS

NO.	DATE	DESCRIPTION

VBFA PROJECT #: 22038
 CHECKED BY: JTA
 DRAWN BY: JTA
 CURRENT/ISSUE DATE: MAR 2022

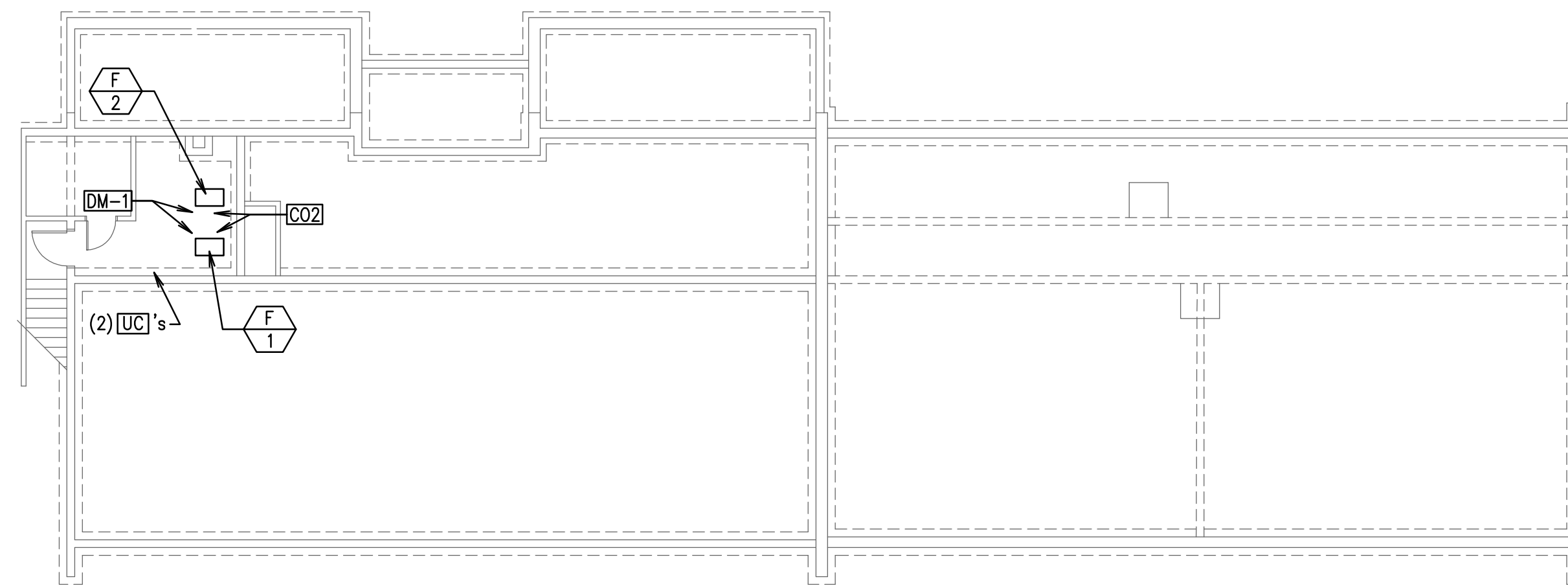
SHEET CONTENTS
MECHANICAL SCHEDULES

D

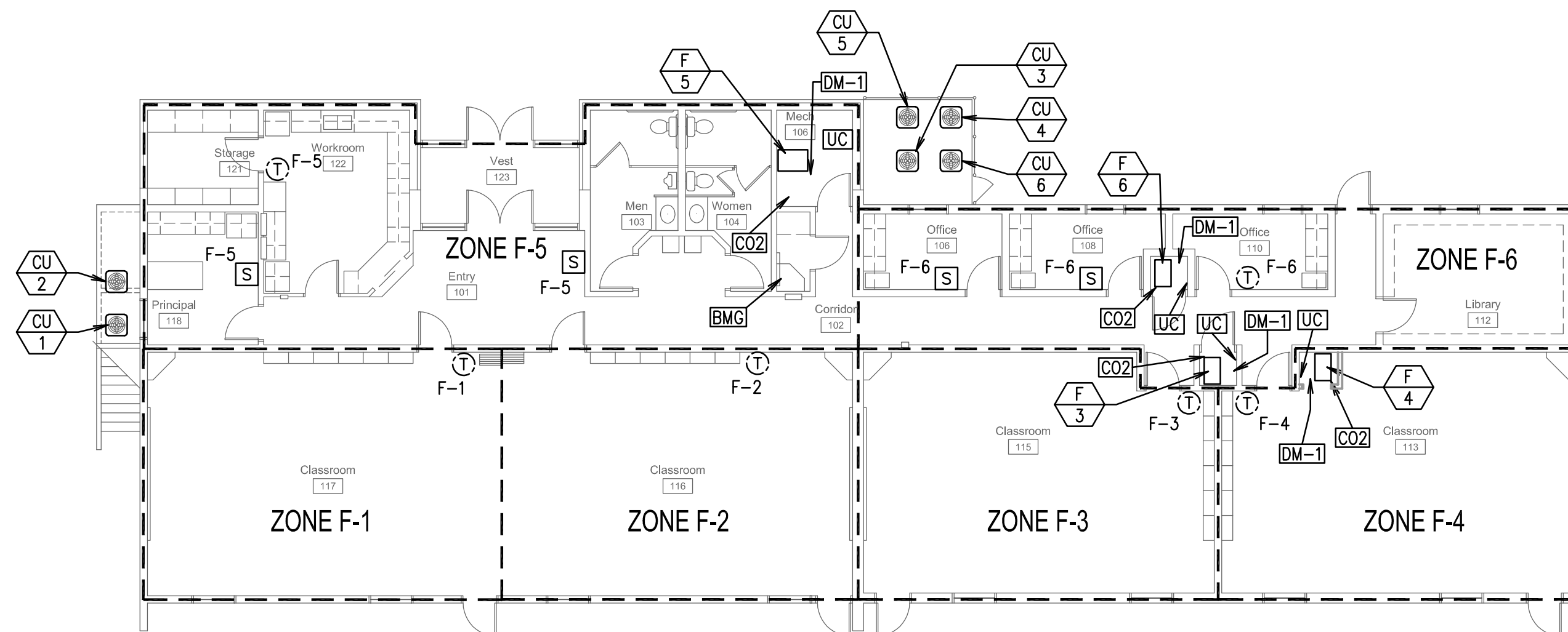
C

B

A



1 AUTOMATIC TEMPERATURE CONTROL PLAN
 ME101 SCALE: 3/32"=1'-0"
 1' 8' 16'
 0'



1 AUTOMATIC TEMPERATURE CONTROL PLAN
 ME101 SCALE: 3/32"=1'-0"
 1' 8' 16'
 0'

SYMBOLS

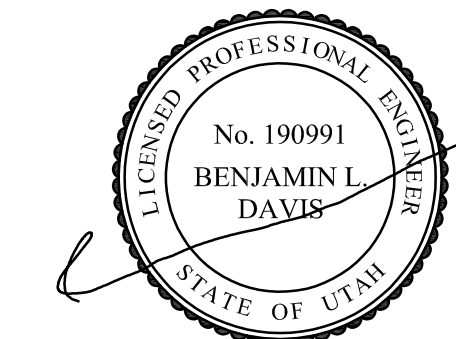
- BMG** BUILDING MANAGEMENT GATEWAY
- S** AVERAGING SENSOR
MOUNT ON WALL WITH INSULATED WOOD BASE. A/ME703.
- T** LCBS TOUCH SCREEN WALL MODULE (THERMOSTAT)
MOUNT ON MASONRY WALL WITH INSULATED WOOD BASE. A/ME703.
- UC** UNITARY CONTROLLER. MOUNT ON WALL ADJACENT TO EQUIPMENT OR ABOVE NEW RELAY PANEL.
- CO2** CO₂ SENSOR (DIV 23)
MOUNTED ON MAIN RA DUCT
- DM-1** 2-POSITION DAMPER MOTOR (DIV 23)
MOUNTED ON MINIMUM OA DAMPER



VBFA

WWW.VBFA.COM

181 East 5600 South
 Murray, UT 84107
 801.530.3148 T
 801.530.3150 F



Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
 • Van Boerum & Frank Assoc., 2014

CASTLE DALE EMERY SR SEMINARY
 CASTLE DALE UTAH STAKE
HVAC UPGRADE
 915 NORTH CENTER STREET, CASTLE DALE, UT 84513

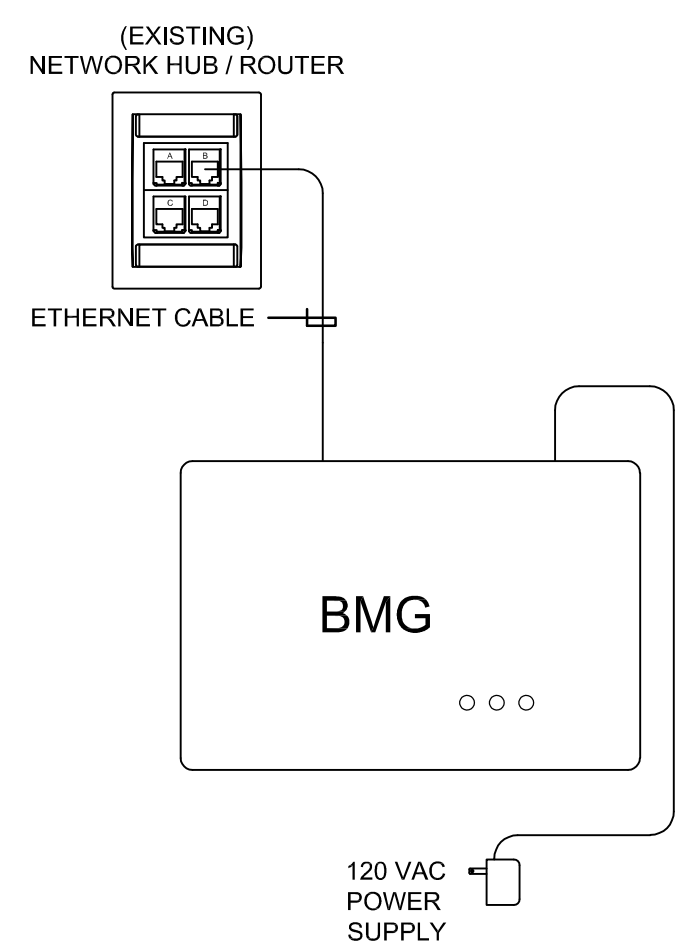
NOTES:

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 W/PLASTIC BUSHING WHEN ATTACHING J-BOX TO EQUIPMENT.
8. PROVIDE CABLE CLAMP SO THAT CABLES CANNOT BE PULLED OUT OF J-BOX.
9. CONDUIT TO BE 1/2" UNLESS OTHERWISE NOTED. ALL WIRING LOCATED IN WALLS AND IN MECHANICAL ROOMS TO BE ROUTED IN CONDUIT. CONDUIT FOR LOW VOLTAGE WIRING BY DIV. 26.
10. ALL CONTROLS ARE NEW UNLESS NOTED OTHERWISE. EXISTING WIRING AND CONDUIT MEETING REQUIREMENTS MAY BE REUSED, OTHERWISE PROVIDE NEW.
11. INSTALL GLOBAL OUTDOOR AIR SENSOR ON NORTH SIDE OF BUILDING OUT OF DIRECT SUNLIGHT. ONE SENSOR PER BUILDING (MAY BE CONNECTED TO ANY CONTROLLER).

CONTROL EQUIPMENT

MARK	DESCRIPTION	CAT. NO. (1)	MARK	DESCRIPTION	CAT. NO. (1)
BMG	BUILDING MANAGEMENT GATEWAY	LGW1000 (GATEWAY) WPM-8000 (WALL PLUG)			
UC	UNITARY CONTROLLER	CRL6438SR1000	X-2	TRANSFORMER 120V/24V 50VA	AT150F1022
T	THERMOSTAT WALL MODULE	LCBS WALL MODULE TS120	DM-1	DAMPER MOTOR TWO POSITION	MSB105A1030
	THERMOSTAT COVER PLATE ASSEMBLY	50002883-001	RIB	TWO POLE RELAY	RIBU1C (2)
S	REMOTE SENSOR	TR40	CO ₂	CO ₂ SENSOR	C7232B1006
DS	DUCT AIR SENSORS	C7041B2005	EBUS	ECHELON NETWORK CABLE	W221P-20018
G-1	THERMOSTAT GUARD	(2)	OAS	GLOBAL OUTSIDE AIR SENSOR	C7041F2006

- (1) ALL CATALOG NUMBERS SHOWN ARE HONEYWELL UNLESS NOTED OTHERWISE.
- (2) SEE SPECIFICATIONS



BMG WIRING DIAGRAM

REVISIONS

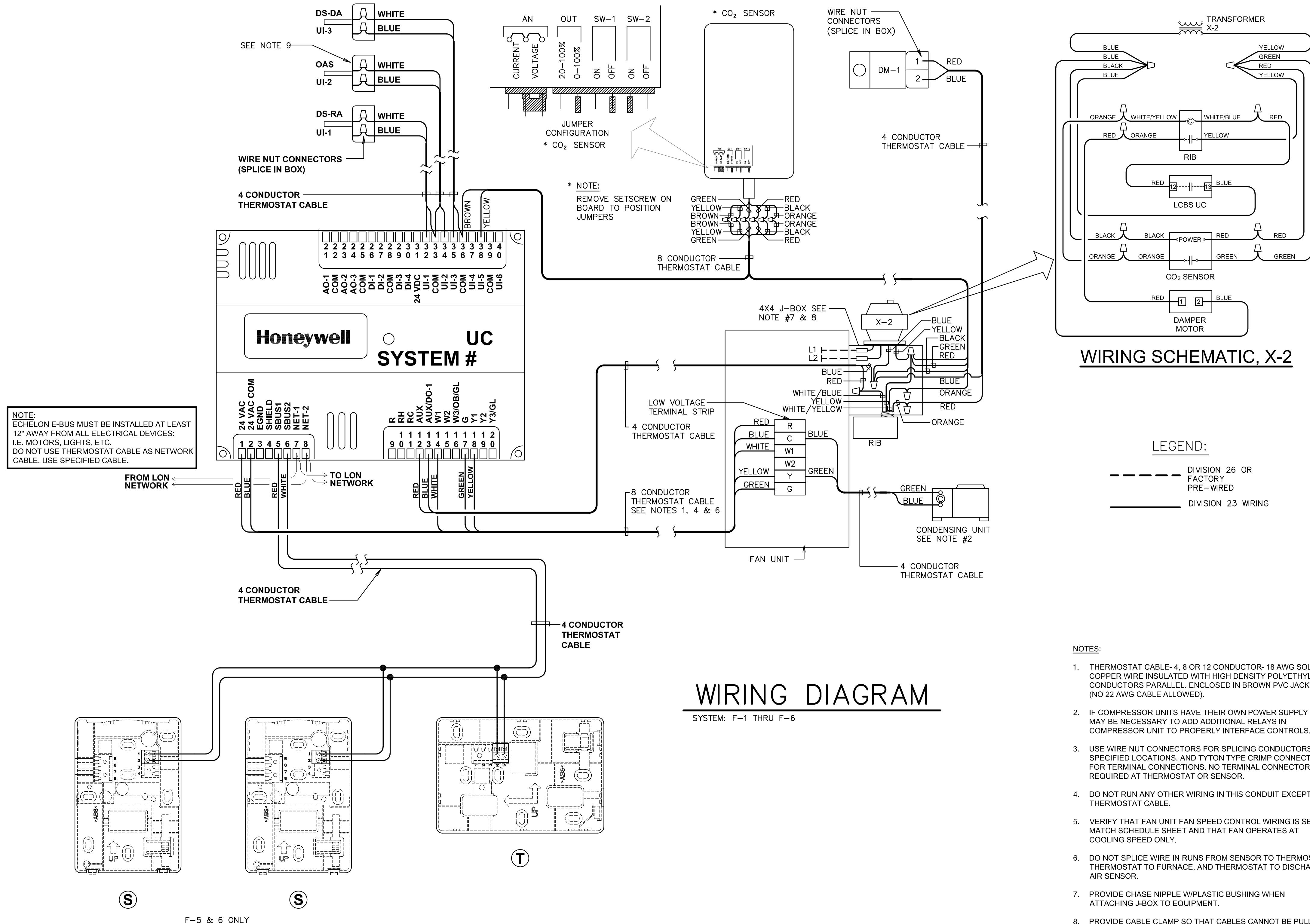
NO.	DESCRIPTION

VBFA PROJECT #: 22038
 CHECKED BY: JTA
 DRAWN BY: JTA
 CURRENT/ISSUE DATE: MAR 2022

SHEET CONTENTS

AUTOMATIC TEMPERATURE CONTROLS

ME101



NOTE:
 ECHELON E-BUS MUST BE INSTALLED AT LEAST
 12" AWAY FROM ALL ELECTRICAL DEVICES:
 I.E. MOTORS, LIGHTS, ETC.
 DO NOT USE THERMOSTAT CABLE AS NETWORK
 CABLE. USE SPECIFIED CABLE.

* NOTE:
 REMOVE SETSCREW ON
 BOARD TO POSITION
 JUMPERS

WIRING DIAGRAM

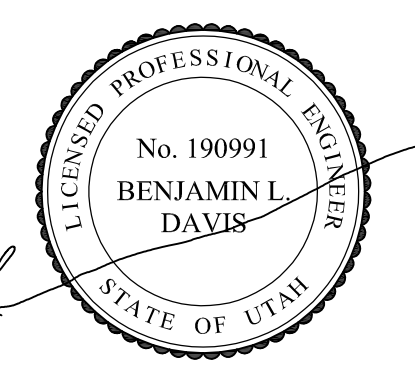
SYSTEM: F-1 THRU F-6

WIRING SCHEMATIC, X-2

LEGEND:
 - - - - - DIVISION 26 OR
 FACTORY
 PRE-WIRED
 _____ DIVISION 23 WIRING

- 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 W/PLASTIC BUSHING WHEN ATTACHING J-BOX TO EQUIPMENT.
 8. PROVIDE CABLE CLAMP SO THAT CABLES CANNOT BE PULLED OUT OF J-BOX.
 9. INSTALL GLOBAL OUTDOOR AIR SENSOR ON NORTH SIDE OF BUILDING OUT OF DIRECT SUNLIGHT. ONE SENSOR PER BUILDING (MAY BE CONNECTED TO ANY CONTROLLER).

GENERAL NOTE:
 EXISTING CONTROLS ARE BEING UPDATED TO WORK WITH NEW AND EXISTING HVAC SYSTEMS. DIAGRAMS SHOWN ARE FOR CONTRACTORS REFERENCE AND MAY NOT SHOW EXACT CONDITIONS. CONTRACTOR SHOULD VERIFY ALL EXISTING CONDITIONS PRIOR TO BIDDING AND/OR STARTING CONTROL WORK. EXIST. EQUIPMENT, CONDUIT, AND WIRING MAY BE RE-USED IF THEY COMPLY WITH NEW REQUIREMENTS. REMOVE ALL UNUSED EQUIPMENT, CONDUIT, AND WIRING.



Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
 Van Boerum & Frank Assoc., 2014

CASTLE DALE EMERY SR SEMINARY
 CASTLE DALE UTAH STAKE
HVAC UPGRADE
 915 NORTH CENTER STREET, CASTLE DALE, UT 84513

REVISIONS

NO.	DESCRIPTION

VBFA PROJECT #: 22038
 CHECKED BY: JTA
 DRAWN BY: JTA
 CURRENT/ISSUE DATE: MAR 2022

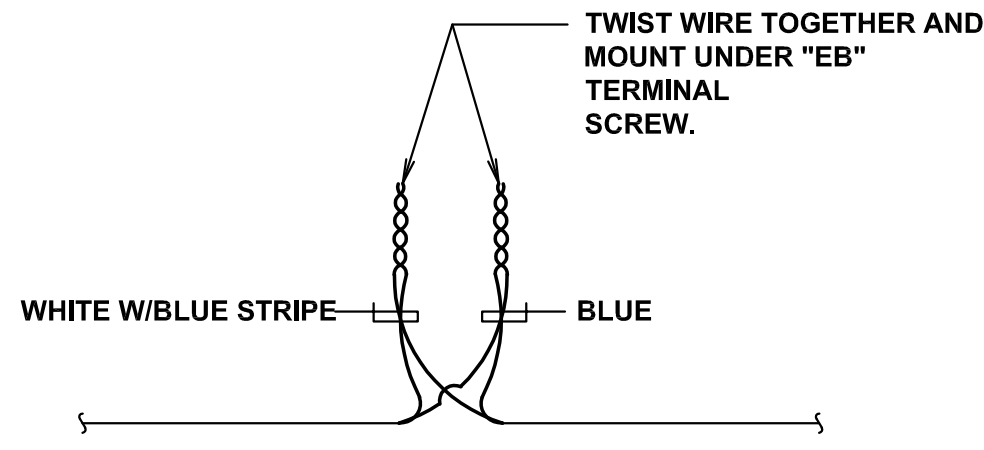
SHEET CONTENTS
**AUTOMATIC
 TEMPERATURE
 CONTROLS**

D

C

B

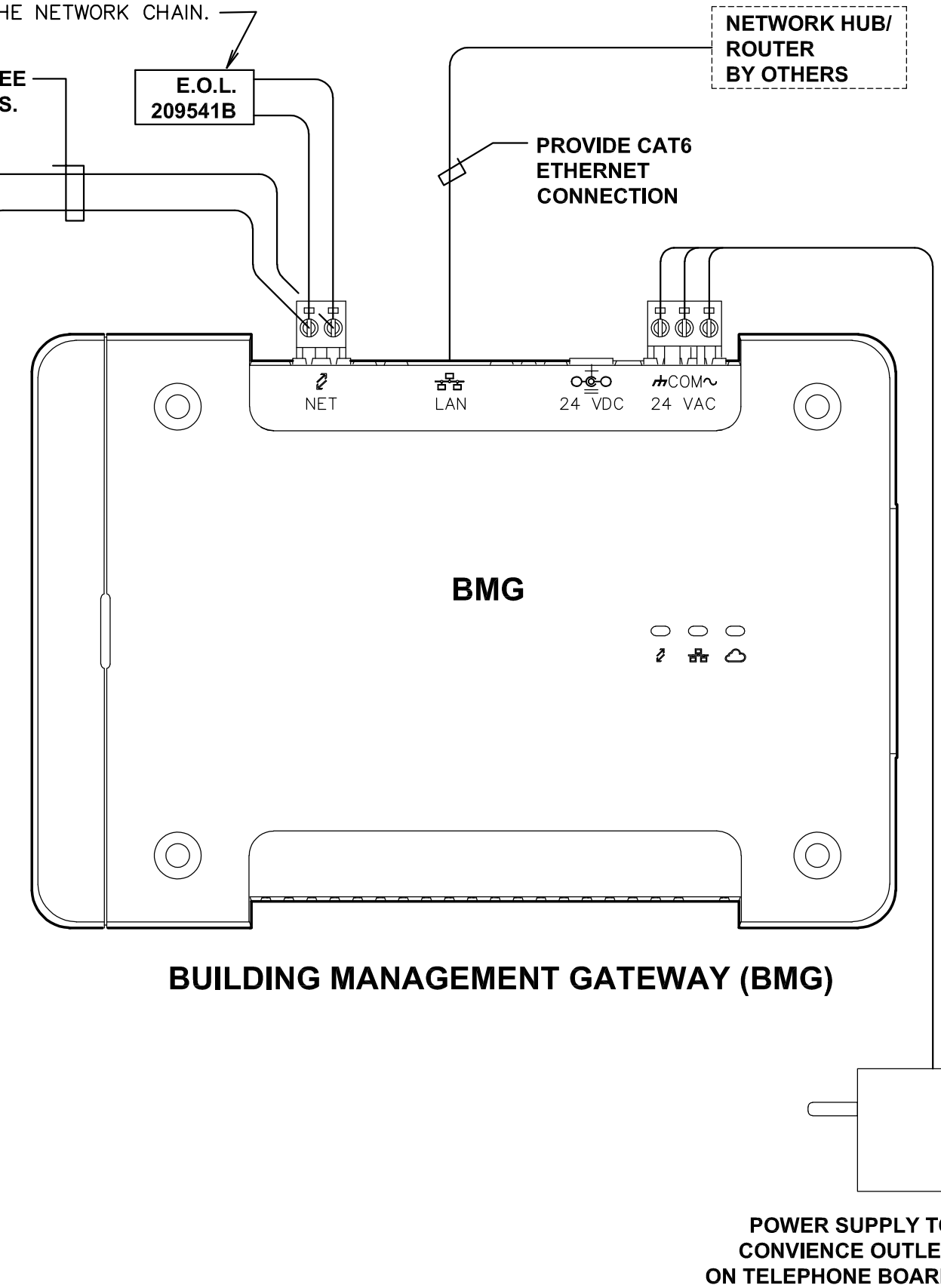
A



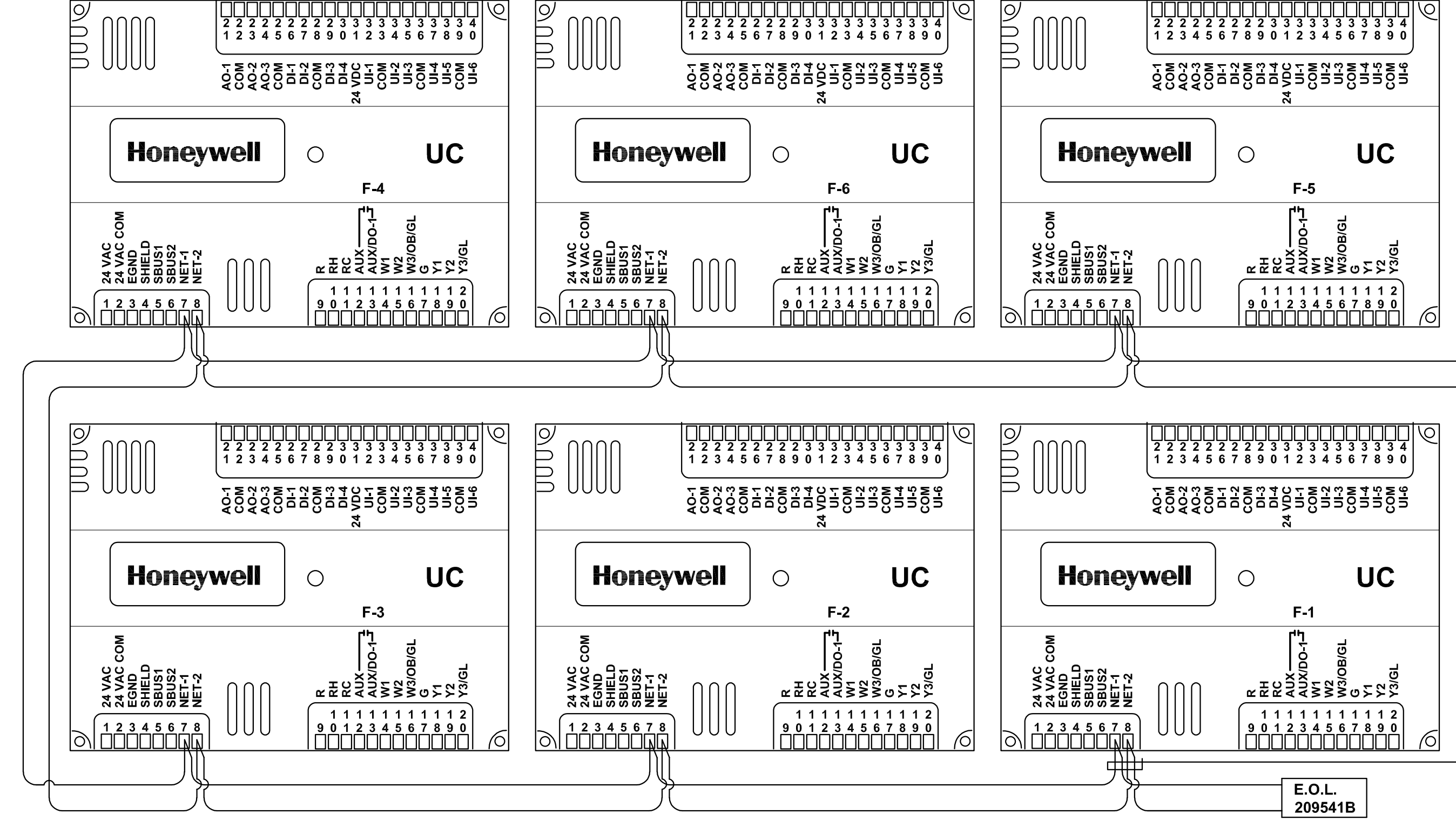
E-BUS CONNECTION DETAIL
NO SCALE

THE E.O.L. IS FOR THE TWO ENDS OF THE ECHELON NETWORK. THE BMG IS NOT REQUIRED TO BE AT THE END OF THE NETWORK; THE BMG CAN RESIDE ANYWHERE IN THE NETWORK CHAIN.

E-BUS CABLE SEE SPECIFICATIONS. (TYPICAL)



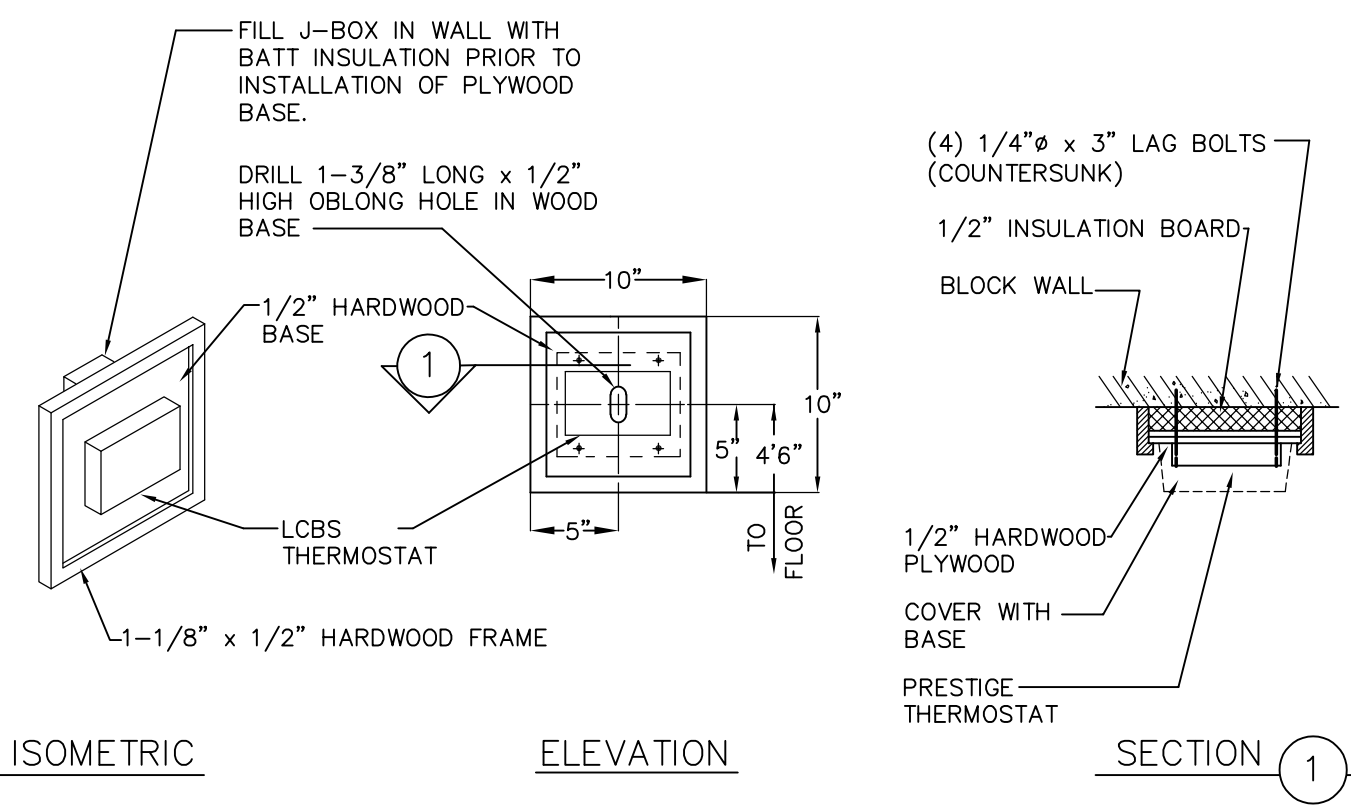
POWER SUPPLY TO CONVENIENCE OUTLET ON TELEPHONE BOARD



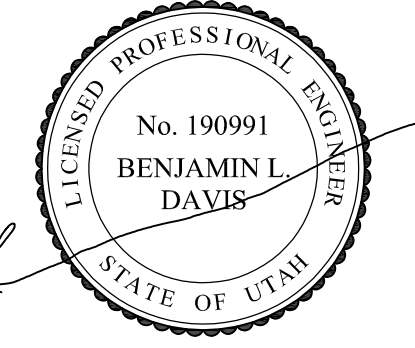
SEE DETAIL
THIS SHEET
(TYPICAL)

E-BUS WIRING DIAGRAM

- NOTES:
- 1- FINISH OF HARDWOOD FRAME AND HARDWOOD PLYWOOD PANEL TO MATCH OTHER WOOD TRIM OR FRAMES.
 - 2- SEE SHEET M101 & ME101 FOR LOCATIONS OF THERMOSTATS AND SENSORS.
 - 3- INSTALL ONLY WHERE THERMOSTATS OR SENSOR ARE LOCATED ON MASONRY WALL
 - 4- EXISTING BASES MAY BE REUSED.



PLYWOOD BASE FOR TOUCHSCREEN / SENSOR DETAIL
ME702 NO SCALE



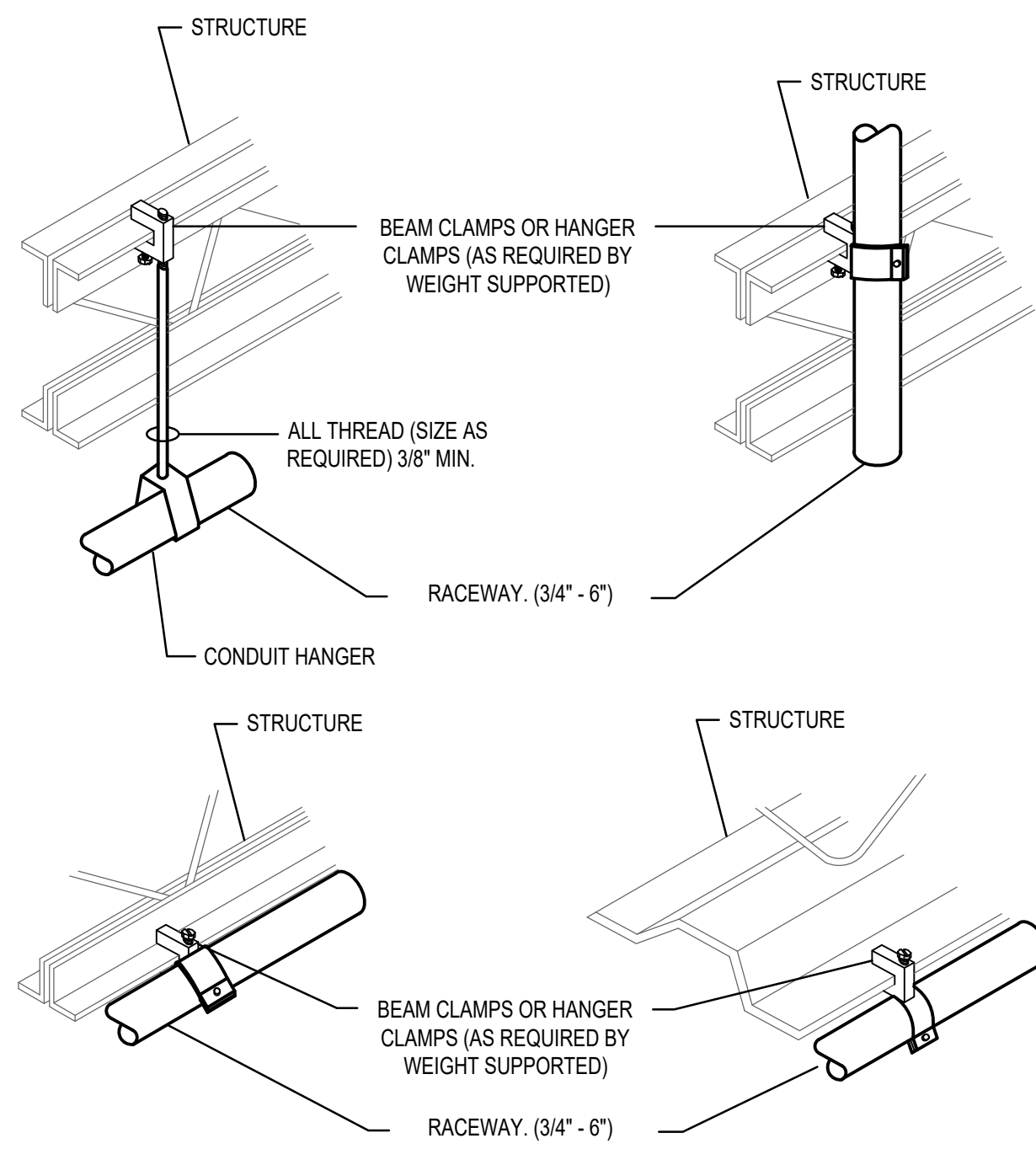
Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
Van Boerum & Frank Assoc., 2014

REVISIONS	

VBFA PROJECT #:	22038
CHECKED BY:	JTA
DRAWN BY:	JTA
CURRENT/ISSUE DATE:	MAR 2022

SHEET CONTENTS
AUTOMATIC TEMPERATURE CONTROLS

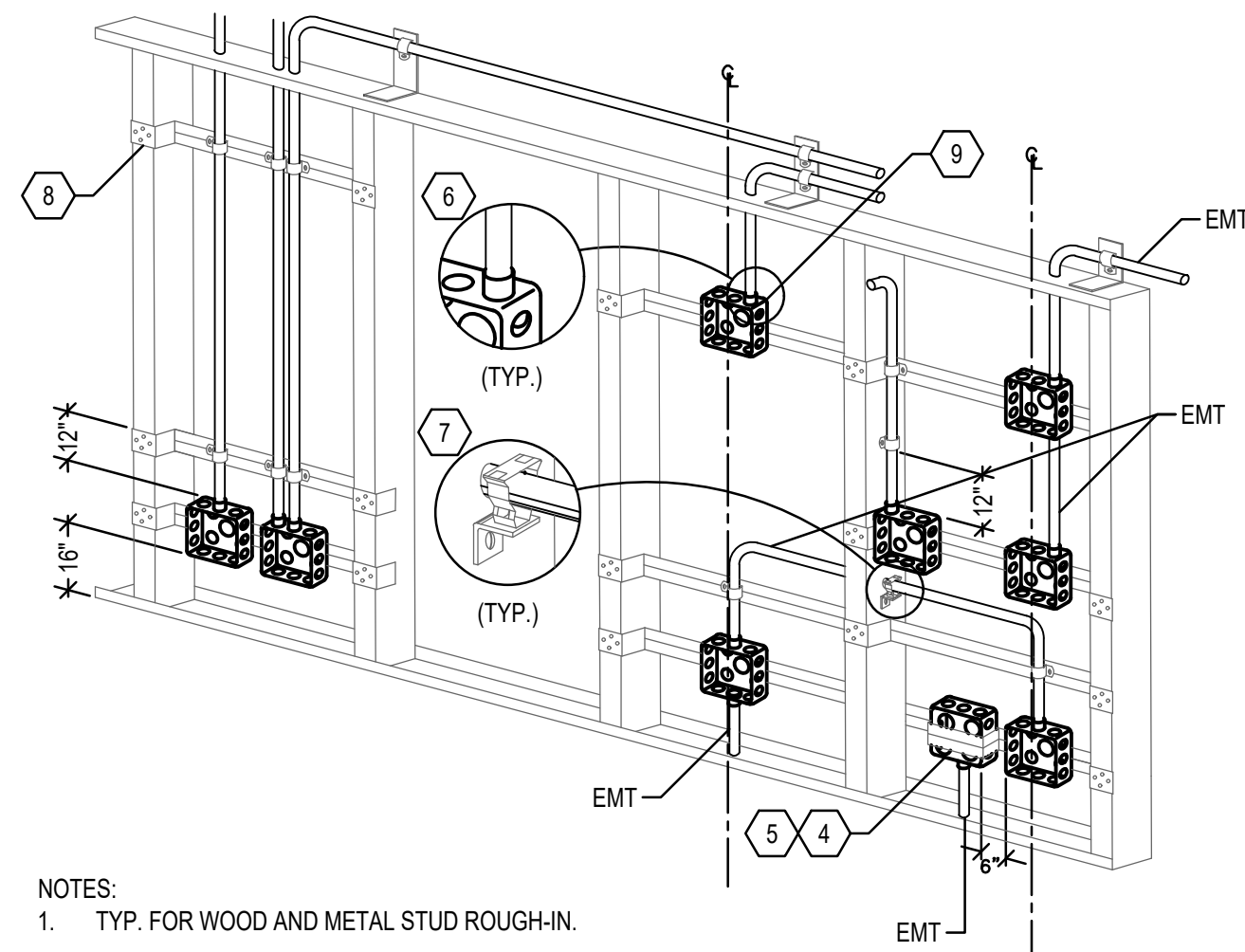
1



- NOTES:
- WIRE SHALL NOT BE USED AS A COMPONENT OF ANY RACEWAY HANGER SYSTEM.
 - DO NOT SUPPORT ANY RACEWAY LARGER THAN 1" FROM BOTTOM CORD OF STEEL TRUSSES.

CN03 RACEWAY SUPPORT METHODS DIAGRAM
EG001 NO SCALE

2



- NOTES:
- TYP. FOR WOOD AND METAL STUD ROUGH-IN.
 - PLASTER RINGS NOT SHOWN. COORDINATE RING DEPTH TO BE FLUSH WITH FINISHED SURFACE, UNLESS NOTED OTHERWISE.
 - LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCH. AND MECH. DRAWINGS, AND WITH ALL APPLICABLE SHOP DRAWINGS.
 - OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY A MIN. OF 6" HORIZONTAL DISTANCE.
 - ELECTRICAL BOXES INSTALLED IN FIRE RESISTANT WALLS OR PARTITIONS SHALL COMPLY WITH IBC 714.3.2.
 - INSULATED THROAT EMT CONNECTOR.
 - CADDY FASTENER, THROUGH STUD CABLE/CONDUIT SUPPORT 'FB12P'.
 - ADJUSTABLE BAR HANGER.
 - TYPICAL DEVICE JUNCTION BOX.

MT01 TYPICAL ROUGH-IN DETAIL
EG001 NO SCALE

3

ELECTRICAL SYMBOL SCHEDULE			
SYMBOL	DEVICE/FIXTURE DESCRIPTION	MOUNTING	COMMENTS
(S) (D) (Q)	(S) SIMPLEX (D) DUPLEX (Q) QUADPLEX OR DOUBLE DUPLEX		
⊕	STANDARD CONVENIENCE OUTLET	18"	
⊕	CONVENIENCE OUTLET, GFCI	18"	
⊕	STANDARD CONVENIENCE OUTLET, CUSTOM HEIGHT	48" UNLESS NOTED	(6)
⊕	CONVENIENCE OUTLET, GFCI, CUSTOM HEIGHT	48" UNLESS NOTED	(6)
⊕	SPECIAL PURPOSE OUTLET		
⊕	DIRECT CONNECTION TO EQUIPMENT		
VFD	VARIABLE FREQUENCY DRIVE		
⊕	JUNCTION BOX	AS NOTED	(12)
⊕	MANUAL SWITCH WITH THERMAL OVERLOAD		
⊕	PUSH BUTTON SWITCH, SINGLE	AS NOTED	
⊕	EMERGENCY POWER OFF (EPO) SWITCH		
⊕	NON-FUSED DISCONNECT SWITCH		(13) (14)
⊕	FUSED DISCONNECT SWITCH		(13) (14)
⊕	MOTOR OUTLET		
⊕	PANEL BOARD, SURFACE	6'-6" TO TOP	(15)
⊕	MECHANICAL/PLUMBING EQUIPMENT CALLOUT		
⊕	KITCHEN EQUIP. CALLOUT, OR AS NOTED BY ARCH.		
⊕	KITCHEN EQUIP. CALLOUT, OR AS NOTED BY ARCH.		
⊕	LUMINAIRE TYPE		
⊕	DIAGRAM/DETAIL CALLOUT		
---	CONDUIT RUN CONCEALED IN WALL OR CEILING		
---UG---	CONDUIT RUN CONCEALED IN FLOOR OR GROUND		
---	SURFACE RACEWAY/WIREMOLD		
---	LOW VOLTAGE CONDUIT RUN		
---	DEMOLITION		
---	EXISTING		
⤴	HOME RUN TO PANEL		
⊕	CONDUIT STUB		
⊕	CONDUIT BREAK/CONTINUATION		
⊕	CONDUIT STUB DOWN		
⊕	CONDUIT STUB UP		
⊕	FUSE		
⊕	GROUND/GROUND ROD		
⊕	CIRCUIT BREAKER		

ABBREVIATIONS

A	AMPS	ENT	ELEC. NON-METAL TUBING	NL	NIGHT LIGHT, BYPASS
AFC	AVAILABLE FAULT CURRENT	ER	EXISTING TO BE RELOCATED	LS	LOCAL SWITCHING
AFB	ABOVE FINISHED FLOOR	EX	EXISTING TO REMAIN	PC	PLUMBING CONTRACTOR
AFG	ABOVE FINISHED GRADE	FMC	FLEXIBLE METAL CONDUIT	POC	POINT OF CONNECTION
AIC	AMPS INTERR. CAPACITY	GC	GENERAL CONTRACTOR	POS	POINT OF SALE
AWG	AMERICAN WIRE GAUGE	GEC	GRND. ELEC. COND. AT SES	R	RELOCATED
BC	BARE COPPER	GFCI	GRND. FLT. CURR. INTERR.	RM	ROOF MOUNTED
BFC	BELOW FINISHED CEILING	GND	GROUND	RMC	RIGID METALLIC CONDUIT
BFG	BELOW FINISHED GRADE	IMC	INTER. METAL CONDUIT	RNC	RIGID NON-METALLIC COND.
C	CONDUIT	IG	ISOLATED GROUND	SBJ	SYSTEM BONDING JUMPER
CND	CONDUIT	KCMIL	1000 CIRCULAR MILS (MCM)	SCA	SHORT CIRCUIT AMPERES
CO	CONDUIT ONLY	LFMC	LIQUID-TIGHT FLEX.	T	TRANSMITTER
CT	CURRENT TRANSDUCER	LFNC	LIQUID-TIGHT FLEX.	TC	TEMP. CONTROL CONTR.
CJ	COPPER MATERIAL	LFNC	LIQUID-TIGHT FLEX.	UG	UNDERGROUND
DED	DEDICATED	LMC	LIQUID-TIGHT FLEX.	UNO	UNLESS NOTED OTHERWISE
DFA	DROP FROM ABOVE	MC	MECHANICAL CONTRACTOR	VA	VOLT/AMPS
EC	ELECTRICAL CONTRACTOR	MCA	MINIMUM CIRCUIT AMPS	VIF	VERIFY IN FIELD
EF	EXHAUST FAN	N1	NEMA 1	WP	WEATHERPROOF/NEMA 3R
EM	EMER./EGRESS BATTERY	N3R	NEMA 3R	XP	EXPLOSION PROOF
EMT	ELEC. METALLIC TUBING	N	NEW	XR	EXISTING TO BE REMOVED

NOTES

- SEE LUMINAIRE SCHEDULE FOR FIXTURE TYPES AND DETAILS.
- SEE LUMINAIRE SCHEDULE FOR MOUNTING REQUIREMENTS.
- WIRE LIGHT FIXTURE FROM ADJACENT J-BOX
- CONNECT NEAREST UN-SWITCHED HOT CONDUCTOR TO EMERGENCY BALLAST
- DIRECTIONAL ARROWS INDICATE REQUIRED CHEVRONS.
- COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL INTERIOR ELEVATIONS
- USE WITH POWER PACK.
- "X" IN SYMBOL IS INCHES BETWEEN RECEPTACLE ALONG WIREWAY. SEE DRAWINGS.
- PROVIDE UL LISTED DEVICE COMPATIBLE WITH THE FIRE ALARM PANEL/SYSTEM.
- MATCH THE VOLTAGE OF THE RELAY WITH THAT OF THE CONTROLLING CIRCUIT.
- USE A 4" X 4" BOX WITH A MUD RING TO MATCH THE DEVICE AND INSTALLATION.
- PROVIDE MUD RING AND/OR BOX COVER APPROPRIATE FOR DEVICE/FIXTURE SERVED.
- USE HEAVY DUTY DEVICE FOR 480 VOLT.
- SIZE TO THE EQUIPMENT BEING CONTROLLED
- FIRE ALARM PANELS: FACP: FIRE ALARM CONTROL PANEL, NAC: NOTIFICATION APPLIANCE PANEL, ANNUN: GRAPHIC ANNUNCIATOR PANEL, AND SES: SMOKE EVACUATION SYSTEM PANEL.
- LIGHT FIXTURES ARE SCALED WITHIN THE DRAWINGS BASED ON ACTUAL DIMENSIONS.

5

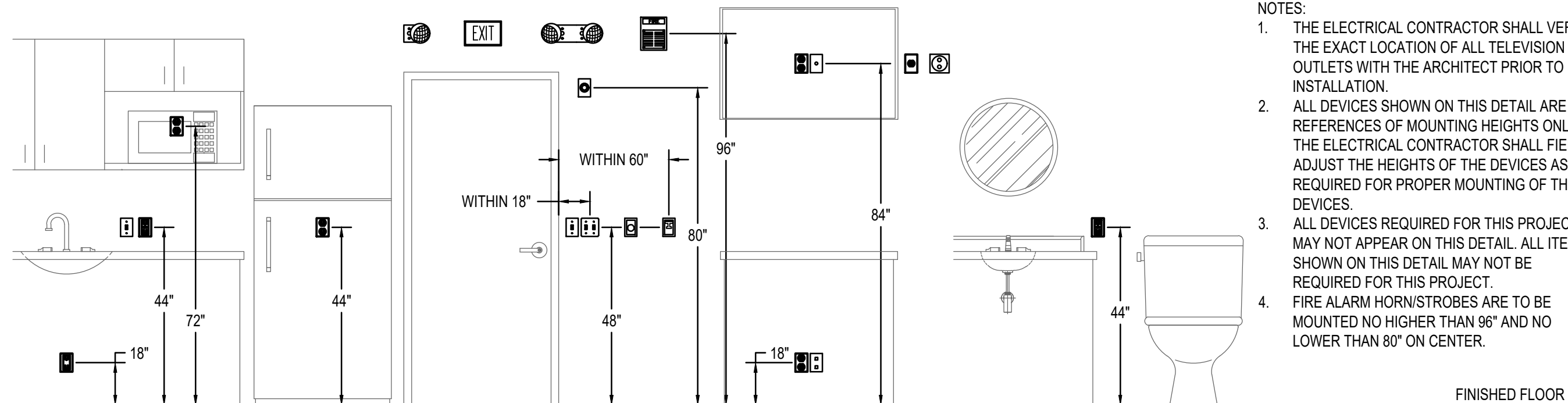
GENERAL NOTES

- THE ELECTRICAL SYSTEMS DEFINED BY THESE PLANS AND SPECIFICATIONS ARE TO BE CONSTRUCTED AS COMPLETE AND OPERABLE SYSTEMS AND SHALL BE BID WITH THIS INTENT. THE CONTRACTOR SHALL VISIT THE SITE, READ ALL THE RELEVANT DOCUMENTS AND BECOME FAMILIAR WITH THE TYPE OF CONSTRUCTION AND WORK TO BE ACCOMPLISHED. SHOULD ANY ERROR, OMISSION OR CONFLICT EXIST IN EITHER THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING BEFORE SUBMITTING HIS BID PRICE SO A CHANGE CAN BE ISSUED IN A PRE-BID ADDENDUM. OTHERWISE, THE CONTRACTOR AND/OR EQUIPMENT SUPPLIER SHALL SUPPLY THE PROPER MATERIALS AND LABOR TO INSTALL COMPLETE AND OPERABLE SYSTEMS AT THEIR OWN EXPENSE. WHEN EACH ELECTRICAL SYSTEM IS COMPLETE, THE CONTRACTOR SHALL TEST AND CONFIRM ITS PROPER OPERATION. ANY INCOMPLETE SYSTEM SHALL BE MADE COMPLETE AND OPERABLE.
- THE ARCHITECTURAL AND MECHANICAL PLANS ARE CONSIDERED A PART OF THE ELECTRICAL DOCUMENTS SO FAR AS ANY ELECTRICAL ITEMS THEY MAY CONTAIN. THE ELECTRICAL CONTRACTOR SHALL REFER TO AND COORDINATE WITH THEM. NO EXTRA COST SHALL BE ALLOWED FOR FAILURE TO COORDINATE THE CONTRACT DOCUMENTS WITH OTHER TRADES AND/OR IF EQUIPMENT DIMENSIONS ARE GREATER THAN SPECIFIED AND/OR DIMENSIONED ON THE PLANS.
- NO ADDITIONS TO THE CONTRACTOR BID WILL BE ALLOWED FOR CHANGES MADE NECESSARY BY INTERFERENCE WITH OTHER WORK.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE EQUIPMENT, MATERIALS AND LABOR FOR THE CONNECTIONS OF ALL EQUIPMENT SHOWN ON THE PLANS - ARCHITECTURAL, MECHANICAL, ETC.
- THIS PROJECT IS TO BE INSTALLED IN STRICT ACCORDANCE WITH LOCAL AND STATE CODES AND THE NEC. IF AT ANY TIME DURING CONSTRUCTION, OR AFTER, SOMETHING IS FOUND TO BE INSTALLED IN VIOLATION OF THE CODES LISTED ABOVE, IT SHALL BE CORRECTED AT THE CONTRACTORS EXPENSE.
- ALL EQUIPMENT PROVIDED BY THE ELECTRICAL CONTRACTOR SHALL BE LISTED AND LABELED BY A NATIONALLY RECOGNIZED TESTING AGENCY, ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, AND BE PROPERLY INSTALLED FOR THE CONDITIONS AND SPACE THAT EQUIPMENT IS BEING INSTALLED WITHIN.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND CONFIRM THE EXACT LOCATION OF THE POWER PANELS FROM WHICH NEW CIRCUITS ARE BEING FED FROM. VERIFY EXISTING BRANCH CIRCUIT BREAKERS AND PROVIDE NEW BREAKERS AS NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM.
- THE ELECTRICAL CONTRACTOR SHALL INSTALL A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT RUN. CONDUIT SHALL NOT BE USED AS AN EQUIPMENT GROUNDING CONDUCTOR. THE ELECTRICAL CONTRACTOR SHALL GROUND THE ELECTRICAL SYSTEM IN ACCORDANCE WITH LOCAL AND NATIONAL CODES.
- THE ELECTRICAL CONTRACTOR SHALL CONFIRM MINIMUM CODE (NEC) WORKING CLEARANCE BEFORE INSTALLING ANY ELECTRICAL PANELS, CABINETS, DISCONNECT, TRANSFORMERS, ETC. AND SHALL MOVE THE PANELS/EQUIPMENT AT HIS EXPENSE IF REJECTED BY AN INSPECTOR. IF CLEARANCE IS NOT POSSIBLE, THE DESIGNER SHALL BE NOTIFIED IMMEDIATELY IN WRITING.
- CONDUIT LAYOUTS SHOWN ON THE PLANS ARE DIAGRAMMATIC, NOT INDICATING THE ROUTING REQUIRED. THE EC SHALL ROUTE THE CONDUITS AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION AND SHALL COORDINATE WITH DUCTWORK, PIPING, EQUIPMENT, BUILDING STRUCTURE AND OTHER POTENTIAL OBSTRUCTIONS.
- THE CONTRACTOR SHALL ALLOW THE MOVEMENT, BEFORE ROUGH-IN, OF ANY ELECTRICAL PANEL, DEVICE, LUMINAIRE, ETC. A DISTANCE OF 10 FEET WITHOUT REQUIRING ADDITIONAL COST TO THE PROJECT.
- THE ELECTRICAL CONTRACTOR SHALL SECURE ALL CONDUIT TO THE STRUCTURE AS IT IS SET IN PLACE USING INDUSTRY STANDARD METHODS AND PRACTICES.
- MINIMUM SIZE CONDUIT SHALL BE 3/4". ABOVE GROUND CONDUIT SHALL BE EMT WITH STEEL SET SCREW FITTINGS. UNDERGROUND CONDUIT SHALL BE PVC (SCH40) WITH GRC ELBOWS AND RISERS WRAPPED IN CORROSION RESISTANT MATERIALS WHERE IN DIRECT CONTACT WITH THE SOIL.
- FLEXIBLE METAL CONDUIT SHALL BE LIMITED TO CONNECTIONS TO LIGHT FIXTURES AND FINAL CONNECTIONS TO MOTORS OR OTHER EQUIPMENT SUBJECT TO VIBRATION. LENGTHS OF FLEXIBLE OR SEAL TITE CONDUIT SHALL NOT EXCEED 72" INCHES. USE LFMC IN DAMP OR WET LOCATIONS.
- WIRING DEVICES SHALL MATCH EXISTING COLOR AND FACEPLATE TYPE. COLOR TO MATCH ADJACENT ARCHITECTURAL FINISH. COORDINATE WITH ARCHITECT.
- TO ASSURE ALL DEVICES ARE RIGIDLY SET, THE ELECTRICAL CONTRACTOR SHALL SECURE ALL DEVICE BOXES WITH BRACKETS, HANGERS, ETC. DESIGNED FOR THE APPLICATION. ANY DEVICE BOXES NOT SECURED WILL BE MADE SECURE AT THE CONTRACTORS EXPENSE.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL EMPTY CONDUITS WITH 200LB RATED NYLON PULL CORD.
- BEFORE ANY ELECTRICAL CONDUIT, BOXES, ETC. ARE COVERED (FLOOR, CEILINGS, WALLS, ETC.), THEY SHALL BE APPROVED BY THE INSPECTING OFFICER (INSPECTOR). THE UNCOVERING AND REPLACEMENT OF ELECTRICAL WORK FOR THE INSPECTION PURPOSES WILL BE AT THE COST OF THE ELECTRICAL CONTRACTOR.
- WHERE WIRE SIZE IS NOT SHOWN ON THE DRAWINGS FOR 20A, 120 OR 277VAC BRANCH CIRCUITS, THE CIRCUIT SHALL CONSIST OF 2#12(CU, THHN/THWN-2)+1#12(CU, THHN/THWN-2)GND IN 3/4" EMT CONDUIT. THIS WIRE SIZE SHALL BE INCREASED TO #10(CU, THHN) FOR 120VAC BRANCH CIRCUITS WITH OVERALL LENGTHS EXCEEDING 100' TO ACCOMMODATE FOR VOLTAGE DROP. REFER TO EQUIPMENT SCHEDULES, FEEDER SCHEDULES AND NOTES ON DRAWINGS FOR ALL OTHER BRANCH CIRCUIT AND FEEDER WIRE/CONDUIT SIZING.
- CONDUCTORS SHALL BE COPPER STRANDED, 600VAC RATED, TYPE THHN/THWN-2 UNLESS OTHERWISE NOTED.
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH EQUIPMENT SUPPLIERS ON THE EXACT LOCATIONS OF ALL EQUIPMENT AND ELECTRICAL CONNECTIONS, WIRES, AND OVERCURRENT PROTECTION PRIOR TO ROUGH-IN. THE ELECTRICAL CONTRACTOR SHALL MAKE THE FINAL CONNECTION TO ALL EQUIPMENT UNLESS OTHERWISE DIRECTED BY THE EQUIPMENT SUPPLIER.
- OBTAIN FROM SUPPLIERS ALL WIRING DIAGRAMS FOR EQUIPMENT PRIOR TO ANY ROUGH-IN. TO ASSURE THAT PROPER CHARACTERISTICS ARE PROVIDED, ANY INCORRECT WIRING OR DEVICES INSTALLED BY THE ELECTRICAL CONTRACTOR WITHOUT THE WIRING DIAGRAM SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. PROVIDE COPIES OF WIRING DIAGRAMS WITHIN EACH PIECE OF EQUIPMENT AND ADDITIONAL COPIES WITH THE OPERATION AND MAINTENANCE MANUALS.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR TO PROVIDE CONDUIT AND DEVICE MOUNTING BOXES FOR THERMOSTATS AND OTHER MECHANICAL CONTROLS.
- IT IS THE INTENT OF THE CONSTRUCTION DOCUMENTS FOR ALL DEVICES TO BE FLUSH MOUNTED AND CONDUIT/CABLING INSTALLED CONCEALED WITHIN WALLS/CEILINGS. IN AREAS WHERE CONDUIT MUST BE INSTALLED EXPOSED IT SHALL BE COORDINATED WITH THE ARCHITECT AND/OR ENGINEER. ALL EFFORTS SHALL BE MADE TO CONCEAL WIRING METHODS.
- PROVIDE AN UPDATED, TYPED PANEL CIRCUIT DIRECTORY FOR ALL PANELS WHERE CIRCUITS HAVE BEEN MODIFIED, ADDED, OR REMOVED BY THE SCOPE OF THIS PROJECT. CIRCUIT DESCRIPTIONS ON THE DIRECTORY SHALL BE UNIQUE AND INDICATE THE ROOM AND EQUIPMENT/DEVICE IT IS FEEDING. DATE DIRECTORY WITH PROJECT COMPLETION DATE. MODIFIED CIRCUITS TO BE IN BOLD.
- SUBMIT A SCALED LAYOUT (1/4" = 1') OF ALL ELECTRICAL ROOMS BASED ON THE ELECTRICAL GEAR AND EQUIPMENT SUBMITTALS.
- PROVIDE A CLEAR, TYPED LABEL ON THE FACEPLATE OF ALL RECEPTACLES AND LIGHT SWITCHES INDICATING THE CIRCUIT IT IS TIED TO. USE LABELING CONVENTION xx-xx, WHERE "xx" IS THE NAME OF THE PANEL AND "xx" IS THE BRANCH CIRCUIT NUMBER. LABELS LENGTH SHALL NOT EXCEED 1/4" ON EITHER SIDE OF TEXT.
- FUSED DISCONNECTS TO BE HEAVY DUTY.

Sheet List Table

Sheet Number	Sheet Title
EG001	ELECTRICAL LEGEND & NOTES
EG501	ELECTRICAL SCHEDULES
ED101	ELECTRICAL DEMOLITION PLAN
EP101	ELECTRICAL POWER PLAN

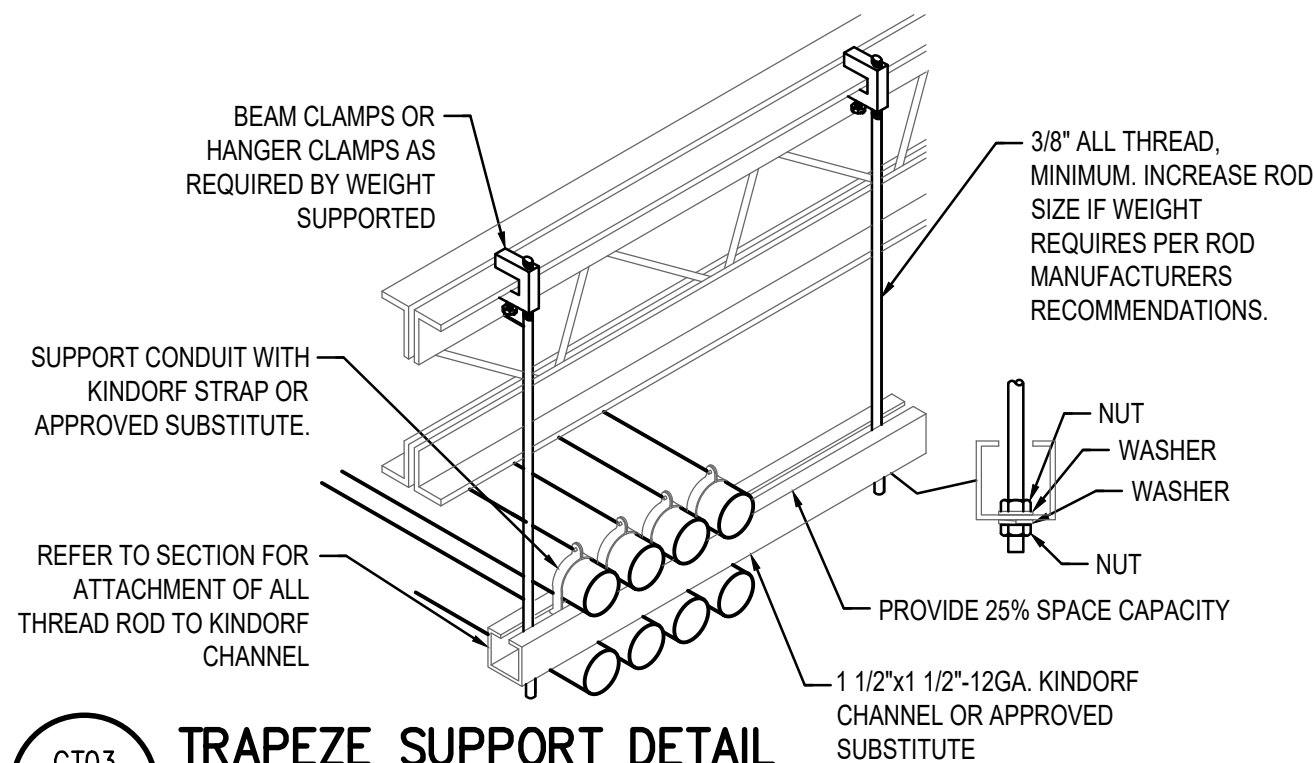
4



MT02 MOUNTING HEIGHTS DETAIL
EG001 NO SCALE

- NOTES:
- THE ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL TELEVISION OUTLETS WITH THE ARCHITECT PRIOR TO INSTALLATION.
 - ALL DEVICES SHOWN ON THIS DETAIL ARE FOR REFERENCES OF MOUNTING HEIGHTS ONLY. THE ELECTRICAL CONTRACTOR SHALL FIELD ADJUST THE HEIGHTS OF THE DEVICES AS REQUIRED FOR PROPER MOUNTING OF THE DEVICES.
 - ALL DEVICES REQUIRED FOR THIS PROJECT MAY NOT APPEAR ON THIS DETAIL. ALL ITEMS SHOWN ON THIS DETAIL MAY NOT BE REQUIRED FOR THIS PROJECT.
 - FIRE ALARM HORN/STROBES ARE TO BE MOUNTED NO HIGHER THAN 96" AND NO LOWER THAN 80" ON CENTER.

3



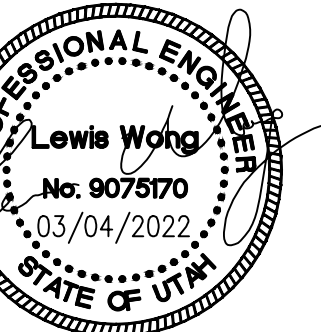
CT03 TRAPEZE SUPPORT DETAIL
EG001 NO SCALE



VBFA

WWW.VBFA.COM

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F



Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
© Van Boerum & Frank Assoc., 2014

CASTLE DALE EMERY SR SEMINARY
CASTLE DALE UTAH STAKE
HVAC UPGRADE
915 NORTH CENTER STREET, CASTLE DALE, UT 84513

REVISIONS

NO.	DESCRIPTION

VBFA PROJECT #: 22038

CHECKED BY: LW

DRAWN BY: MM

CURRENT/ISSUE DATE: MAR 2022

SHEET CONTENTS

ELECTRICAL
LEGEND &
NOTES

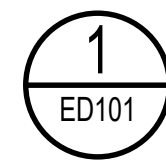
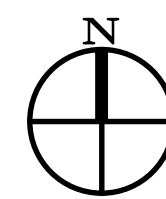
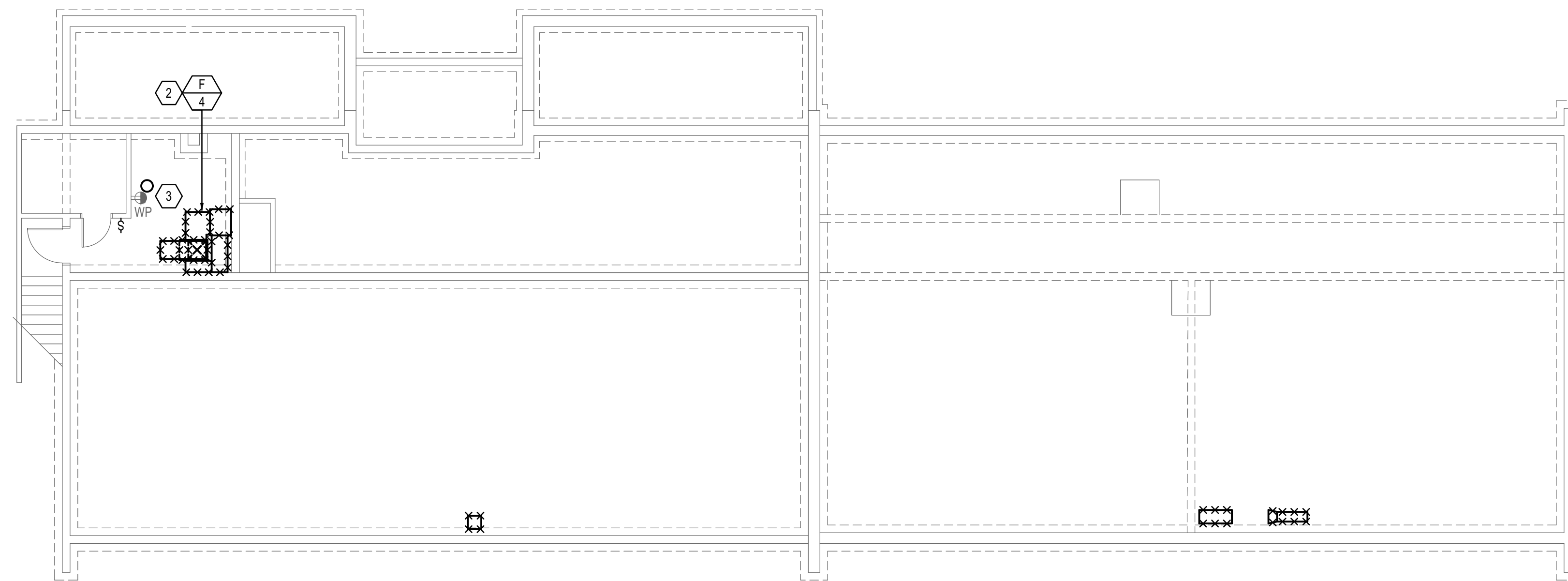
EG001

D

C

B

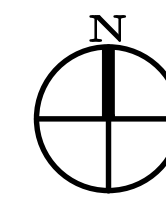
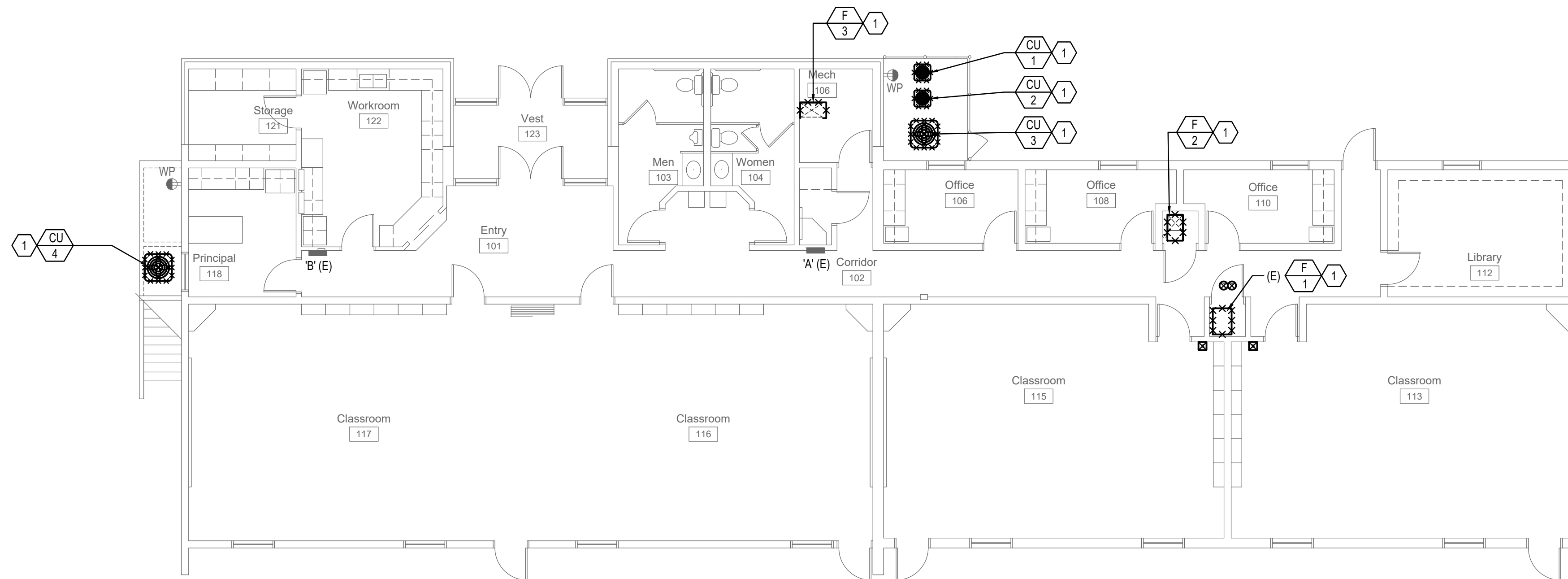
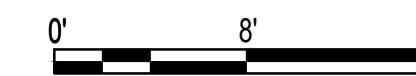
A



1 ELECTRICAL DEMOLITION FOUNDATION PLAN

ED101

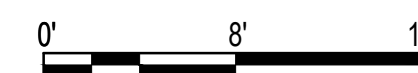
SCALE: 1/8" = 1'-0"



2 ELECTRICAL DEMOLITION FLOOR PLAN

ED101

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



KEYED NOTES

- EXISTING EQUIPMENT TO BE REMOVED. REMOVE DISCONNECTS, DEVICES, AND WIRE ASSOCIATED WITH EQUIPMENT BACK TO THE SOURCE. EXISTING CONDUIT TO BE RE-USED IF SIZE IS EQUAL TO OR GREATER THAN SIZE CALLED OUT ON EQUIPMENT SCHEDULE. EC TO FIELD VERIFY CONDUIT SIZE.
- EXISTING EQUIPMENT TO BE REMOVED. REMOVE CONDUIT, DEVICES, AND WIRE ASSOCIATED WITH EQUIPMENT BACK TO SOURCE AND MARK BREAKER AS SPARE. PROVIDE NEW UPDATED TYPED PANEL SCHEDULE INDEX. IF CONDUIT IS INACCESSIBLE, CUT CONDUIT FLUSH WITH STRUCTURAL SURFACE.
- EXISTING LIGHT AND LIGHT SWITCH TO BE DEMOLISHED. REMOVE WIRE AND CONDUIT BACK TO THE NEAREST DEVICE TO REMAIN. IF CONDUIT IS INACCESSIBLE, CUT CONDUIT FLUSH WITH STRUCTURAL SURFACE.

GENERAL NOTES

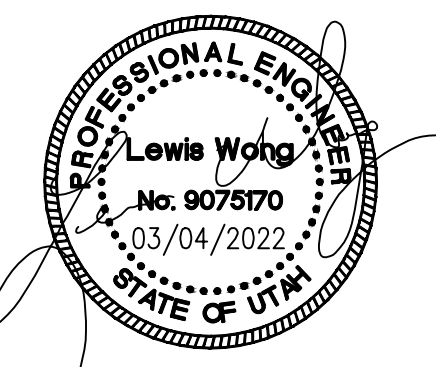
- EC SHALL COORDINATE WITH ALL OTHER TRADES DURING DEMOLITION AND CONSTRUCTION TO FACILITATE TIMELY WORK.
- ALL AREAS ARE TO BE KEPT CLEAN AND CLEAR OF DEBRIS AT ALL TIMES.
- CONTRACTOR SHALL PATCH AND REPAIR ALL WALLS, CEILING ETC. TO MATCH EXISTING CONDITIONS. PENETRATIONS SHALL BE SEALED WITH FIRE RATED CAULK.
- ROUTE ALL CONDUIT IN A NEAT AND ORDERLY FASHION. ALL CONDUIT SHALL BE CONCEALED ABOVE CEILING OR IN WALLS OR FINISHED SPACES UNLESS OTHERWISE INDICATED ON THE PLANS.
- DEVICES SHOWN ON DEMOLITION SHEETS ARE GATHERED FROM AS-BUILT DRAWINGS AND FIELD INVESTIGATION. NOT ALL DEVICES ARE SHOWN. DEVICE PLACEMENT IS SCHEMATIC AND NOT EXACT. CONTRACTOR TO FIELD VERIFY FOR EXACT LOCATIONS AND COORDINATE WORK WITH ALL OTHER DEVICES, EQUIPMENT, CONDUIT, ETC. WHETHER OR NOT SHOWN TO COMPLETE PROJECT.
- CONTRACTOR TO COORDINATE WITH OWNER FOR ITEMS TO BE SALVAGED PRIOR TO DEMOLITION. CONTRACTOR RESPONSIBLE FOR DISPOSING OF ANY MATERIAL THAT THE OWNER DOES NOT WANT TO KEEP.
- CAP AND LABEL ALL EMPTY CONDUIT TO REMAIN.
- DEVICES/EQUIPMENT SHOWN IN GRAY ARE EXISTING TO REMAIN. PRESERVE AND PROTECT. MAINTAIN EXISTING CIRCUIT INTEGRITY.



VBFA

WWW.VBFA.COM

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F



Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
• Van Boerum & Frank Assoc., 2014

CASTLE DALE EMERY SR SEMINARY
CASTLE DALE UTAH STAKE
HVAC UPGRADE
915 NORTH CENTER STREET, CASTLE DALE, UT 84513

REVISIONS

VBFA PROJECT #:	22038
CHECKED BY:	LW
DRAWN BY:	MM
CURRENT/ISSUE DATE:	MAR 2022

SHEET CONTENTS
**MAIN LEVEL
ELECTRICAL
DEMOLITION
PLAN**

ED101

1

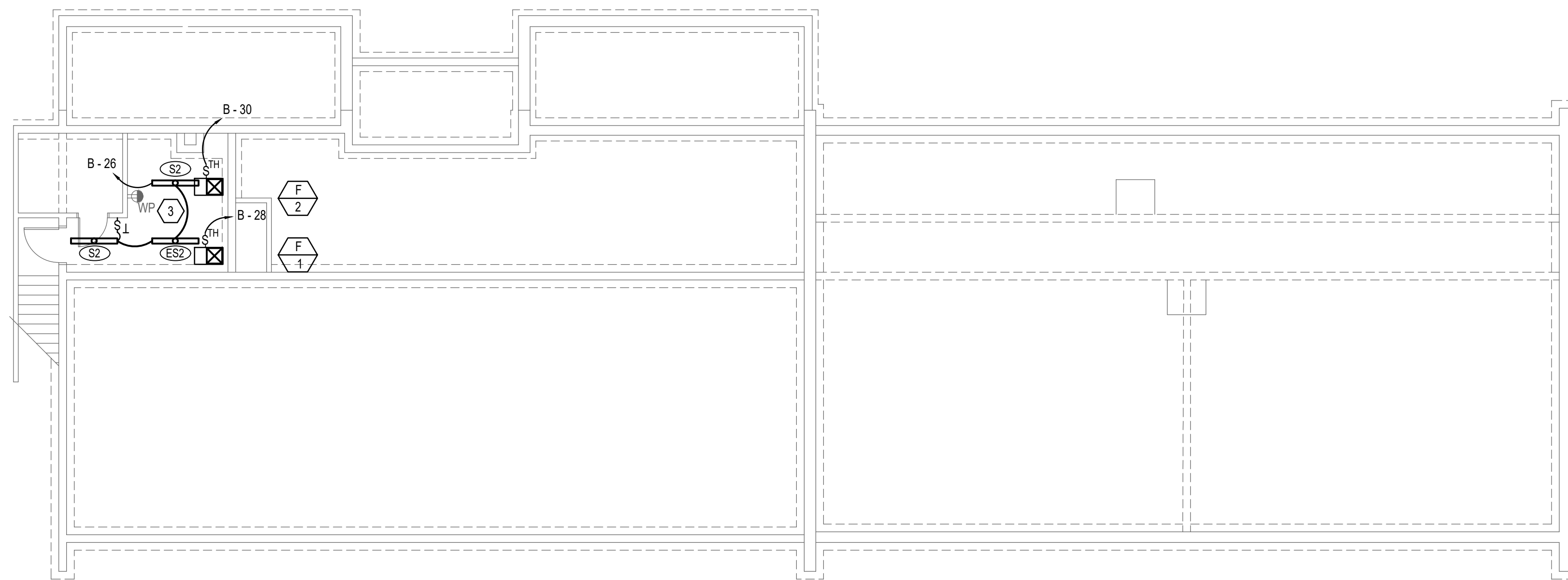
2

3

4

5

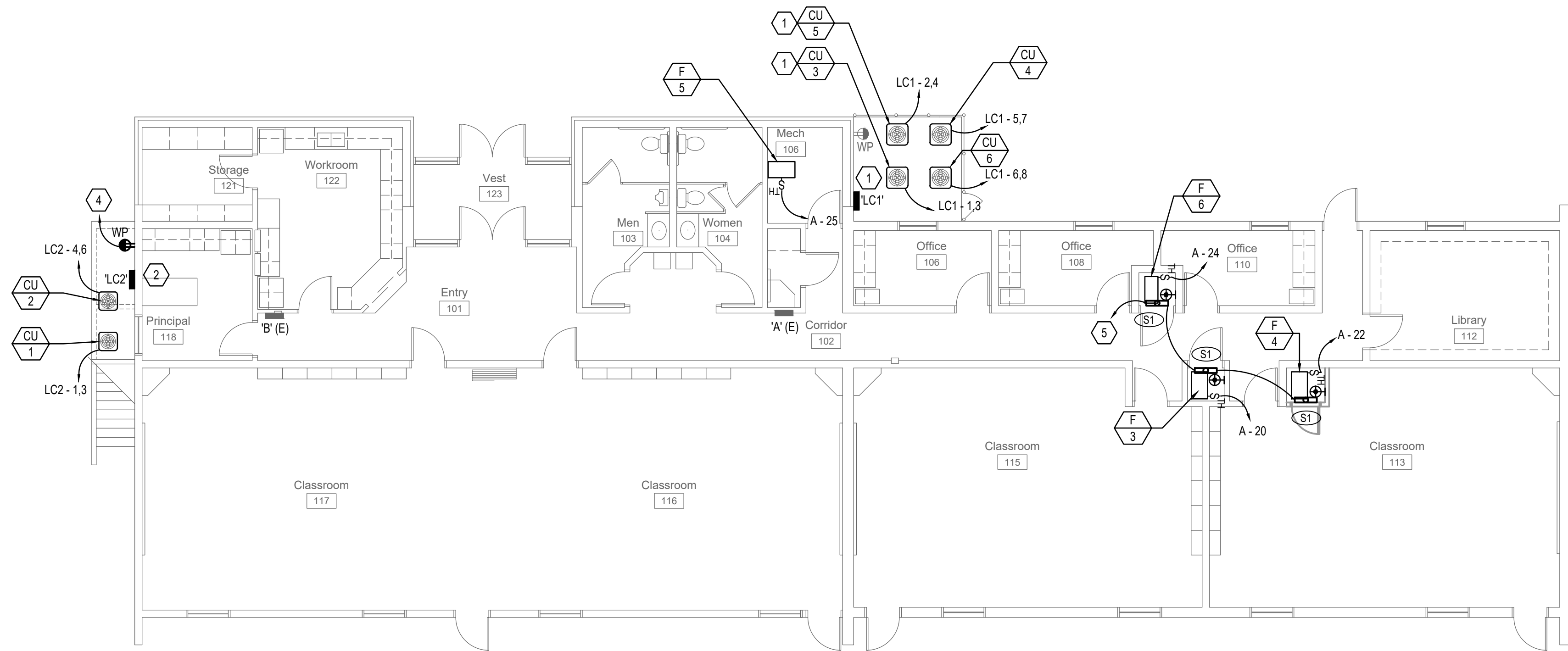
D



C

1 ELECTRICAL FOUNDATION PLAN
 EP101 SCALE: 1/8" = 1'-0"
 0' 8' 16'

B



A

2 ELECTRICAL FLOOR PLAN
 EP101 SCALE: 1/8" = 1'-0"
 0' 8' 16'

KEYED NOTES

- FURNISH AND INSTALL A NEW 100A, 3 PHASE LOAD CENTER. RUN 4#3, 1#8, 1 25C FROM A NEW 100A, 3P BREAKER IN PANEL 'A'. NEW BREAKER SHALL MATCH EXISTING AIC RATING.
- FURNISH AND INSTALL A NEW 60A, 3 PHASE LOAD CENTER. RUN 4#4, 1#8, 1 25C FROM A NEW 60A, 3P BREAKER IN PANEL 'B'. NEW BREAKER SHALL MATCH EXISTING AIC RATING.
- PROVIDE AN EMERGENCY BATTERY PACK FOR EMERGENCY LIGHTS. FIXTURE SHALL DELIVER 1400 LUMENS MINIMUM UPON COMMERCIAL POWER FAILURE REGARDLESS OF CONTROL DEVICE POSITION. RUN AN UNSWITCHED HOT CONDUCTOR AHEAD OF THE SWITCHING DEVICE TO THE BATTERY PACK FROM THE SAME CIRCUIT AS NORMAL FIXTURE OPERATION.
- CIRCUIT TO CLOSEST AVAILABLE EXISTING RECEPTACLE CIRCUIT WITH CAPACITY.
- CIRCUIT TO CLOSEST AVAILABLE EXISTING LIGHTING CIRCUIT W/ CAPACITY.

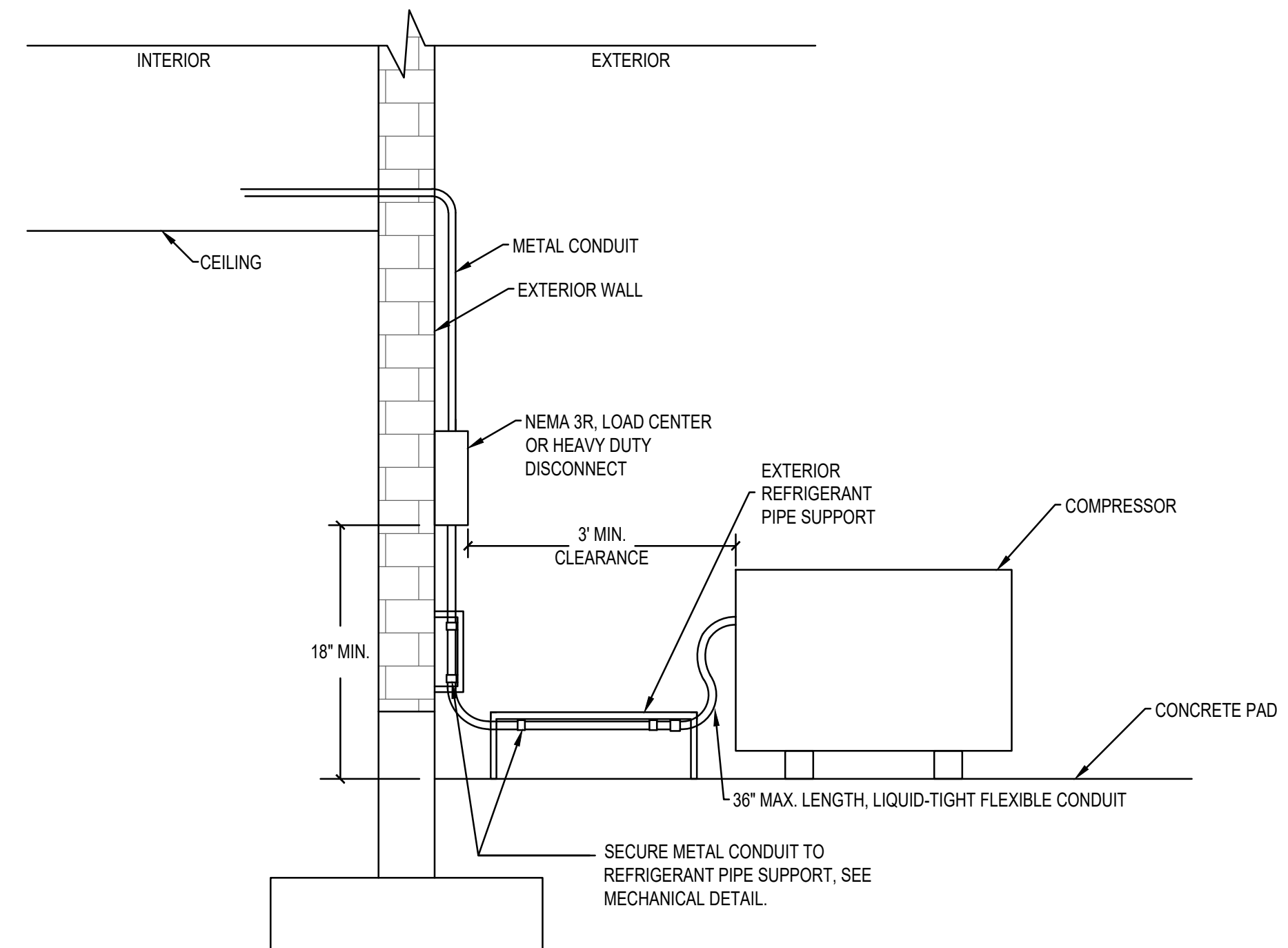
GENERAL NOTES

- EC SHALL COORDINATE WITH ALL OTHER TRADES DURING DEMOLITION AND CONSTRUCTION TO FACILITATE TIMELY WORK.
- ALL AREAS ARE TO BE KEPT CLEAN AND CLEAR OF DEBRIS AT ALL TIMES.
- CONTRACTOR SHALL PATCH AND REPAIR ALL WALLS, CEILINGS ETC. TO MATCH EXISTING CONDITIONS. PENETRATIONS SHALL BE SEALED WITH FIRE RATED CAULK.
- ROUTE ALL CONDUIT IN A NEAT AND ORDERLY FASHION. ALL CONDUIT SHALL BE CONCEALED ABOVE CEILINGS OR IN WALLS OR FINISHED SPACES UNLESS OTHERWISE INDICATED ON THE PLANS.
- CONTRACTOR TO COORDINATE WITH OWNER FOR ITEMS TO BE SALVAGED PRIOR TO DEMOLITION. CONTRACTOR RESPONSIBLE FOR DISPOSING OF ANY MATERIAL THAT THE OWNER DOES NOT WANT TO KEEP.
- CAP AND LABEL ALL EMPTY CONDUIT TO REMAIN.
- PROVIDE UPDATED TYPED PANEL SCHEDULES FOR PANELS AFFECTED BY THE SCOPE OF THIS WORK.
- ALL NEW BREAKERS SHALL MATCH EXISTING AIC RATINGS OF ITS CORRESPONDING PANEL WHERE IT IS INSTALLED.
- DISCONNECTS TO BE HEAVY DUTY AND SHALL BE LOCATED TO MEET NEC CLEARANCES. COORDINATE WITH EQUIPMENT LOCATIONS PRIOR TO ROUGH IN.
- DEVICES/EQUIPMENT SHOWN IN GRAY ARE EXISTING TO REMAIN.
- FURNISH AND INSTALL A CONVENIENCE OUTLET WITHIN 25' OF NEW EQUIPMENT IF NONE EXIST. TIE TO THE NEAREST 120V, 20A POWER RECEPTACLE CIRCUIT THAT HAS AVAILABLE SPACE AND CAPACITY THAT IS NOT DEDICATED FOR EQUIPMENT.
- CIRCUIT NEW LIGHTS TO EXISTING LIGHTING CIRCUIT IN THE SPACE.

VBFA
 WWW.VBFA.COM
 181 East 5600 South
 Murray, UT 84107
 801.530.3148 T
 801.530.3150 F

Original drawings remain the property of the Engineer and as such the Engineer retains total ownership and control. The design represented by these drawings are sold to the client for a one time use, unless otherwise agreed upon in writing by the Engineer.
 • Van Boerum & Frank Assoc., 2014

CASTLE DALE EMERY SR SEMINARY
 CASTLE DALE UTAH STAKE
HVAC UPGRADE
 915 NORTH CENTER STREET, CASTLE DALE, UT 84513



5 EXTERIOR COMPRESSER/DISCONNECT DETAIL (TYP.)
 EP101 NO SCALE

REVISIONS	

VBFA PROJECT #:	22038
CHECKED BY:	LW
DRAWN BY:	MM
CURRENT/ISSUE DATE:	MAR 2022
SHEET CONTENTS	
MAIN LEVEL ELECTRICAL PLAN	

EP101

FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS	CEILING	CEILING HT	SPECIAL TRIM OR EQUIPMENT
MAIN FLOOR							
001	LOWER MECHANICAL	F2	B2	W2	C2	CH2	
113	CLASSROOM	F1	B1	W1/W2	C2	CH1	S1 S2 S3
117	CLASSROOM	F3/F4	B3	W2	C2	CH2	
122	WORKROOM	F3	B3	W3	C2	CH2	S4
124	MECHANICAL	F2	B2	W4	C1	CH1	

DESCRIPTION

F FLOOR	B BASE
F1 CARPET	B1 CARPET
F2 CONCRETE - PAINTED	B2 NONE
F3 EXISTING	B3 EXISTING
F4 CARPET PATCH	
W WALLS	CH CEILING HEIGHT
W1 GYPSUM BOARD - PAINTED	CH1 9'-9"
W2 EXISTING	CH2 EXISTING
W3 PATCH GYPSUM BOARD - PAINTED	
W4 GYPSUM BOARD TAPED - NOT PAINTED	S SPECIAL TRIM OR EQUIPMENT
C CEILING	S1 WOOD TRIM - SEE F/A101
C1 NEW GYPSUM BOARD TAPED - NOT PAINTED	S2 CHAIR RAIL - SEE H/A101
C2 EXISTING	S3 WOOD TRIM ON WALL CARPET AT DOORS - SEE G/A101
	S4 PATCH WALL WHERE NEW FLUES INSTALLED INSIDE WALL

NOTE:

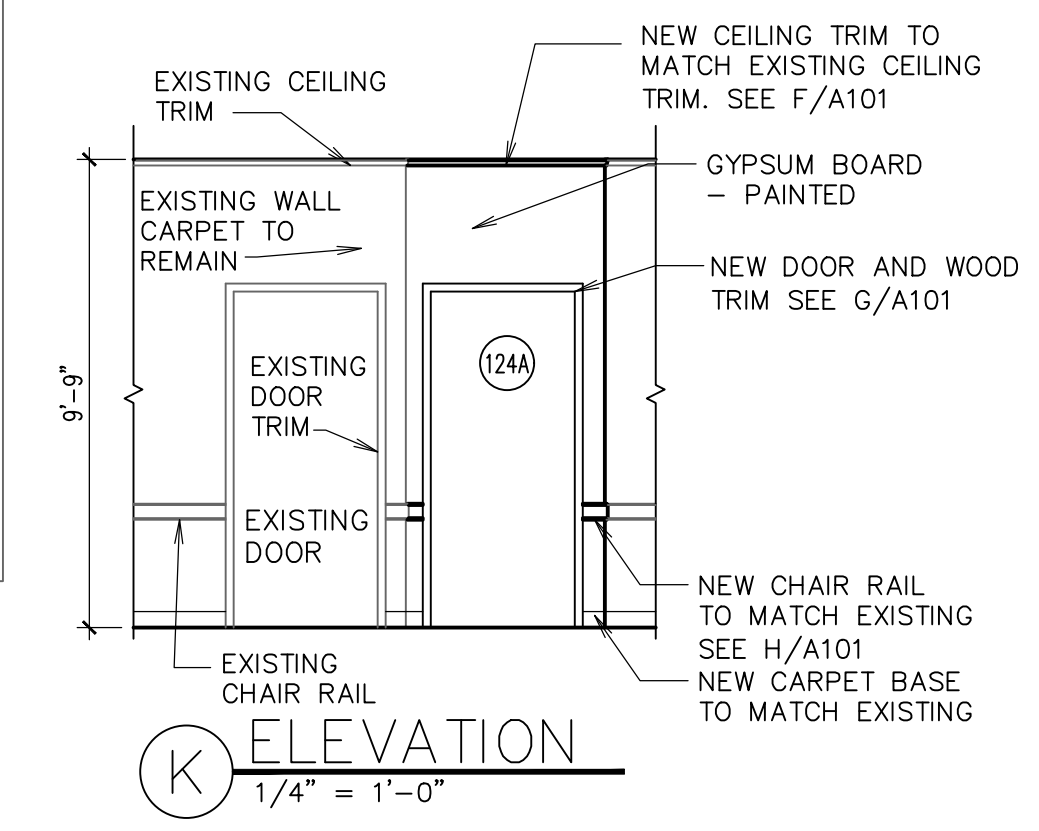
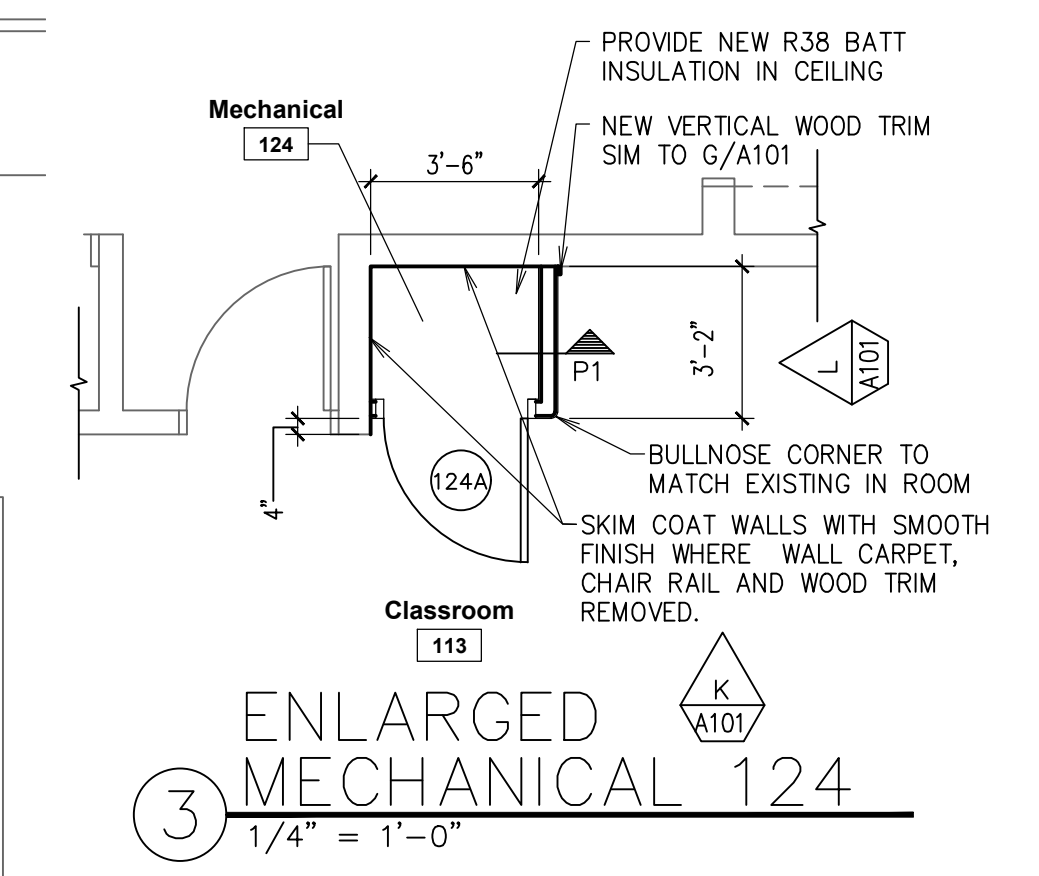
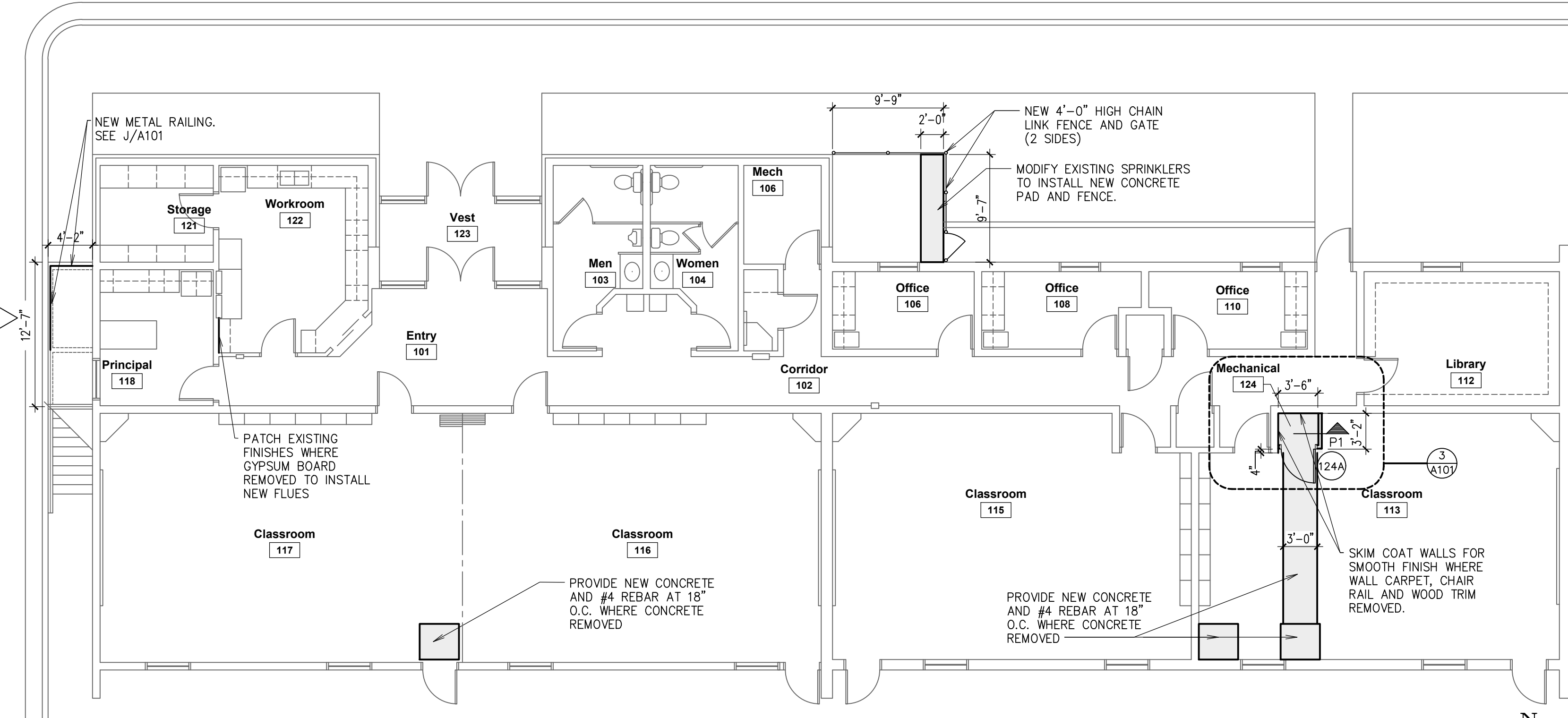
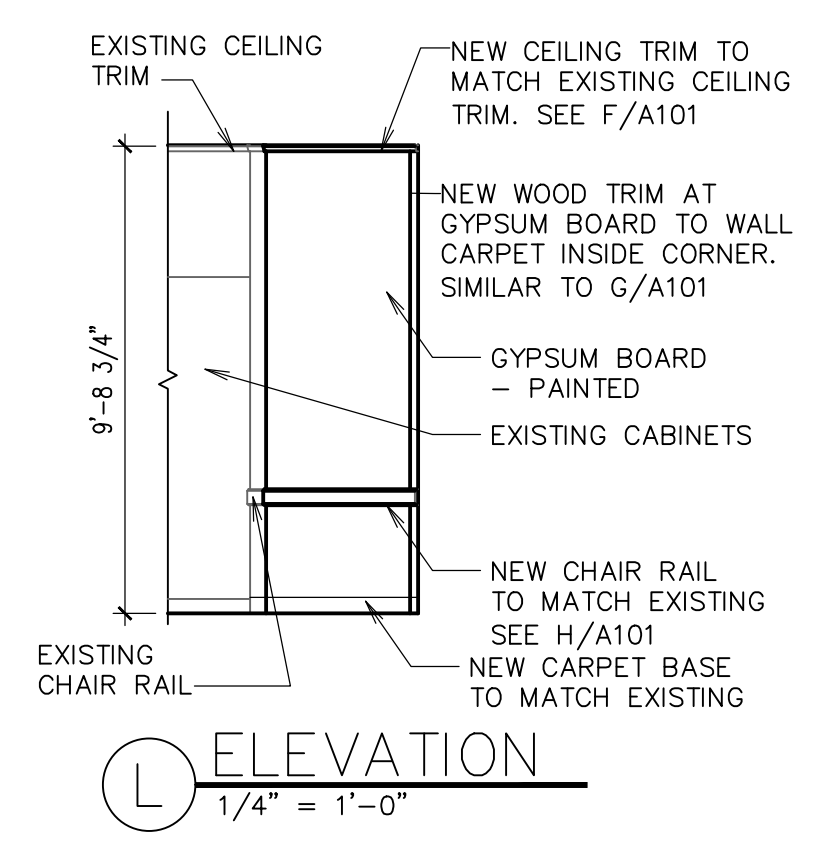
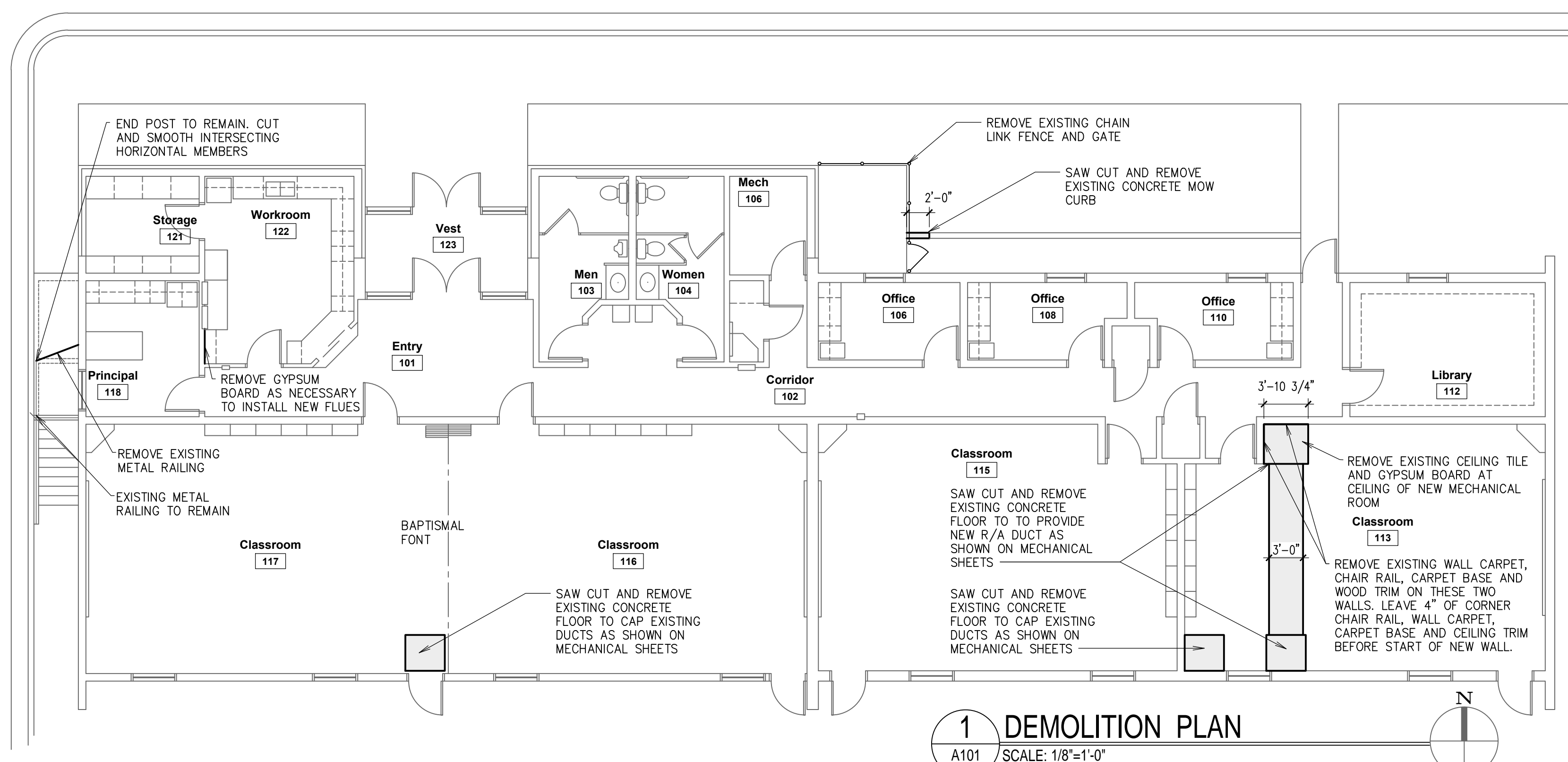
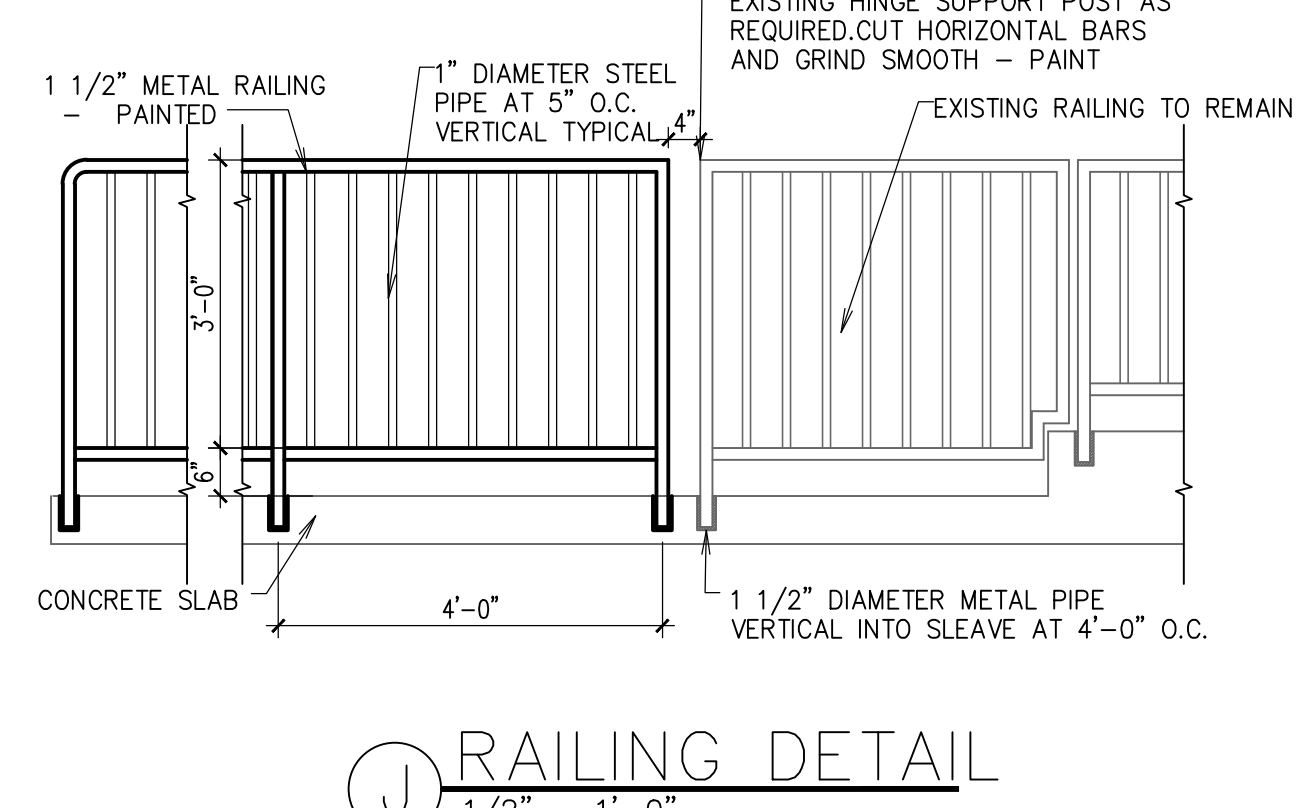
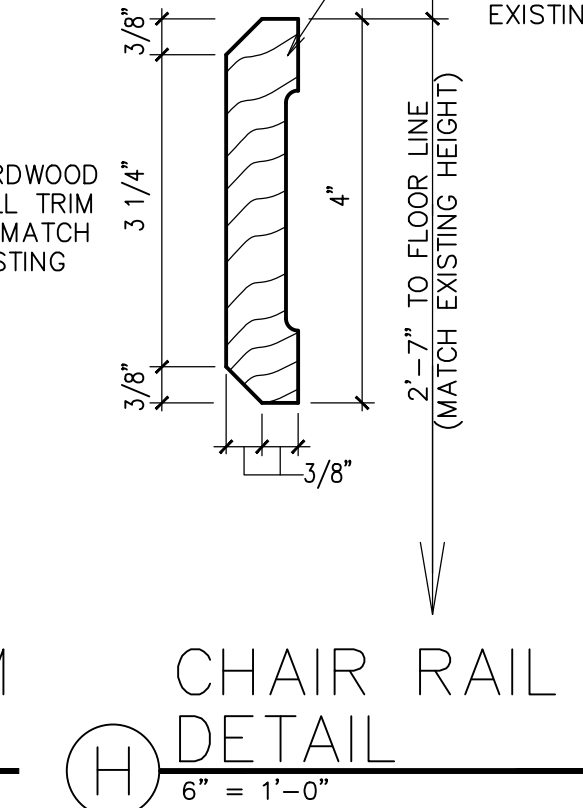
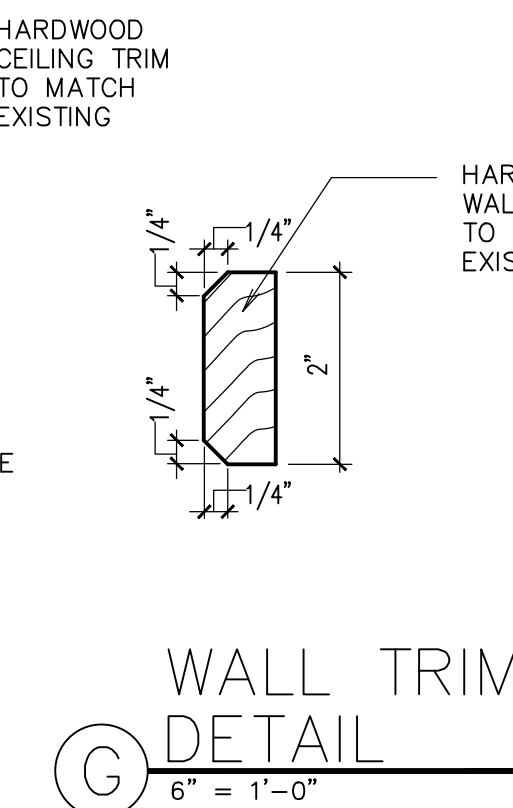
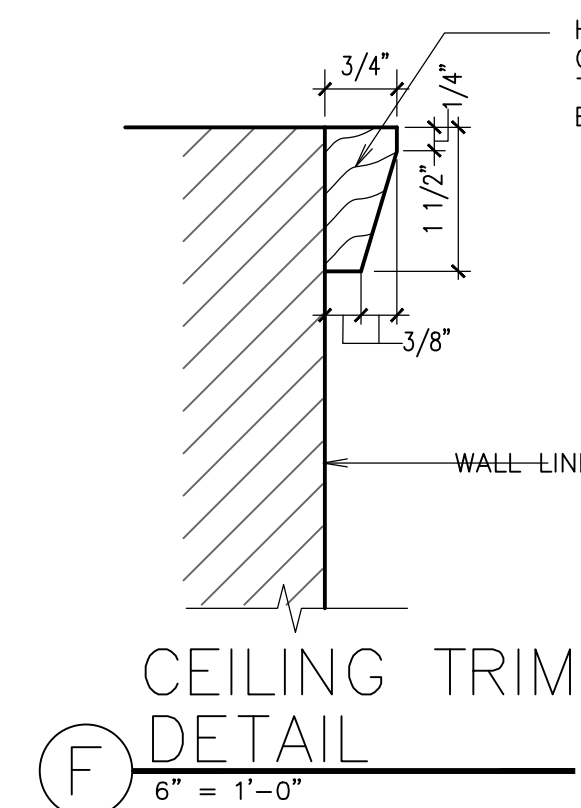
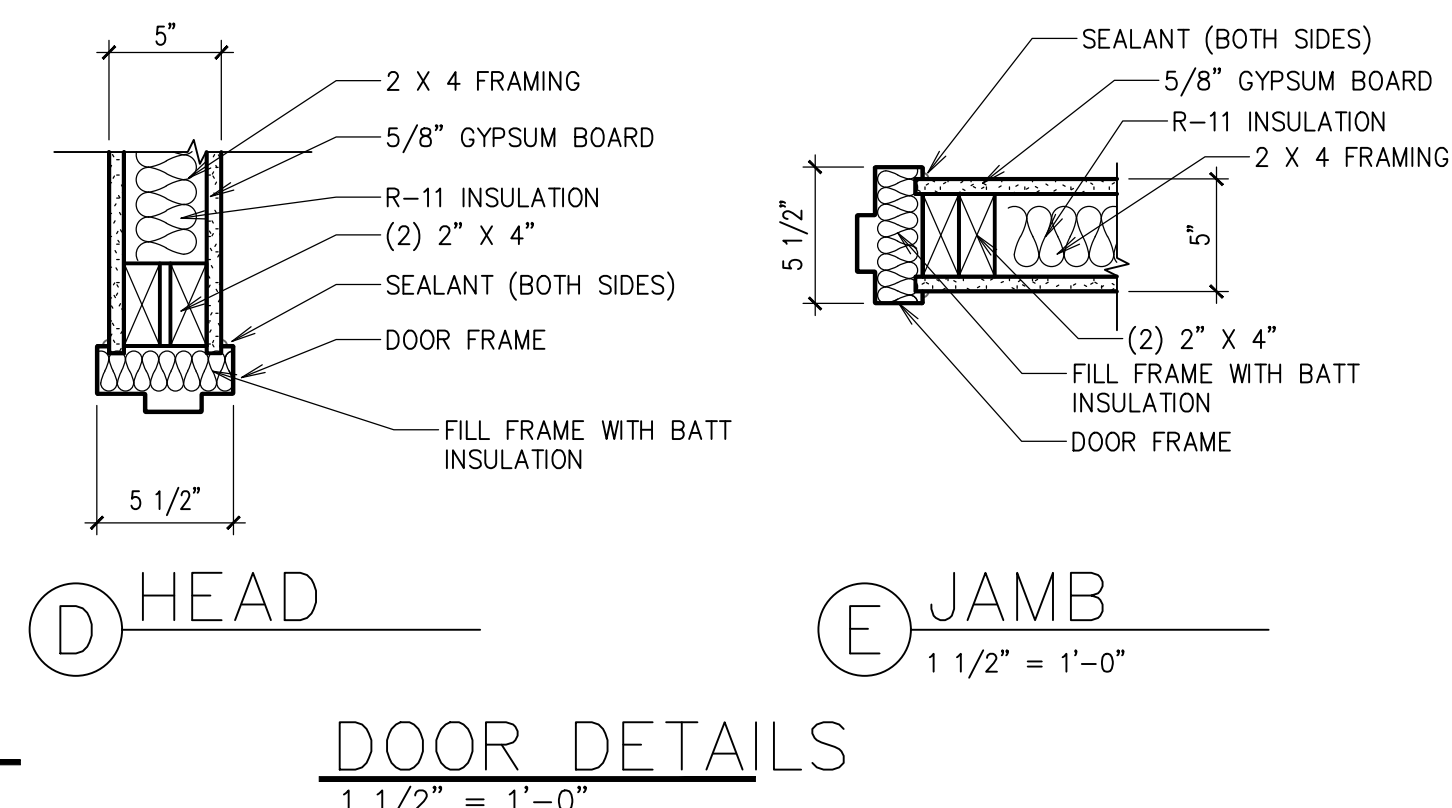
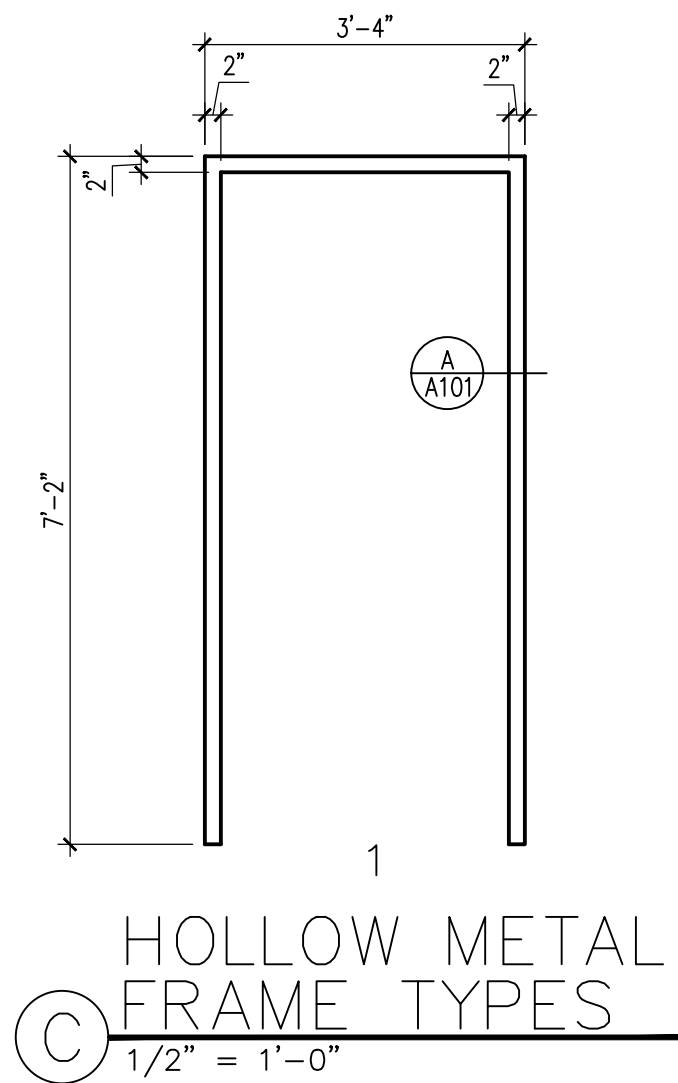
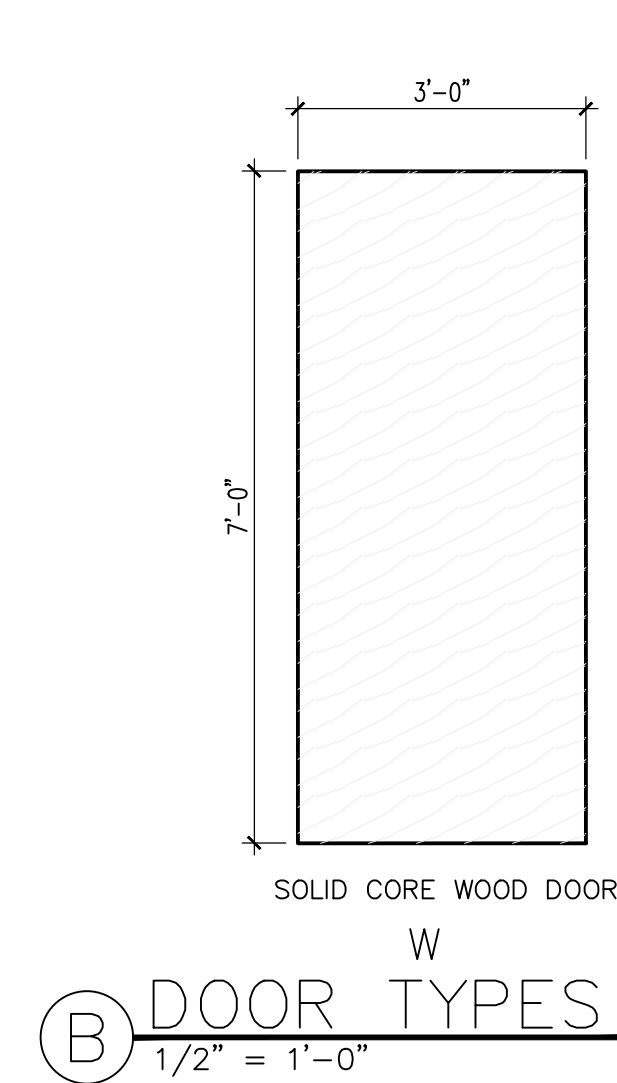
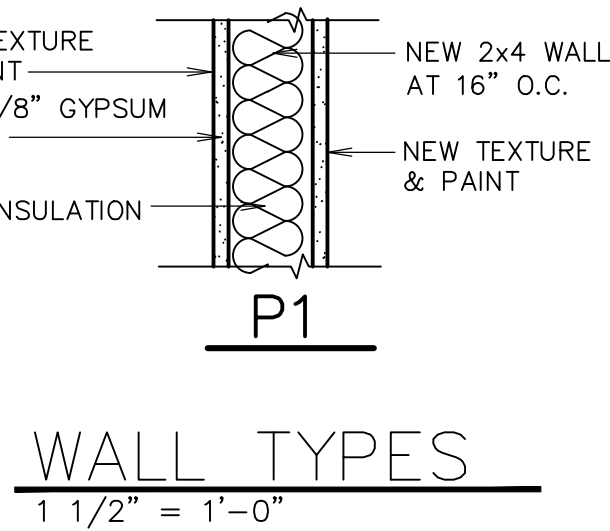
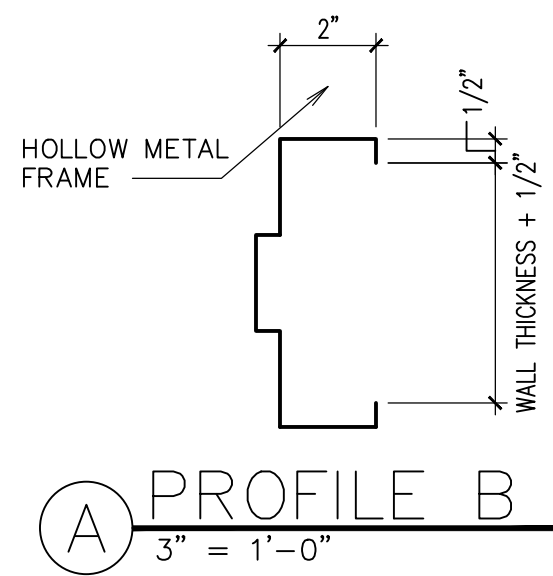
1 ALL ITEMS ARE NEW UNLESS NOTED AS EXISTING

DOOR SCHEDULE

MARK	ROOM	DOOR				FRAME		KEYING	HARDWARE GROUP	THRESHOLD	REMARKS
		TYPE	PAIR	SINGLE	GLASS	PROFILE	DETAILS				
							HEAD	JAMB			
MAIN FLOOR											
124A	113	W					D/A101	E/A101	XAA13	26	T1

DESCRIPTION

S SIZE	T THRESHOLD
S1 3'-0" x 7'-0" x 1 3/4"	T1 ACOUSTIC THRESHOLD



Architect / Engineer:
KNELL ARCHITECTS, P.C.
 45 EAST 300 NORTH, PROVO, UTAH 84606
 PHONE: (801) 375-634 FAX: (801) 377-1061

Stamp:

 3/1/22
 FRED CAMPBELL
 LICENSED ARCHITECT

Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

Project Number: 504-8931
 Plan Series: R&I
 Property Number: 504-8931

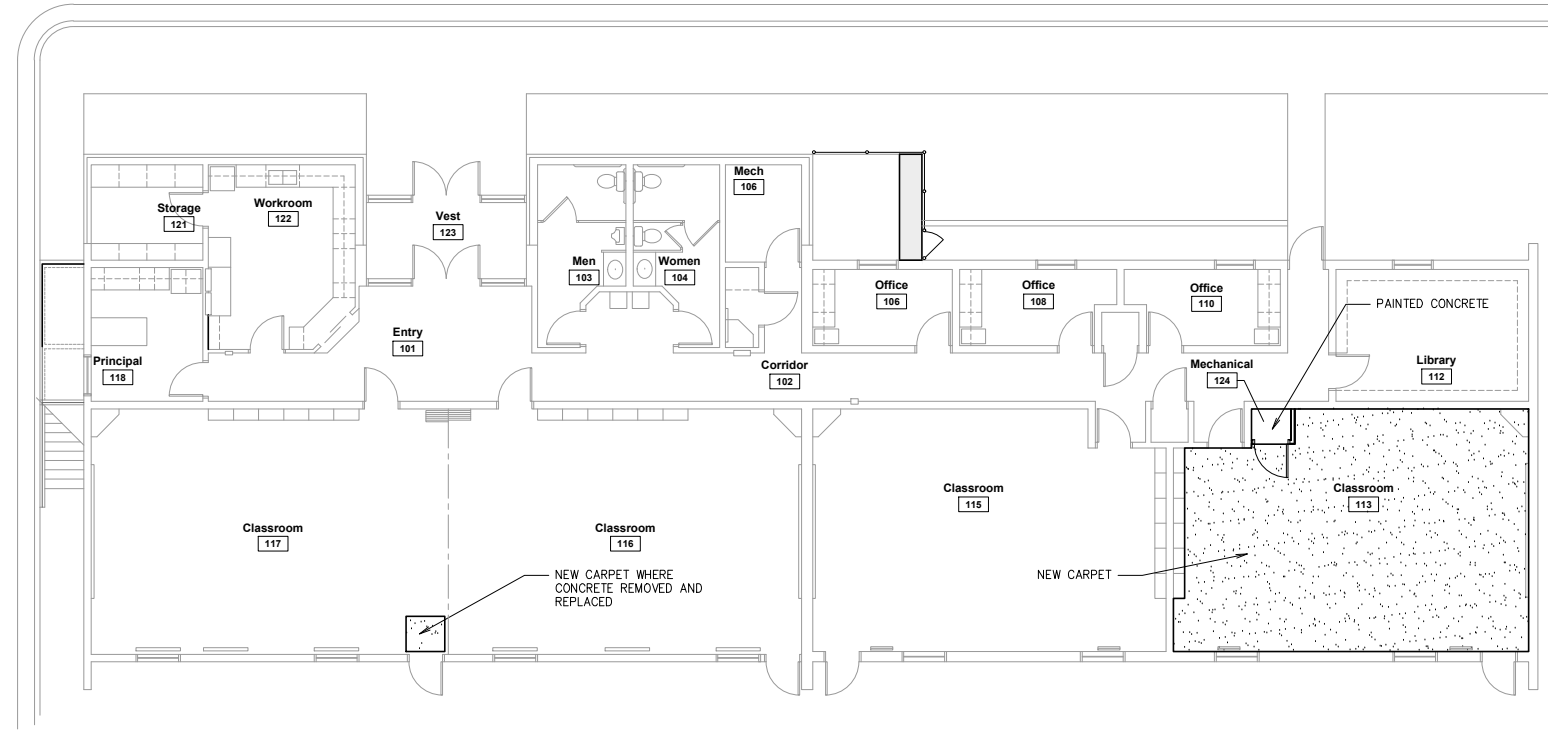
Sheet Title:
FLOOR PLAN

Sheet:
A101

915 NORTH CENTER STREET
 CASTLE DALE, UTAH

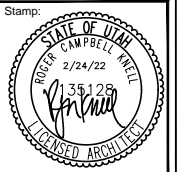
CASTLE DALE EMERY SR SEMINARY
 CASTLE DALE UTAH STAKE
 HVAC UPGRADE

FRED\Projects\DRAWINGS\CHURCH\ITES\Castle Dale Emery SR Seminary\A101 FLOOR PLAN.dwg 01 Mar. 2022 10:44am



1 FURNISHING PLAN
 F101 SCALE: 1/8"=1'-0"

KNELL ARCHITECTS, P.C.
 45 EAST 300 NORTH, PROVO, UTAH 84606
 PHONE: (800) 375-0624 FAX: (800) 377-1061



Stamp:
 STATE OF UTAH
 BRUCE CAMPBELL KNELL
 2/24/22
 33125
 LICENSED ARCHITECT

CASTLE DALE EMERY SR SEMINARY
 CASTLE DALE FURNISHING
 HVAC UPGRADE
 915 NORTH CENTER STREET
 CASTLE DALE, UTAH

Project for:
**THE CHURCH OF
 JESUS CHRIST
 OF LATTER-DAY SAINTS**

\\FRED\Projects\DRAWINGS\CHURCHES\Castle Dale Emery SR Seminary\A101 FLOOR PLAN.dwg 24 Feb 2022 12:06pm

Project Number:	504-8931
Plan Series:	R&I
Property Number:	504-8931

Sheet Title:
FURNISHING PLAN

Sheet:
F101