

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE INSTALLATION OF THE UNDERGROUND CONDENSATE DRAIN LINES WITH THE BUILDING'S FOOTERS.

	CITY OF FORT MYERS
	THIS PLAN REVIEWED FOR SUBSTANTIAL CODE COMPLIANCE WITH ALL APPLICABLE CODES.
DATE APPROVED:	06/17/20
PERMIT NUMBER:	BLD2020-00848
PROPERTY ADDRESS:	3810 OLD BERRY POINT
JOB DESCRIPTION:	New construction of a 3 story apartment building that

- | | | PROPERTY ADDRESS: 10000 10TH AVE UNIT 10000
JOB DESCRIPTION: New construction of a 3 story apartment building that includes 72 units of 4 types and 1 direct entry direct entry |
|---|--|--|
| 1 | 1-1/2" DIA. INSULATED CONDENSATE DRAIN | |
| 2 | INSTALL A WALL CLEANOUT FOR THE PENETRATING FLOOR SLAB. SLAB PENETRATION SHALL BE WATER-TIGHT. | |
| 3 | MOUNT UNIT ON EQUIPMENT PAD AND SECURE THE UNIT TO THE PAD. REFER TO DETAIL ON M6.01 FOR MORE INFORMATION. PROVIDE EQUIPMENT TAGS ON CONDENSING UNITS. THE IDENTIFYING THE APARTMENT NUMBER. SERVED TAGS SHALL BE THREE-LAYER PLASTIC WITH ENGRAVED WHITE LETTERS ON A BLACK BACKGROUND. | |
| 4 | MAINTAIN 3'-0" CLEAR IN FRONT OF UNITS ELECTRICAL ACCESS SECTION. | |
| 5 | 1-1/2" DIA SCH 40 PVC CONDENSATE DRAIN PIPE SLOPED DOWNWARDS TO THE POINT OF TERMINATION. | |
| 6 | REFRIGERANT LINES AND CONTROL WIRING ROUTED BY THE CONTRACTOR BETWEEN THE INDOOR AND OUTDOOR UNITS. THE EXTERIOR WALL PENETRATION SHALL BE 12"-18" ABOVE GRADE WITH A FLASHED STEEL METAL WALL CAP. GALVEAL WEATHER-TIGHT. PRIME AND PAINT CAP TO MATCH SURROUNDING WALL. | |
| 7 | 1-1/2" INSULATED CONDENSATE DRAIN PIPE FROM RISER ABOVE. CONTINUE CONCEALED ABOVE THE CEILING AND SLOPED TO THE DRAIN RISER CONCEALED IN THE WALL. | |
| 8 | DOOR INTAKE LOUVER - REFER TO ARCHITECTURAL PLANS. | |

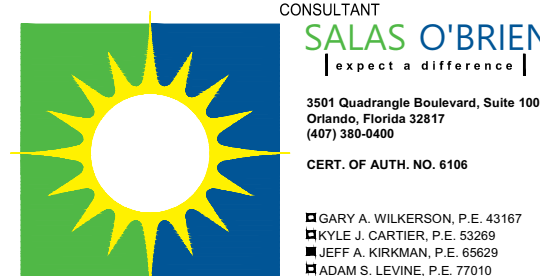
PERMIT REVIEW STAMP

ISSUE HISTORY		
No.	Date	Description
1	11/22/19	SCHEMATIC DESIGN
2	12/06/19	DESIGN DEVELOPMENT
3	02/28/20	PERMIT REVIEW SET

[illegible]

FUGLEBERG KOCH
PLLC

2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com BR569



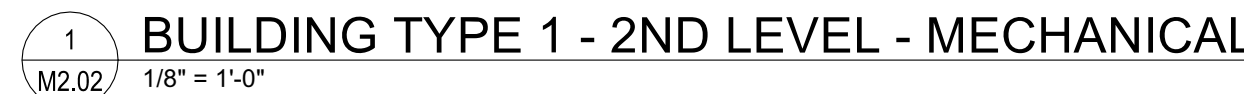
THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY JEFFREY A. KIRKMAN, PE ON DATE INDICATED IN DIGITAL SIGNATURE USING A DIGITAL SIGNATURE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON THE E-DESIGN COPY.

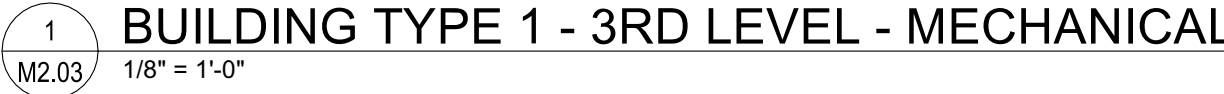
<h1>THE ROBERT</h1> <p><i>FT. MYERS, FL</i></p>	Drawn:	SWC
	Checked:	RDP
	Approval:	JAK
	Date:	09/10/2019
	Project #:	5592

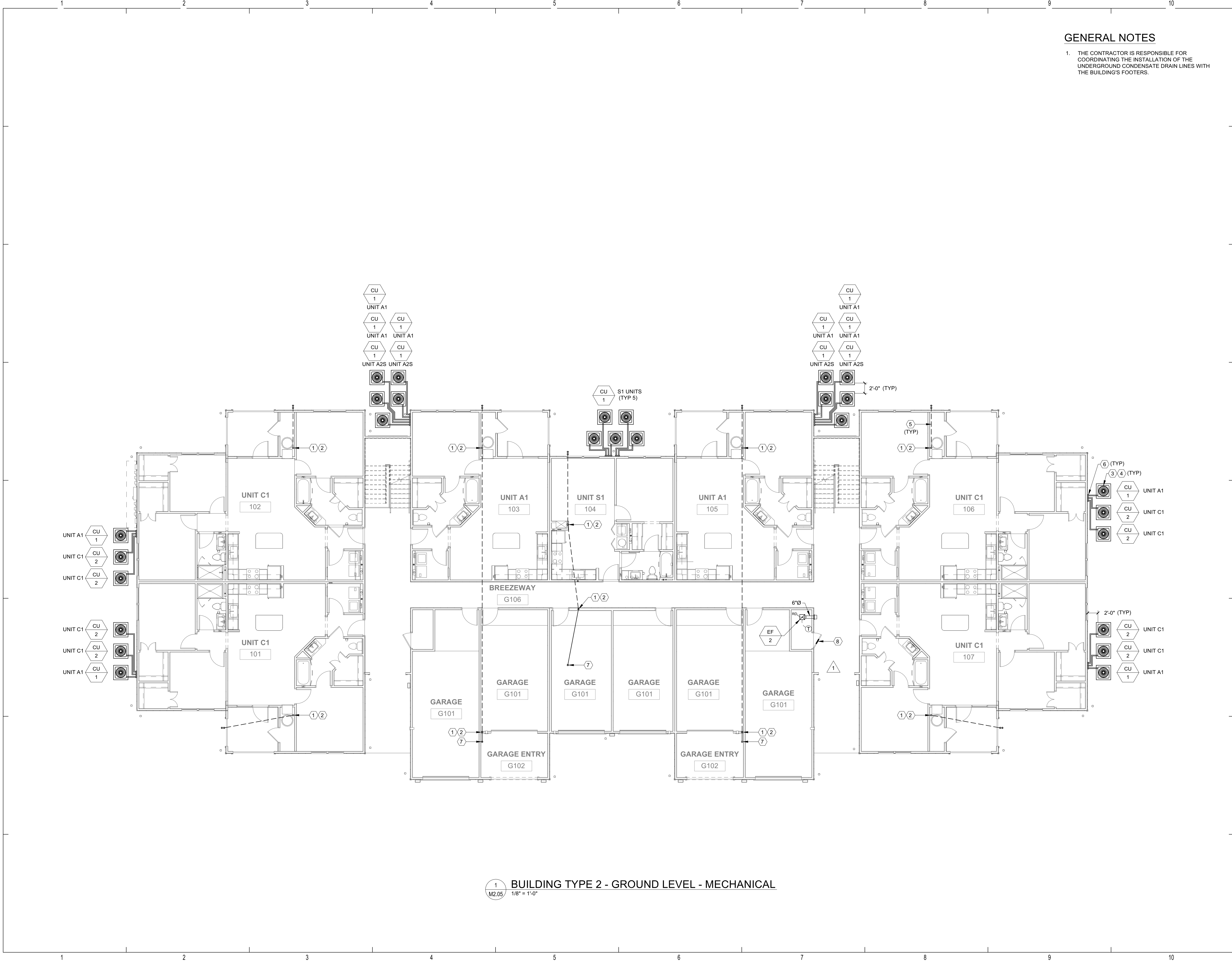
BUILDING TYPE 1 - GROUND
LEVEL - MECHANICAL

M2.01



M2.02





GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE INSTALLATION OF THE UNDERGROUND CONDENSATE DRAIN LINES WITH THE BUILDING'S FOOTERS.

REFERENCE

1. 1-1/2" DIA. INSULATED CONDENSATE DRAIN
2. INSTALL A WALL CLEARWALL PENETRATING FLOOR SLAB. SLAB PENETRATION SHALL BE WATER-TIGHT.
3. MOUNT UNIT ON EQUIPMENT PAD AND SECURE THE UNIT TO THE PAD. REFER TO DETAIL ON M6.01 FOR MORE INFORMATION. PROVIDE EQUIPMENT TAGS ON CONDENSING UNITS INDICATING THE APARTMENT NUMBER SERVED. TAGS SHALL BE THREE-LAYER PLASTIC WITH ENGRAVED WHITE LETTERS ON A BLACK BACKGROUND.
4. MAINTAIN 3'-0" CLEAR IN FRONT OF UNIT'S ELECTRICAL ACCESS SECTION.
5. 1-1/2" DIA SCH 40 PVC CONDENSATE DRAIN PIPE SLOPED DOWNWARDS TO THE POINT OF TERMINATION.
6. REFRIGERANT LINES AND CONTROL WIRING ROUTED BY THE CONTRACTOR BETWEEN THE INDOOR AND OUTDOOR UNITS. THE EXTERIOR WALL PENETRATION SHALL BE 12"-18" ABOVE GRADE WITH A FLASHED SHEET METAL WALL CAP SEALED WEATHER-TIGHT. PRIME AND PAINT CAP TO MATCH SURROUNDING WALL.
7. 1-1/2" INSULATED CONDENSATE DRAIN PIPE FROM RISER ABOVE. CONTINUE CONCEALED ABOVE THE CEILING AND SLOPED TO THE DRAIN RISER CONCEALED IN THE WALL.
8. DOOR INTAKE LOUVER - REFER TO ARCHITECTURAL PLANS.

CITY OF FORT MYERS
THIS PLAN REVIEWED FOR SUBSTANTIAL CODE COMPLIANCE WITH ALL APPLICABLE CODES.
DATE APPROVED: 06/17/20
PERMIT NUMBER: BL2020-00848
PROPERTY ADDRESS: 3815 OLD BERRY POINT
JOB DESCRIPTION: New construction of a 3 story apartment building that includes 77 units of 4 bedrooms and 6 direct entry direct entry units. The building will be a 3 story building with a total of 77 units.

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	11/22/19	SCHEMATIC DESIGN
2	12/06/19	DESIGN DEVELOPMENT
3	02/28/20	PERMIT REVIEW SET

REVISION HISTORY

No.	Date	Description
1	05/06/20	PERMIT COMMENT RESPONSES



FUGLEBERG KOCH
PLLC
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com BR569

CONSULTANT
SALAS O'BRIEN
[expect a difference]
2001 Quince Orchard, Suite 100
Gaithersburg, MD 20878
CERT. OF AUTH. NO. 4106
■ GARY A. WALKERSON, P.E. 43167
■ BOBIE J. CARTER, P.E. 30389
■ JEFF A. KIRKMAN, P.E. 88519
■ CLAUDE S. COVINO, P.E. 77079

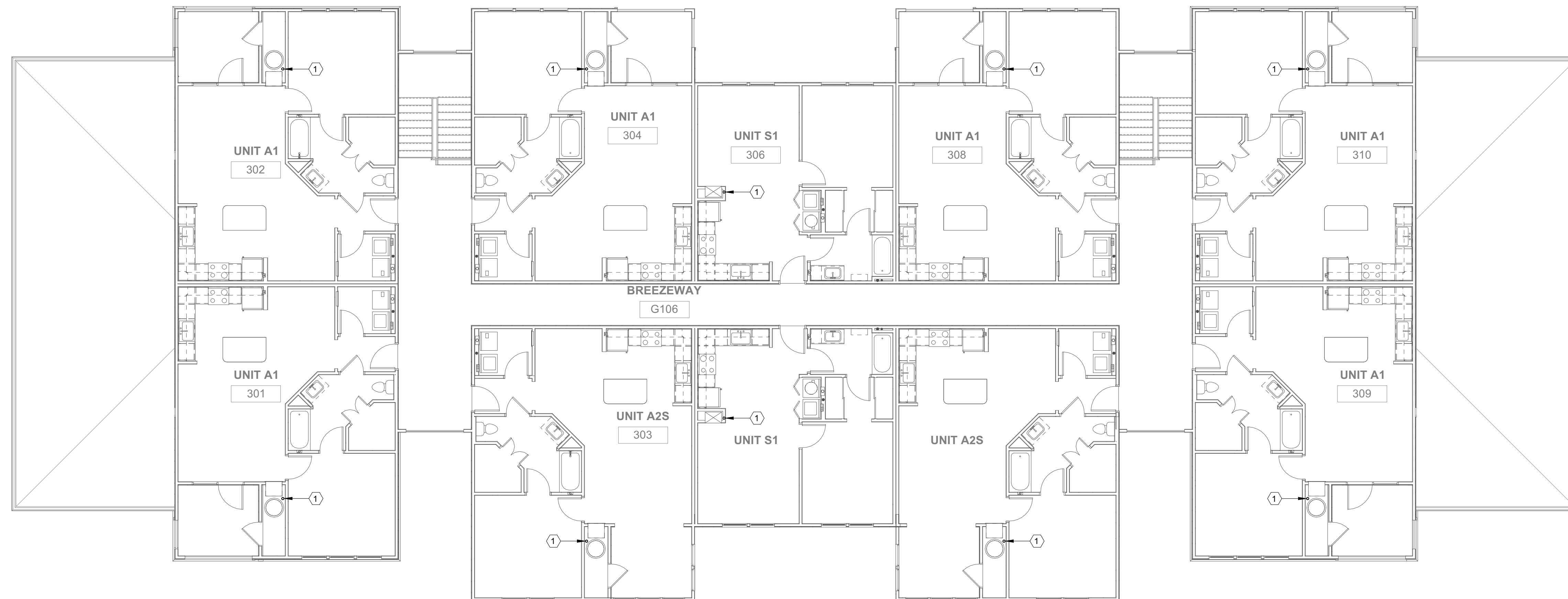
THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY JEFFREY A. KIRKMAN, PE ON DATE 08/10/2019.
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

THE ROBERT FT. MYERS, FL	Drawn: SWC
	Checked: RDP
	Approval: JAK
	Date: 08/10/2019
	Project #: 5592


BUILDING TYPE 2 - GROUND LEVEL - MECHANICAL

M2.05

1 BUILDING TYPE 2 - GROUND LEVEL - MECHANICAL
M2.05 1/8" = 1'-0"



BUILDING TYPE 2 - 3RD LEVEL - MECHANICAL

<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <h1 style="margin: 0;">REFERENCE</h1> <h2 style="margin: 0;">SCHEDULE 40 F</h2> </div> <div style="flex: 2; text-align: center;">  <p>CITY OF FORT MYERS</p> <p>THIS PLAN REVIEWED FOR SUBSTANTIAL CODE COMPLIANCE WITH ALL APPLICABLE CODES.</p> </div> </div>	<p>DATE APPROVED: 06/17/20</p> <p>PERMIT NUMBER: BLD2020-00848</p> <p>PROPERTY ADDRESS: 3810 OLD BERRY POINT</p>
	<p>JOB DESCRIPTION: New construction of a 3 story apartment building that includes: 27 units of 4 types and 6 direct entry direct-entry garage units. The building project</p>

REFERENCE

1 1-1/2" SCHEDULE 40 RISER.

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	11/22/19	SCHEMATIC DESIGN
2	12/06/19	DESIGN DEVELOPMENT
3	02/28/20	PERMIT REVIEW SET

REVISION HISTORY

[illegible]

FUGLEBERG KOCH
PLLC

2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com BR569



THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY JEFFREY A. KIRKMAN, PE ON DATE INDICATED IN DIGITAL SIGNATURE USING A DIGITAL SIGNATURE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

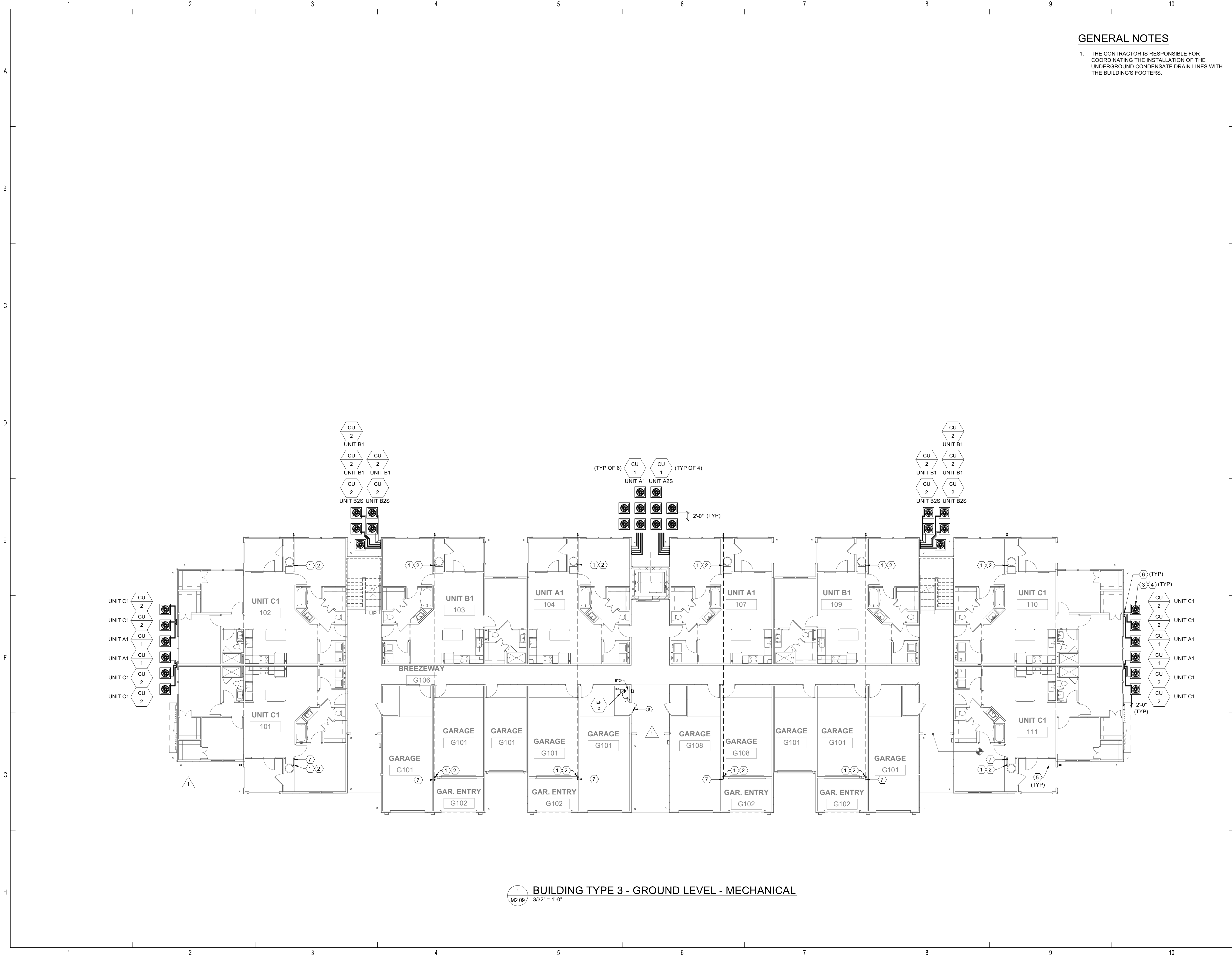
THE ROBERT

FT. MYERS, FL

BUILDING TYPE 2 - 3RD
LEVEL - MECHANICAL

M2.07

PLOTTED: 6/4/2020
2:34:04 PM



GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE INSTALLATION OF THE UNDERGROUND CONDENSATE DRAIN LINES WITH THE BUILDING'S FOOTERS.

REFERENCE

- 1-1/2" DIA, INSULATED CONDENSATE DRAIN
- INSTALL A WALL CLEARANCE PENETRATING FLOOR SLAB. SLAB PENETRATION SHALL BE WATER-TIGHT.
- MOUNT UNIT ON EQUIPMENT PAD AND SECURE THE UNIT TO THE PAD. REFER TO DETAIL ON M6.01 FOR MORE INFORMATION. PROVIDE EQUIPMENT TAGS ON CONDENSING UNITS INDICATING THE APARTMENT NUMBER SERVED. TAGS SHALL BE THREE-LAYER PLASTIC WITH ENGRAVED WHITE LETTERS ON A BLACK BACKGROUND.
- MAINTAIN 3'-0" CLEAR IN FRONT OF UNIT'S ELECTRICAL ACCESS SECTION.
- 1-1/2" DIA SCH 40 PVC CONDENSATE DRAIN PIPE SLOPED DOWNWARDS TO THE POINT OF TERMINATION.
- REFRIGERANT LINES AND CONTROL WIRING ROUTED BY THE CONTRACTOR BETWEEN THE INDOOR AND OUTDOOR UNITS. THE EXTERIOR WALL PENETRATION SHALL BE 12"-18" ABOVE GRADE WITH A FLASHED SHEET METAL WALL CAP SEALED WEATHER-TIGHT. PRIME AND PAINT CAP TO MATCH SURROUNDING WALL.
- 1-1/2" INSULATED CONDENSATE DRAIN PIPE FROM RISER ABOVE. CONTINUE CONCEALED ABOVE THE CEILING AND SLOPED TO THE DRAIN RISER CONCEALED IN THE WALL.
- DOOR INTAKE LOUVER - REFER TO ARCHITECTURAL PLANS.

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	11/22/19	SCHEMATIC DESIGN
2	12/06/19	DESIGN DEVELOPMENT
3	02/28/20	PERMIT REVIEW SET

REVISION HISTORY

No.	Date	Description
1	05/06/20	PERMIT COMMENT RESPONSES



FUGLEBERG KOCH
PLLC
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com BR569



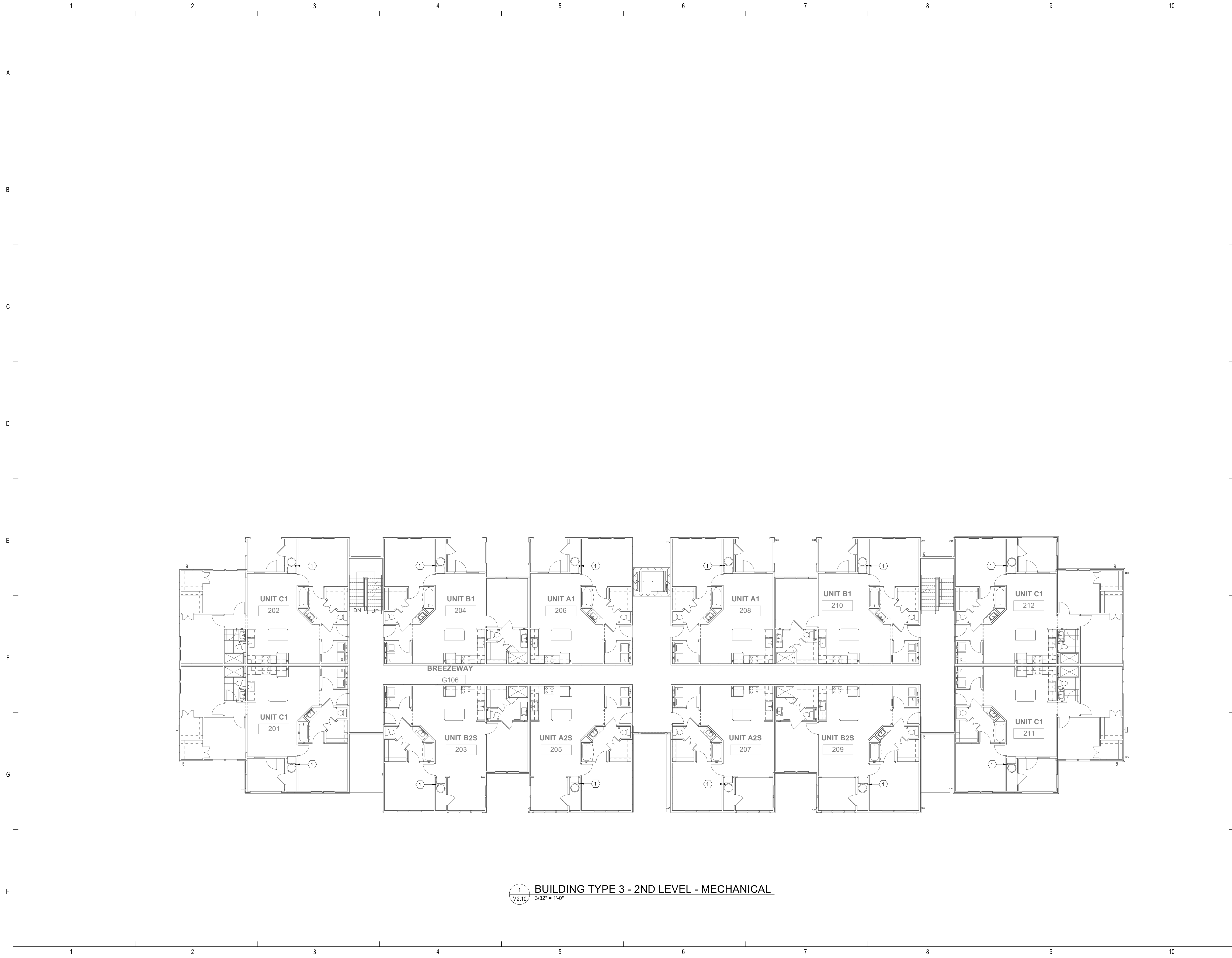
THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY JEFFREY A. KROGMAN, PE ON DATE INDICATED IN DIGITAL SIGNATURE USING A DIGITAL SIGNATURE.
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

THE ROBERT	Drawn:	SWC
	Checked:	RDP
	Approval:	JAK
	Date:	08/10/2019
FT. MYERS, FL	Project #:	5592

BUILDING TYPE 3 - GROUND
LEVEL - MECHANICAL

M2.09

1 BUILDING TYPE 3 - GROUND LEVEL - MECHANICAL
M2.09 3/32" = 1'-0"



1 BUILDING TYPE 3 - 2ND LEVEL - MECHANICAL

1 BUILD
M2.10 $3/32" = 1'-0"$

REFERENCE

1 1-1/2" SCHEDULE 40 RISER.

PERMIT REVIEW STAMP

ISSUE HISTORY

No.	Date	Description
1	11/22/19	SCHEMATIC DESIGN
2	12/06/19	DESIGN DEVELOPMENT
3	02/28/20	PERMIT REVIEW SET

REVISION HISTORY

[illegible]

FUGLEBERG KOCH
PLLC
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0
www.fuglebergkoch.com BR569



THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY JEFFREY A. KIRKMAN, PE ON DATE INDICATED IN DIGITAL SIGNATURE USING A DIGITAL SIGNATURE.

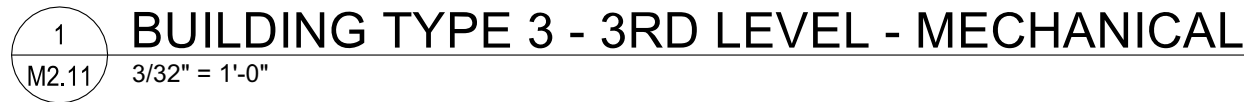
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

THE ROBERT

FT. MYERS, FL

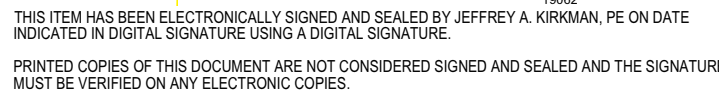
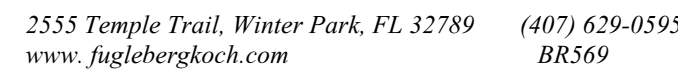
BUILDING TYPE 3 - 2ND
LEVEL - MECHANICAL

M2.10



1 1-1/2" SCHEDULE 40 RISER.

FILE 40

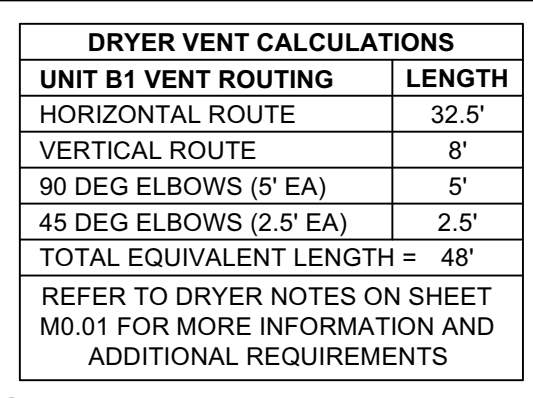
[illegible]

FT. MYERS, FL.

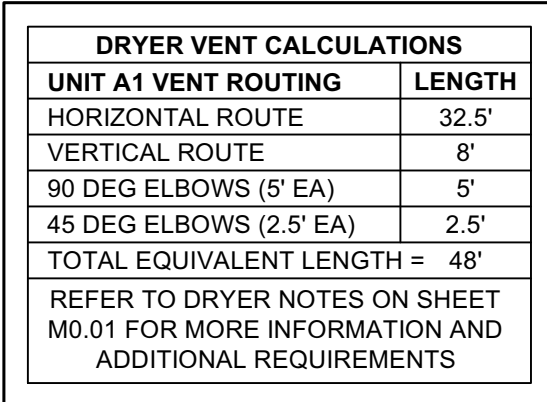
BUILDING TYPE 3 - 3RD
LEVEL - MECHANICAL

M2.11

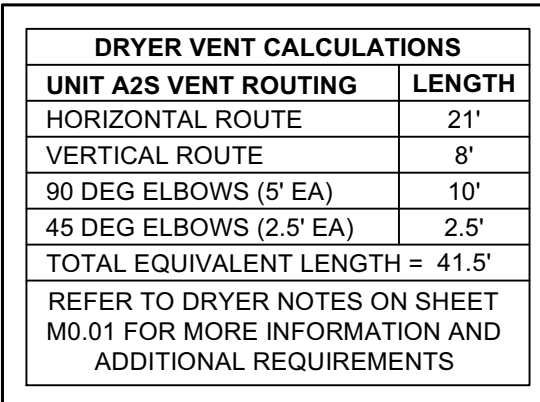
PLOTTED: 6/4/2020
2:34:55 PM



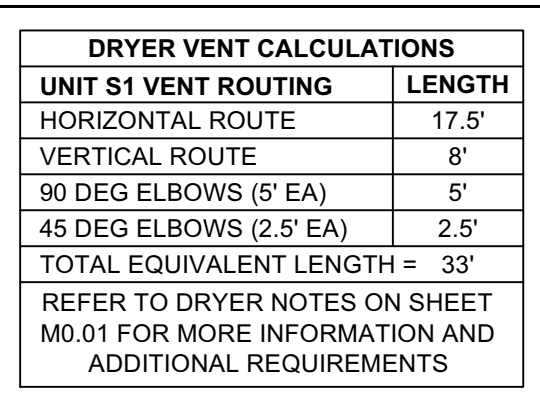
M3.01 $1/4" = 1'-0"$



M3.01 $1/4" = 1'-0"$

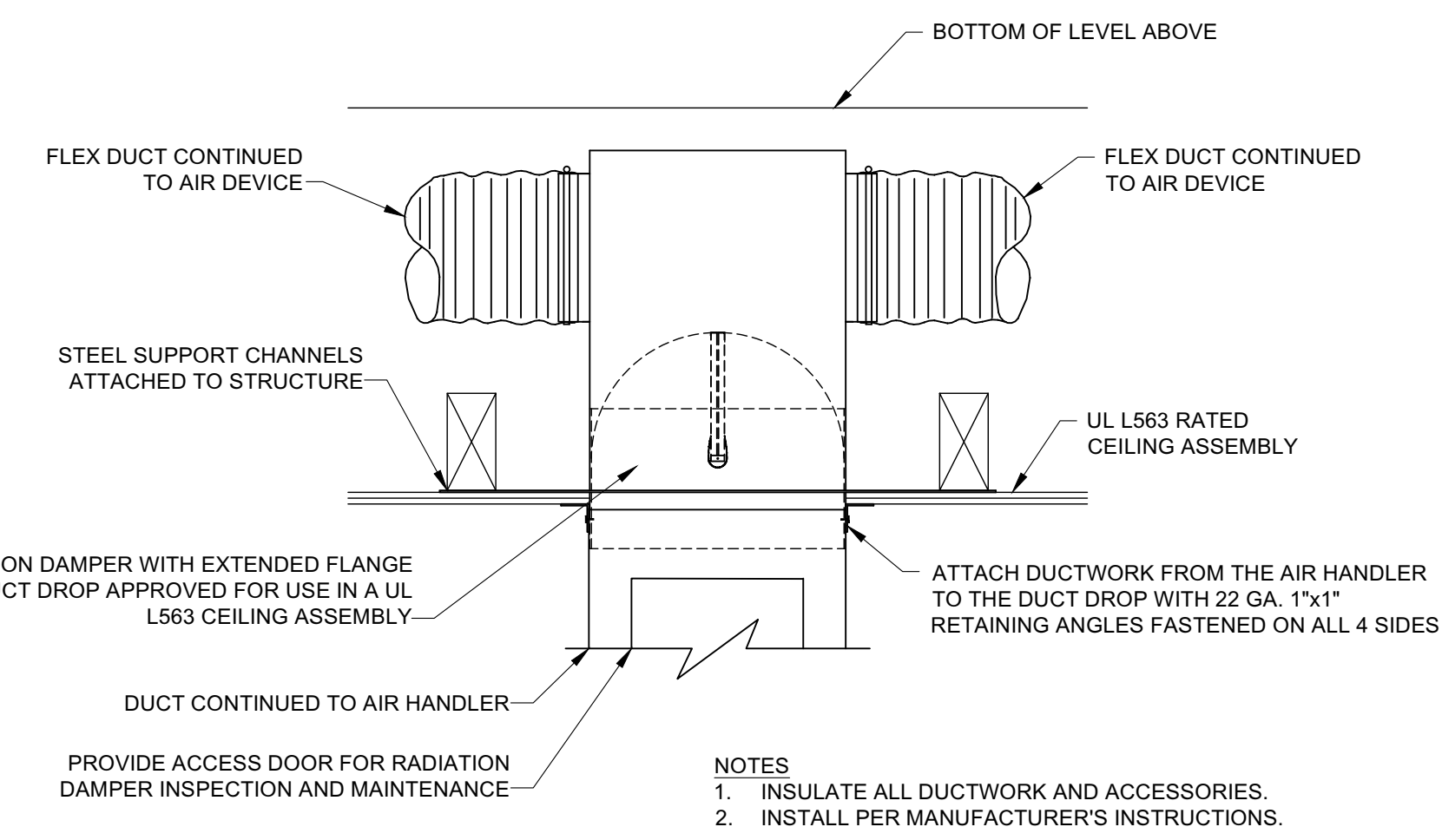
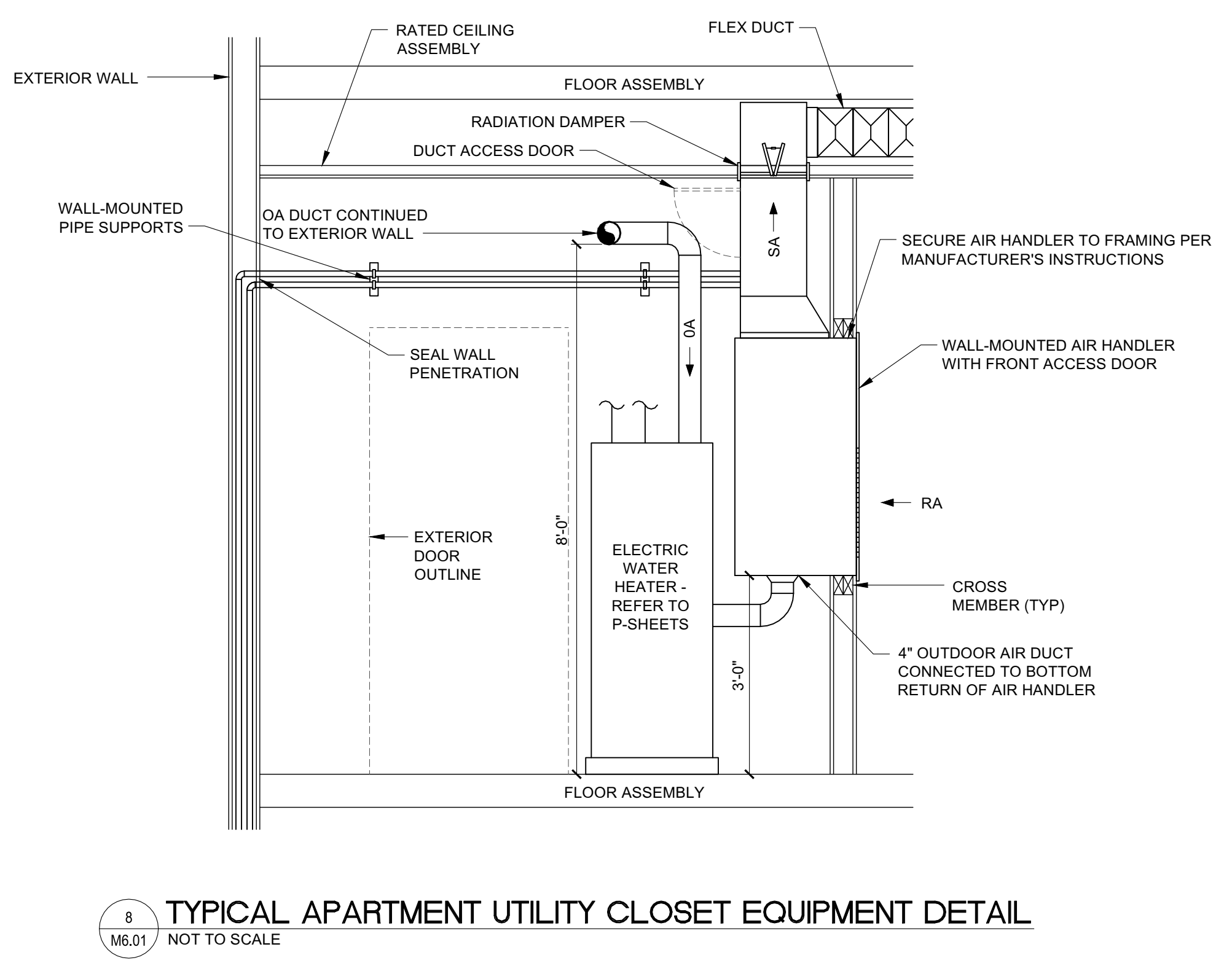
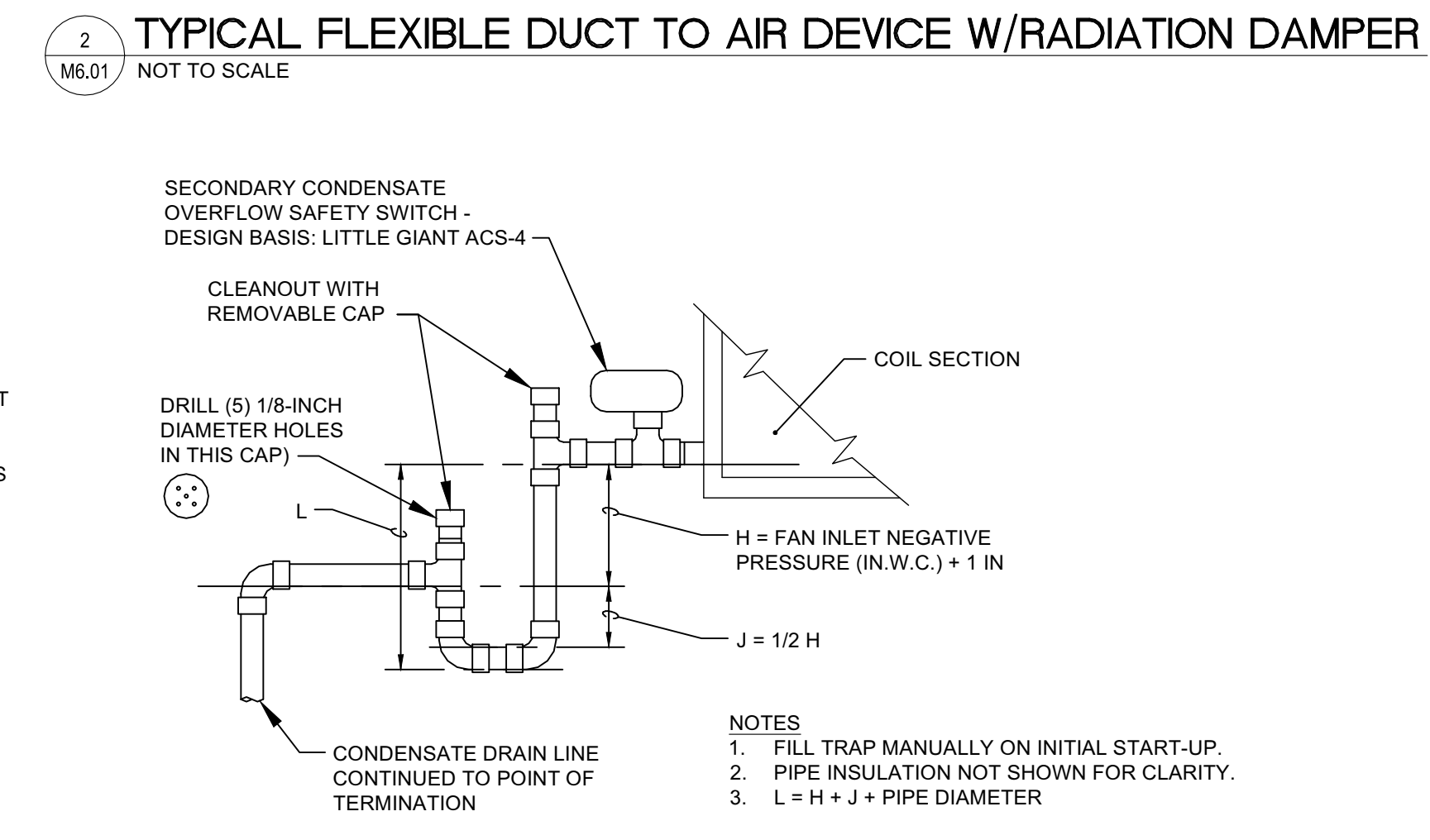
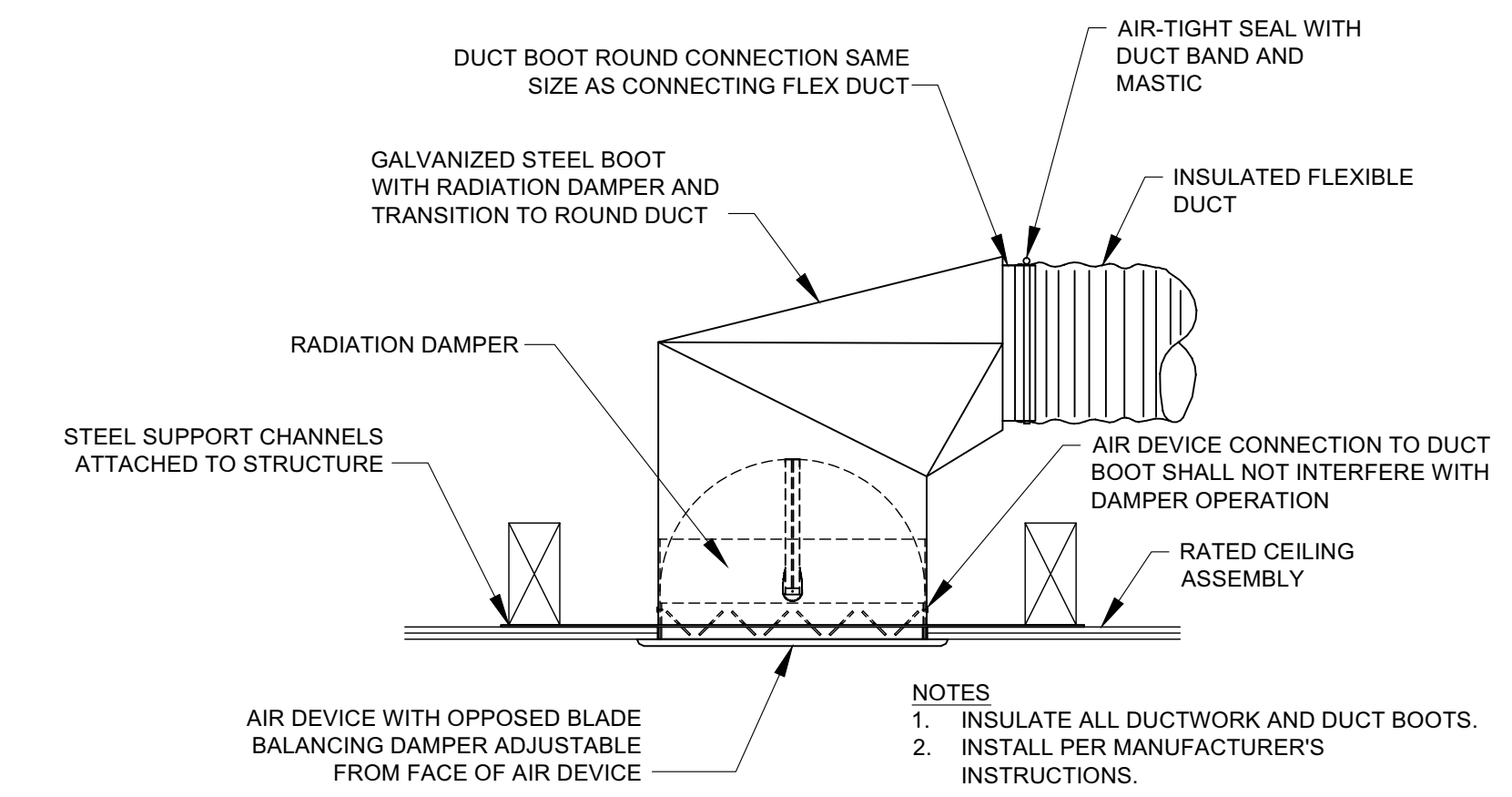
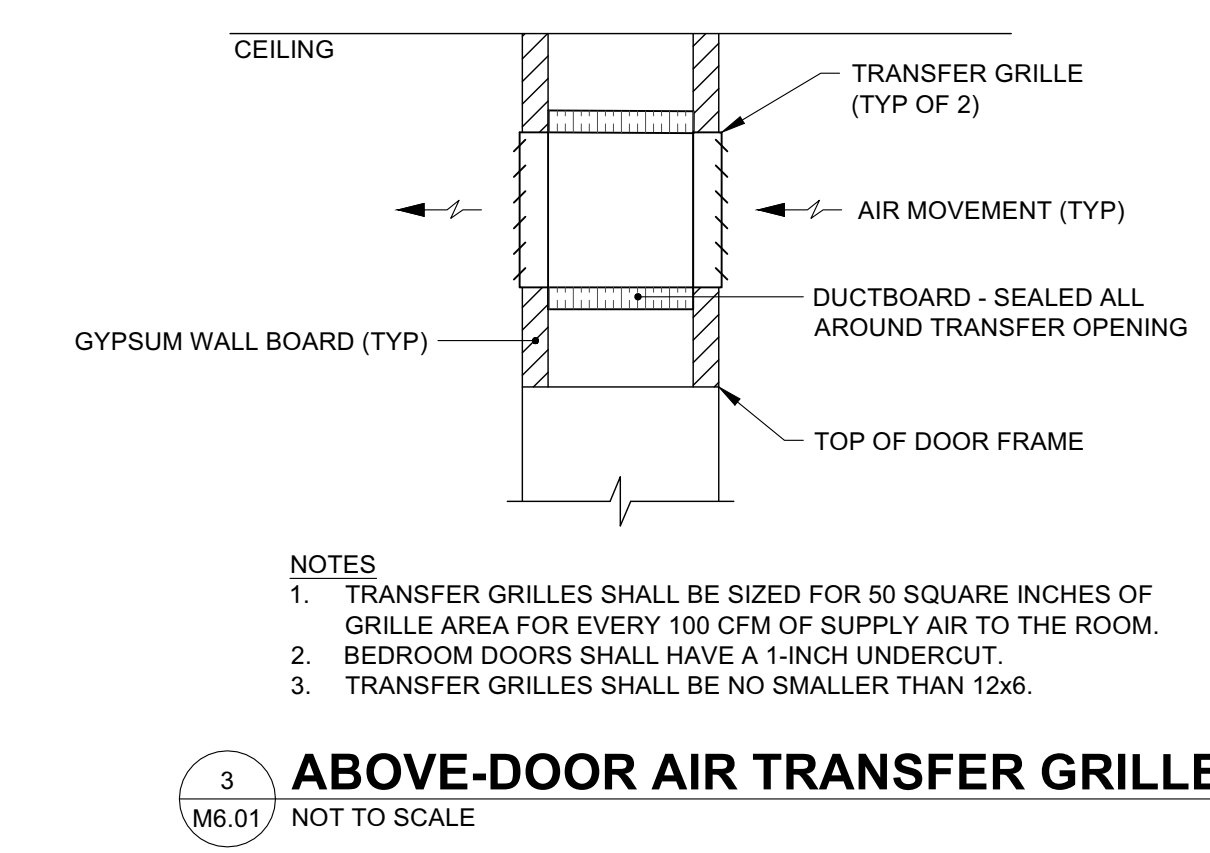
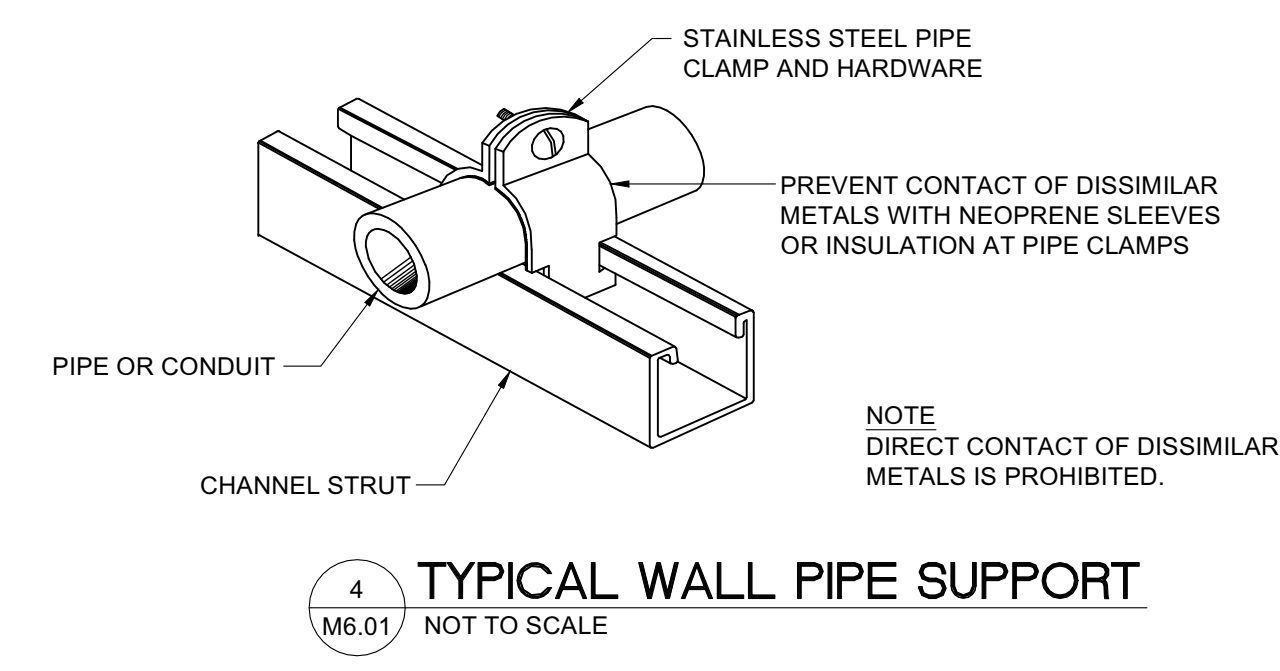


M3.01 $1/4" = 1'-0"$



M3.01 $1/4" = 1'-0"$

PLOTTED: 6/4/2020
2:35:23 PM



PERMIT REVIEW STAMP

ISSUE HISTORY		
No.	Date	Description
1	11/22/19	SCHEMATIC DESIGN
2	12/06/19	DESIGN DEVELOPMENT
3	02/28/20	PERMIT REVIEW SET

REVISION HISTORY		
No.	Date	Description

CONSULTANT
SALAS O'BRIEN
2001 Quince Orchard, Suite 100
Gaithersburg, MD 20878
CERT. OF AUTH. NO. 4106
JEFFREY A. KROEMER, P.E. ON DATE
INDICATED IN DIGITAL SIGNATURE USING A DIGITAL SIGNATURE.
PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE
MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

Drawn: SWC
Checked: RDP
Approved: JAK
Date: 08/10/2019
Project #: 5592

THE ROBERT
FT. MYERS, FL

DETAILS - MECHANICAL

M6.01

CLUBHOUSE AIR DEVICE SCHEDULE				
MARK	CS-A	CS-B	CS/xxX	CR/xxX
MANUFACTURER		HART & COOLEY		
MODEL	ARSD	ARSD	681/682/683	650
TYPE	SUPPLY	SUPPLY	SUPPLY	RETURN
AIR DEVICE SIZE (INxIN)	18x18	12x12	SEE DWG	SEE DWG
FINISH	WHITE	WHITE	WHITE	WHITE
MATERIAL	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM
ACCESSORIES	1	1	1	1
NOTES	1,2	1,2	1-3	1,2
PERFORMANCE				
MAX NC LEVEL	25	25	25	25
MAX PRESS DROP	0.04 IN.W.G.	0.04 IN.W.G.	0.04 IN.W.G.	0.04 IN.W.G.
ACCESSORIES (PROVIDE THE FOLLOWING)				
1. OPPOSED BLADE DAMPER ADJUSTABLE FROM FACE OF AIR DEVICE				
NOTES				
1. PAINT DUCTWORK THAT IS VISIBLE THROUGH FRONT OF AIR DEVICE MATTE BLACK.				
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE AIR DEVICE FRAME WITH THE CEILING OR WALL TYPE.				
3. REFER TO DRAWINGS FOR REQUIRED SUPPLY AIR DEVICE AIR FLOW PATTERN.				

REFRIGERANT PIPING NOTES

REFRIGERANT PIPE SIZING AND ROUTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE INTO ACCOUNT LENGTH OF RUN, ELEVATION CHANGES, AND FIELD CONDITIONS. ALL ACCESSORIES FOR LONG LINE APPLICATIONS (HARD-START KIT, THERMOSTATIC EXPANSION VALVE (TXV), LIQUID LINE SOLENOID AT THE OUTDOOR UNIT, AN INVERTED REFRIGERANT TRAP AT THE INDOOR UNIT, ETC.) SHALL BE PROVIDED AND INSTALLED WHEN THE DEVELOPED LENGTH FALLS IN THE CATEGORY OF A LONG LINE APPLICATION. THE CONTRACTOR SHALL SUBMIT CALCULATIONS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER. ALL REFRIGERANT ROUTING SHALL BE INSTALLED CONCEALED.

THERMOSTAT SCHEDULE	
<p>THERMOSTATS SHALL HAVE THE FOLLOWING FEATURES:</p> <ol style="list-style-type: none"> 1. 5-2-DAY PROGRAMMABLE THERMOSTAT ALLOWING SEPARATE SCHEDULES FOR WEEKDAYS AND WEEKENDS. THE THERMOSTAT SHALL ALLOW FOR 4 PROGRAMMED PERIODS (HOME OR AWAY) PER DAY. 2. TEMPERATURE CONTROL OF +/-1 DEG F. 3. LCD DISPLAY INDICATING CURRENT TEMPERATURE (DEG F) AND 12 HOUR CLOCK. 4. AH-2C AND AH-3C SHALL INCLUDE REMOTE-MOUNTED TEMPERATURE SENSORS TO ALLOW FOR AVERAGING THE SPACE TEMPERATURES. 	

FAN SCHEDULE				
MARK	EF-1C	EF-2C, 3C, 4C	EF-5C	EF-6C
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK	GREENHECK
MODEL	CSP-A200	SP-A90	SP-A70	SP-A70
APPLICATION	EXHAUST	EXHAUST	EXHAUST	EXHAUST
FAN				
LOCATION	CEILING	CEILING	CEILING	CEILING
AIR FLOW (CFM)	140	70	50	50
ESP (IN.W.G.)	0.15	0.15	0.15	0.15
DRIVETYPE	DIRECT	DIRECT	DIRECT	DIRECT
WATTS	9	9	8	8
VOLTAGE/PHASE/HZ	115/1/60	115/1/60	115/1/60	115/1/60
UNIT REQUIREMENTS				
MAXIMUM SONES	<0.3	<0.3	<0.3	<0.3
WEIGHT (LBS)	2.3	12	12	12
ACCESSORIES	1,2	1,2	1-3	1,2,4
NOTES	1	1	2	-
ACCESSORIES (PROVIDE THE FOLLOWING)				
1. WHITE GRILLE 2. GALVANIZED STEEL WALL CAP WITH BACKDRAFT DAMPER AND BIRDSCREEN PRIMED AND PAINTED TO MATCH BUILDING EXTERIOR 3. WALL-MOUNTED (SINGLE-GANG BOX) 24 HOUR PROGRAMMABLE TIMER IN LIEU OF A WALL SWITCH - DESIGN BASIS: BROAN MODEL T24H 4. LINE-VOLTAGE THERMOSTAT SET TO ACTIVATE FAN WHEN ROOM TEMPERATURE RISES ABOVE 85 DEG F (ADJUSTABLE).				
NOTES				
1. FAN SHALL BE POWERED BY THE BATHROOM LIGHT SWITCH. 2. FAN SHALL BE POWERED FROM A PROGRAMMABLE TIMER AND OPERATE CONTINUOUSLY BETWEEN THE HOURS OF 6 AM AND 6 PM (TIMES ARE USER ADJUSTABLE).				

CLUBHOUSE TEST AND BALANCE

<ul style="list-style-type: none">A. THE CLUBHOUSE HVAC SYSTEM SHALL BE TESTED AND BALANCED BY THE MECHANICAL CONTRACTOR, SUBJECT TO THE PRIOR APPROVAL OF THE ENGINEER. ALL INSTRUMENTS USED SHALL BE ACCURATELY CALIBRATED AND MAINTAINED IN GOOD WORKING ORDER.B. CONDUCT TESTING AND BALANCING IN ACCORDANCE WITH AABC NATIONAL STANDARDS FOR FIELD MEASUREMENT AND INSTRUMENTATION, TOTAL SYSTEM BALANCE, ASHRAE 1984 SYSTEMS HANDBOOK, OR NEBB PROCEDURAL STANDARDS FOR TESTING, BALANCING AND ADJUSTING OF ENVIRONMENTAL SYSTEMS.C. SHOULD THE BASIC SYSTEM OR ANY OF ITS COMPONENTS FAIL TO MEET CONTRACT REQUIREMENTS, AND THEREBY MAKE THE TESTING AND BALANCING WORK INVALID, NOTIFY THE ENGINEER AND STOP THE TESTS UNTIL SUCH TIME THAT THE FAILURE IS CORRECTED.D. SPECIFIC TESTING AND BALANCING PROCEDURES SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:<ul style="list-style-type: none">1. TEST AND ADJUST SPEED OF AIR HANDLER FAN AND RECORD.2. TEST AND RECORD AIR HANDLER MOTOR VOLTAGE AND AMPERAGE.3. BALANCE TOTAL AIRFLOW AND OUTDOOR AIRFLOW TO WITHIN 10% OF DESIGN. RECORD COIL ENTERING AND LEAVING AIR TEMPERATURES (DRY BULB AND WET BULB).4. BALANCE AIR DEVICES TO WITHIN 10% OF DESIGN AIR QUANTITIES.E. SUBMIT REPORTS ON AABC NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE OR NEBB FORMS.
--

AIR HANDLER SCHEDULE			
MARK	AH-1C	AH-2C	AH-3C
LOCATION	MECH. CLOSET	MECHANICAL	MECHANICAL
MANUFACTURER	GOODMAN	GOODMAN	GOODMAN
MODEL	ASPT47C14	ASPT25B14	ASPT37B14
FAN			
TOTAL AIR FLOW (CFM)	1,400	800	1,000
OUTDOOR AIR FLOW (CFM)	150-450	125	150
EXTERNAL STATIC PRESSURE (IN.W.G.)	0.3	0.3	0.3
DRIVE/SPEED	DIRECT/HIGH	DIRECT/HIGH	DIRECT/HIGH
MOTOR HP	3/4	3/4	3/4
EVAPORATOR COIL			
SENSIBLE CAPACITY (MBH)	30.0	17.9	20.9
TOTAL CAPACITY (MBH)	37.6	21.8	27.8
ENTERING AIR TEMP (DB/WB)	77.1/64.2	78.1/64.9	78.0/64.8
LEAVING AIR TEMP (DB/WB)	57.3/55.3	57.4/55.9	58.6/55.7
AUXILIARY ELECTRIC HEATING COIL			
INPUT (KW @ 240V)	9.6	4.5	6.0
CONTROL STEPS	1	1	1
FILTERS			
TYPE	DISPOSABLE	DISPOSABLE	DISPOSABLE
EFFICIENCY	MERV 7	MERV 7	MERV 7
ELECTRICAL			
VOLTAGE/PHASE/HZ	240/1/60	240/1/60	240/1/60
MINIMUM CIRCUIT AMPACITY	54.9	31.0	37.0
MAXIMUM FUSE SIZE	60	35	40
UNIT REQUIREMENTS			
OPERATING WEIGHT (LBS)	150	125	150
ACCESSORIES	1-7	1-7	1-7
NOTES	1	1	1
ACCESSORIES (PROVIDE THE FOLLOWING)			
1. SINGLE POINT POWER CONNECTION 2. BUILT-IN FILTER RACK WITH TOOL-LESS ACCESS 3. MULTI-SPEED ECM MOTOR 4. HEATER KIT WITH UNIT-MOUNTED BREAKER 5. 120V OPEN/CLOSE DAMPER AND MANUAL BALANCING DAMPER IN OUTDOOR AIR DUCT. 6. SECONDARY CONDENSATE OVERFLOW SAFETY SWITCH WHICH WILL SHUT DOWN THE AIR HANDLER IF THE PRIMARY CONDENSATE DRAIN LINE CLOGS. 7. EQUIPMENT STAND TO ALLOW FOR BOTTOM RETURN DUCT CONNECTION.			
NOTES			
1. REFER TO DETAILS FOR CONDENSATE TRAP REQUIREMENTS. RUNNING TRAPS WILL NOT BE PERMITTED.			

CONDENSING UNIT SCHEDULE			
MARK	CU-1C	CU-2C	CU-3C
LOCATION	GRADE	GRADE	GRADE
MANUFACTURER	GOODMAN	GOODMAN	GOODMAN
MODEL NUMBER	GSX140241K	GSX140241L	GSX140301K
NOMINAL TONS	3.5	2.0	2.5
REFRIGERANT CIRCUITS (QTY)	1	1	1
REFRIGERANT	R-410A	R-410A	R-410A
COMPRESSOR			
OUTDOOR DESIGN TEMP (DEG F)	95	95	95
NUMBER OF STAGES	1	1	1
NUMBER OF COMPRESSORS	1	1	1
CONDENSER FAN			
NUMBER OF FANS	1	1	1
MOTOR HP	1/6	1/8	1/6
ELECTRICAL			
VOLTAGE/PHASE/HZ	240/1/60	240/1/60	240/1/60
COMPRESSOR RLA	16.7	7.7	12.8
CONDENSER FAN MOTOR FLA	0.95	0.7	0.95
MCA	21.8	10.3	17.0
MOCp	35	15	25
UNIT REQUIREMENTS			
SEER	14.0	14.0	14.0
UNIT WEIGHT (LBS)	200	150	175
ACCESSORIES	1-7	1-7	1-7
NOTES	1	1	1
ACCESSORIES (PROVIDE THE FOLLOWING)			
1. LOUVERED COIL GUARD 2. MANUFACTURER'S ANCHOR BRACKET KIT 3. ANTI-SHORT CYCLE KIT 4. HIGH AND LOW PRESSURE SWITCHES 5. REFRIGERANT CHARGING VALVES 6. MANUFACTURER'S RECOMMENDED LONG LINE SET ACCESSORIES WHEN THE DEVELOPED LENGTH OF THE REFRIGERANT LINES FALL INTO THIS CATEGORY - SEE REFRIGERANT PIPING NOTES ON THIS SHEET 7. PROGRAMMABLE THERMOSTAT - SEE THERMOSTAT SCHEDULE ON THIS SHEET			
NOTES			
1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE EQUIPMENT MANUFACTURER FOR THE PROPER REFRIGERANT PIPE SIZING FOR THE APPLICATION.			

DEMAND CONTROL VENTILATION REQUIREMENTS

BACKGROUND: AH-1C SERVES A SPACE WITH TRANSIENT OCCUPANCY AND THE FULL VENTILATION RATE WILL NOT ALWAYS BE DEMAND. DEMAND RESPONSE VENTILATION WILL BE REQUIRED FOR THIS SPACE TO PROVIDE BOTH A HEALTHY INDOOR ENVIRONMENT AND ENERGY SAVINGS.

SEQUENCE OF OPERATION FOR AH-1C: A PRE-PACKAGED SYSTEM WITH A SPACE-MOUNTED CO2 SENSOR, CONTROLLER, TRANSFORMER, AND A MOTORIZED DAMPER SHALL BE INSTALLED. THE CO2 SENSOR SHALL MONITOR CONCENTRATIONS IN THE SPACE AND MODULATE THE DAMPER AS REQUIRED, TO PRECLUDE OVER-VENTILATION. THE DAMPER SHALL BE BALANCED TO PROVIDE 200 CFM AND THEN PROPORTIONALLY OPEN AT 800 PPM UNTIL FULLY OPEN AT 1200 PPM.

SPECIFICATION: THE CONTROLLED FRESH-AIR INTAKE SYSTEM SHALL BE USED AS A STANDALONE PRODUCT. DAMPER ACTION WILL BE MODULATING AND PROPORTIONAL TO CARBON DIOXIDE CONCENTRATION IN THE SPACE. BLADE MUST BE AT LEAST 20 GAGE GALVANIZED STEEL AND FEATURE EPDM LOW-LEAK SEALS. SHELL MUST BE AT LEAST 24 GAGE FOR SIZES 4 INCHES THROUGH 10 INCHES AND 20 GAGE FOR DAMPERS 12 INCHES THROUGH 20 INCHES. SHAFT SHALL BE 1/2 INCH PLATED STEEL AND TURN INSIDE AN OIL-IMPREGNATED BRONZE BEARING. THE DAMPER WILL BE DRIVEN BY AN ELECTRONIC DIRECT COUPLED BRUSHLESS DC MOTOR. THE MOTOR MUST ACCEPT EITHER A 2 TO 10 VDC OR A 4 TO 20 MA INPUT FROM THE CO2 SENSOR. IT WILL HAVE A REFLECTIVE POSITION INDICATOR AND ADJUSTABLE POSITION STOPS. THE MOTOR MUST BE ABLE TO DELIVER 45 INCH POUNDS OF TORQUE AND HAVE A 95 SECOND TIMING INTERVAL. THE MOTOR SHALL NOT PRODUCE SOUND AT MORE THAN 35DB(A). THE SENSOR MUST FEATURE SINGLE BEAM NON-DISPERSIVE INFRARED TECHNOLOGY AND AUTOMATIC BACKGROUND CALIBRATION. IT SHOULD BE ABLE TO SENSE CARBON DIOXIDE FROM 0 TO 2,000 PARTS PER MILLION AND DISPLAY THE SAME ON A LED DISPLAY. IT SHOULD HAVE A CALIBRATION INTERVAL OF NOT LESS THAN 15 YEARS. THE SENSOR MUST HAVE FACTORY CONFIGURABLE SCALING. TOTAL SYSTEM DRAW SHALL NOT EXCEED 4 WATTS. THE SYSTEM MUST CARRY A 5 YEAR PARTS WARRANTY.

DESIGN BASIS: YOUNG REGULATOR DA-CO2-XX

HVAC DESIGN DATA					
LOCATION		FORT MYERS, FLORIDA			
CLIMATE ZONE		1A			
OUTDOOR AIR DESIGN CONDITIONS	SUMMER		WINTER	BUILDING CONSTRUCTION	
	DB (DEG F)	WB (DEG F)	DB (DEG F)	SLAB EDGE R-VALUE	N/A
				FLOOR R-VALUE	19
	95	78	45	WALL R-VALUE	13
INDOOR AIR DESIGN CONDITIONS	SUMMER		WINTER	ROOF R-VALUE	
	DB (DEG F)	RELATIVE HUMIDITY	DB (DEG F)	WINDOW GLAZING	DOUBLE
				WINDOW U-FACTOR	0.40
	75	50%	72	WINDOW SHGC	0.25
ALL UNITS					

VENTILATION CALCULATIONS	
OUTSIDE AIRFLOW CALCULATIONS - SINGLE ZONE SYSTEMS	
THE REQUIRED OUTSIDE AIR FOR EACH SYSTEM WAS CALCULATED USING THE FORMULAS FROM THE 2017 FBC-M, CHAPTER 4.	
$V_{OZ} = \text{THE CODE REQUIRED MINIMUM VENTILATION RATE.}$ $\text{SINGLE ZONE SYSTEMS: } V_{ot} = V_{OZ}$ $V_{ot} = V_{OZ}E_z$ $V_{OZ} = A \times R_a + P \times R_p, E_z = 1.0.$	
THE APPROPRIATE PEOPLE OUTDOOR AIR RATE (R_p) AND THE AREA OUTDOOR AIR RATES (R_a) WERE SELECTED FROM TABLE 403.3 BASED ON THE OCCUPANCY CATEGORY FOR EACH SPACE.	
REQUIRED CLUBHOUSE VENTILATION AIRFLOWS	
AH/CU-1C CODE REQUIRED MINIMUM VENTILATION RATE = 443 CFM (450 CFM SCHEDULED)	
AH/CU-2C CODE REQUIRED MINIMUM VENTILATION RATE = 107 CFM (125 CFM SCHEDULED)	
AH/CU-3C CODE REQUIRED MINIMUM VENTILATION RATE = 139 CFM (150 CFM SCHEDULED)	


The mechanical floor plan for the Clubhouse is divided into three main sections: a left wing, a central wing, and a right wing. The left wing includes a kitchen area with a large range hood (SR/24x14, 950 CFM) and several exhaust fans (CS-B, 40 CFM). The central wing contains a lounge area with a large ceiling fan (CS-A, 125 CFM) and a reception area. The right wing features a bar area with a large ceiling fan (CS-A, 120 CFM) and a lounge area with a large ceiling fan (CS-A, 190 CFM). The plan also shows various ductwork, diffusers, and outdoor loggia areas. A detailed callout on the right side provides a close-up view of the mechanical equipment, including air handlers (AH), ceiling fans (CS), and exhaust fans (EF).

CLUBHOUSE FLOOR PLAN - MECHANICAL

1 CM2.01 1/8"=1'-0"

- ① MOUNT UNIT ON HOUSE SECURE THE UNIT TO T DETAIL ON CMC.01 FOR
- ② REFRIGERANT LINES AN ROUTED BY THE CONTRACTOR BETWEEN THE INDOOR AND OUTDOOR UNITS. THE EXTERIOR WALL PENETRATION SHALL BE 12"-18" ABOVE CURB WITH A FLASHED STEEL METAL WALL CAP SEALED WEATHER-TIGHT. PRIME AND PAINT CAP TO MATCH SURROUNDING WALL.
- ③ MAINTAIN 3'-0" CLEAR IN FRONT OF OUTDOOR UNIT ELECTRICAL ACCESS SECTION.
- ④ TERMINATE EXHAUST DUCT WITH A HOODED WALL CAP WITH BACKDRAFT DAMPER AND BIRD SCREEN.
- ⑤ 8" DIA GALVANIZED STEEL OUTDOOR AIR DUCT UP TO ROOF CAP WITH BIRDSCREEN AND BACKDRAFT DAMPER ARRANGED TO ONLY LET AIR IN. INSTALL A BALANCING DAMPER AND A 120V MOTORIZED DAMPER AT THE CONNECTION TO THE RETURN AIR DUCT. DAMPER SHALL BE INTERLOCKED TO ONLY OPEN WHEN THE UNIT IS OPERATING.
- ⑥ DEMAND CONTROL VENTILATION DAMPER INSTALLED IN SERIES WITH MOTORIZED OPEN/CLOSE DAMPER.
- ⑦ 1-1/2" DIA SCH 40 PVC CONDENSATE DRAIN PIPE SLOPED DOWNWARDS AND TERMINATED WITH A GOOSENECK.
- ⑧ PROGRAMMABLE THERMOSTAT WITH CLEAR, VENTED, AND LOCKING COVER. KEY THE LOCKS TO USE THE SAME KEY.
- ⑨ REMOTE TEMPERATURE SENSOR FOR AVERAGING.
- ⑩ INSTALL DEMAND CONTROL VENTILATION CO2 SENSOR ADJACENT TO THERMOSTAT.

ISSUE HISTORY		
No.	Date	Description
1	11/22/19	SCHEMATIC DESIGN
2	12/06/19	DESIGN DEVELOPMENT
3	02/28/20	PERMIT REVIEW SET

[illegible]

CONSULTANT
SALAS O'BRIEN
| expect a difference |

3551 Quadrangle Boulevard, Suite 100
Orlando, Florida 32817
(407) 350-2400

CERT. OF AUTH. NO. 6108

■ GARY A. WILKERSON, P.E. 43167
■ EYLEE J. CARTIER, P.E. 52205
■ JEFF A. KRISMAN, P.E. 69529
■ ADAM S. LEVINE, P.E. 77010

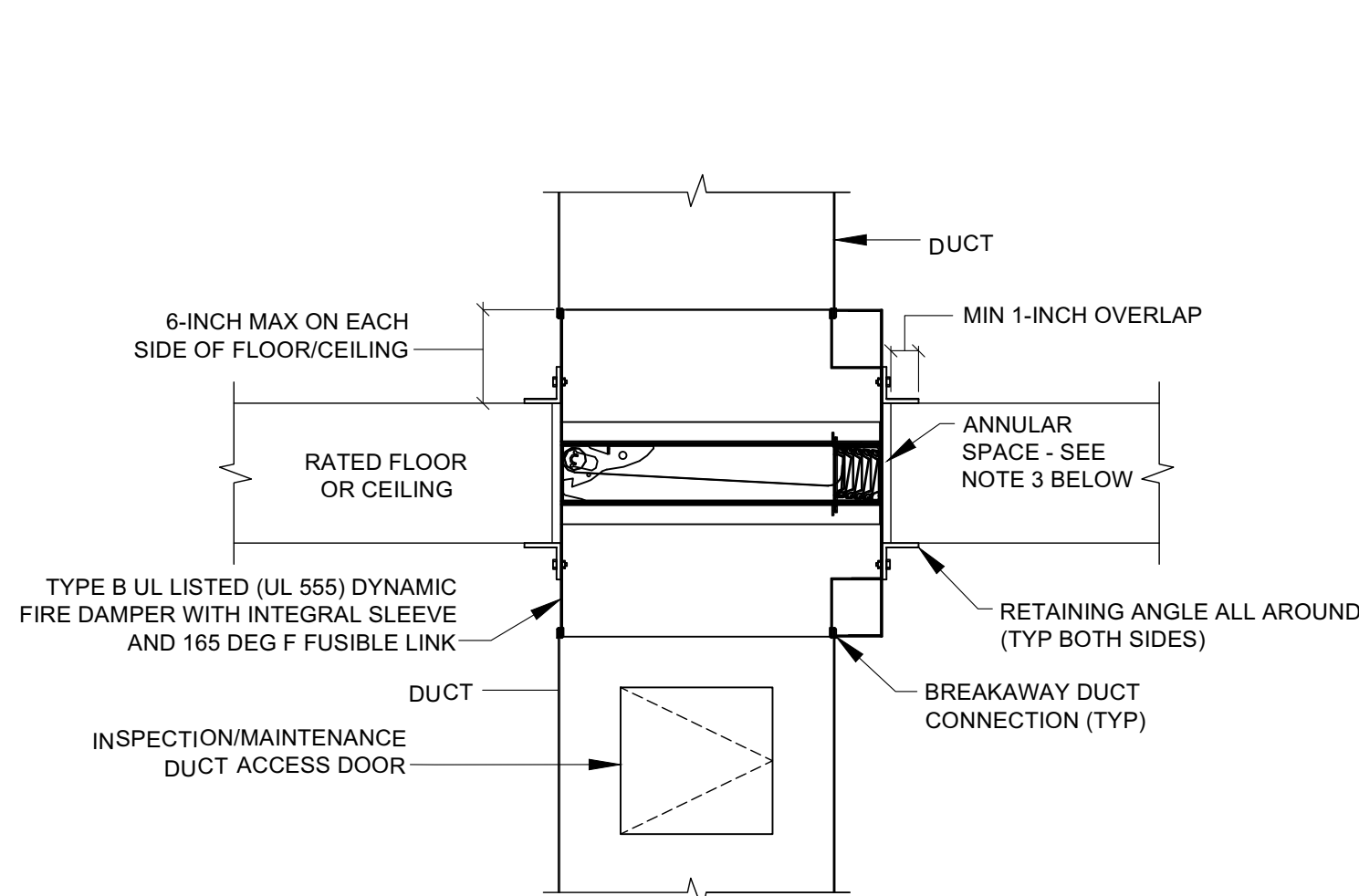
THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY JEFFREY A. KIRKMAN, PE ON DATE
INDICATED IN DIGITAL SIGNATURE USING A DIGITAL SIGNATURE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE
MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

CLUBHOUSE FLOOR PLAN - MECHANICAL

CM2.01

PLOTTED: 6/4/2020
2:26:00 PM



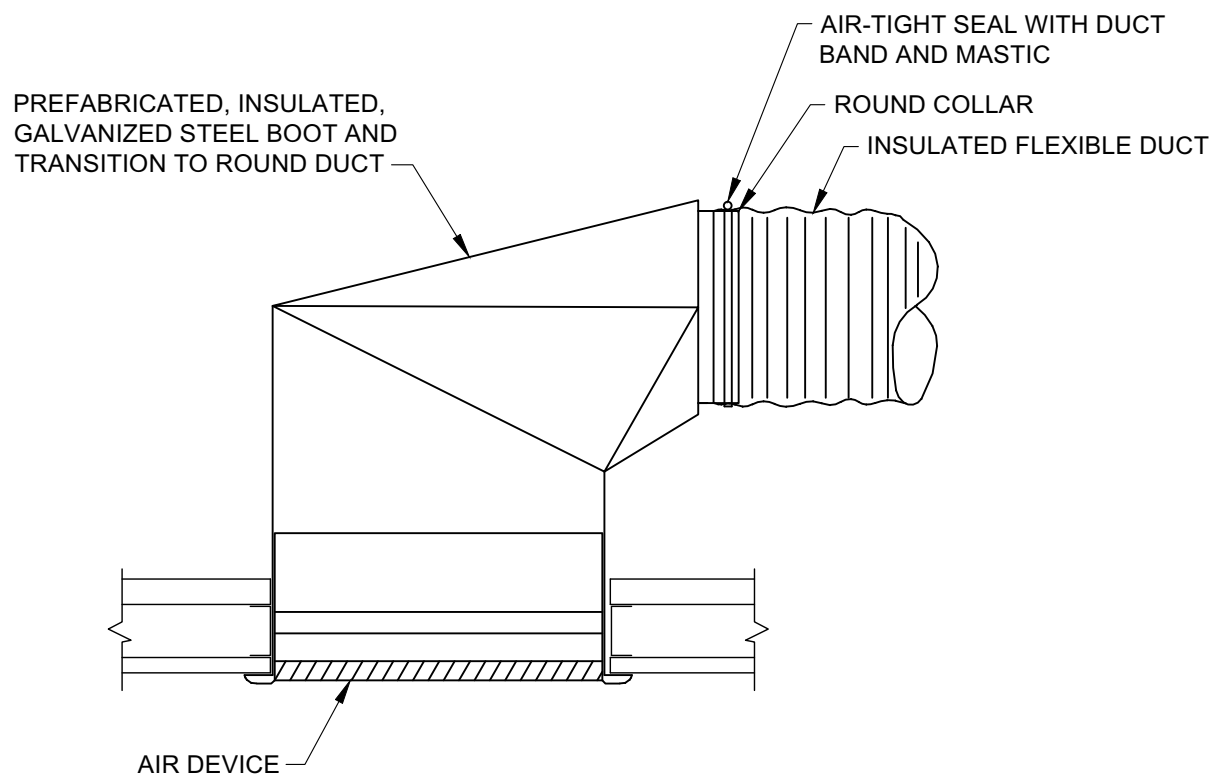
NOTES

- THE DESIGN BASIS IS A GREENHECK DFD-150X, TYPE B FIRE DAMPER. THE ACTUAL INSTALLED FIRE DAMPERS' INSTALLATION MANUAL WILL SUPERCEDE THIS DETAIL AND BE BASED ON THE THE WALL TYPE IN WHICH IT IS INSTALLED.
- MAINTAIN A COPY OF THE FIRE DAMPER MANUFACTURER'S INSTALLATION INSTRUCTIONS ON SITE AND MAKE AVAILABLE FOR REVIEW BY THE AUTHORITY HAVING JURISDICTION.
- ANNULAR SPACE BETWEEN DAMPER AND WALL OPENING SHALL BE 1/8-INCH PER FOOT OF WIDTH OF DAMPER WITH A MINIMUM CLEARANCE OF 1/4-INCH AND A MAXIMUM CLEARANCE OF 1-1/2-INCHS, UNLESS OTHERWISE RECOMMENDED BY DAMPER MANUFACTURER.
- RETAINING ANGLE GAUGE: RETAINING ANGLES FOR 1-1/2 HOUR RATED DAMPERS WITH A WIDTH AND HEIGHT 48-INCHES OR LESS MUST BE A MINIMUM OF 20 GA. WIDTH OR HEIGHT GREATER THAN 48-INCHES MUST BE A MINIMUM OF 16 GAUGE.
- RETAINING ANGLE SIZE: THE LEG OF THE RETAINING ANGLE ON THE DAMPER SLEEVE SHALL BE A MINIMUM OF 1-1/4-INCHES. THE LEG OF THE RETAINING ANGLE ON THE WALL SHALL BE LONG ENOUGH TO COVER THE ANNULAR SPACE AND OVERLAP THE WALL BY A MINIMUM OF 1-INCH.
- RETAINING ANGLE ATTACHMENT TO SLEEVE: RETAINING ANGLES MUST BE ATTACHED TO THE DAMPER USING ONE OR MORE OF THE FOLLOWING METHODS OF ATTACHMENT (REFER TO LABEL ON OUTSIDE OF SLEEVE FOR "NO SCREW" AREA):
 - #10 (3/4-INCH MAX) SHEET METAL SCREWS
 - 1/4-INCH BOLTS AND NUTS
 - 3/16-INCH STEEL POP RIVETS
- A MINIMUM OF TWO CONNECTIONS PER SIDE, TOP, AND BOTTOM, 12-INCHES O.C. MAXIMUM FOR OPENINGS OF 48-INCHES WIDE AND 36-INCHES HIGH AND LESS. DAMPERS GREATER THAN 48-INCHES WIDE OR 36-INCHES HIGH REQUIRE THE CONNECTIONS TO BE NO MORE THAN 6-INCHES O.C. THE ANGLES MUST BE ATTACHED TO ALL 4 SIDES OF THE SLEEVE. ENSURE THAT FASTENERS DO NOT INTERFERE WITH THE OPERATION OF THE DAMPER.
- RETAINING ANGLE ATTACHMENT TO WALL/FLOOR - FOR TWO-SIDED ANGLE INSTALLATIONS THE RETAINING ANGLES SHALL NOT BE ATTACHED TO THE WALL.
- SLEEVE GAUGE AND CONNECTION TYPE REQUIREMENTS - THE SIZE OF THE DAMPER/DUCT DETERMINES THE REQUIRED SLEEVE GAUGE AND THE REQUIRED DUCT TO SLEEVE CONNECTION (SEE TABLE BELOW). THE SLEEVE THICKNESS MUST ALSO NOT BE LESS THAN THE GAUGE OF THE CONNECTING DUCT. ANY DUCT CONNECTION OTHER THAN THE BREAKAWAY CONNECTIONS DESCRIBED BELOW ARE CONSIDERED RIGID.
- SIZE THE ACCESS DOOR TO ALLOW INSPECTION AND REPLACEMENT OF THE FUSIBLE LINK. SEE TABLE BELOW FOR SIZES.

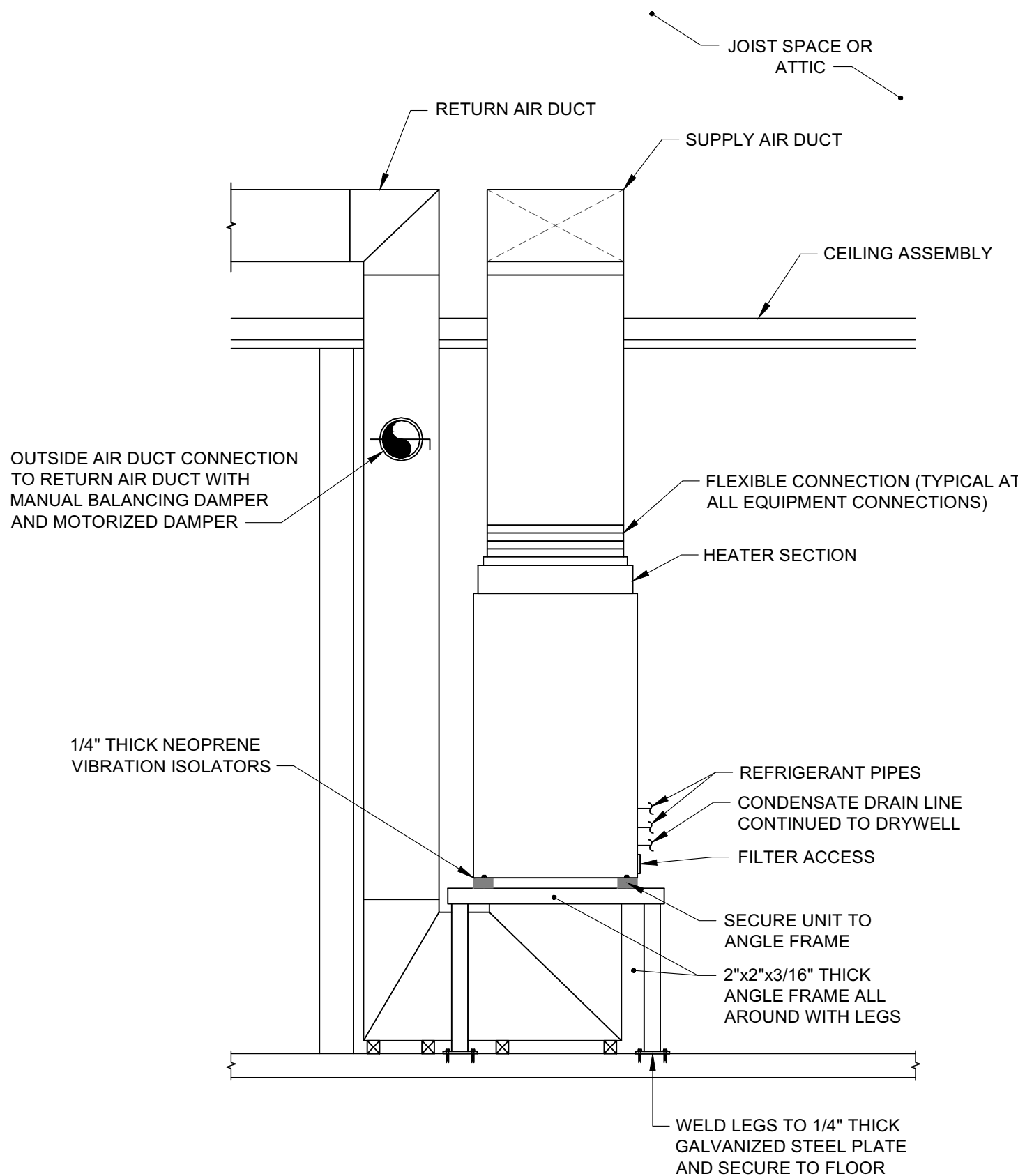
SLEEVE REQUIREMENTS		
SLEEVE GAUGE	DUCT DIMENSIONS	DUCT TO SLEEVE CONNECTION
14 GA - 10 GA	ALL DUCT SIZES	RIGID OR BREAKAWAY
16 GA	36-IN MAX WIDTH 24-IN MAX HEIGHT 24-IN MAX DIA	RIGID OR BREAKAWAY
16 GA	ALL DUCT SIZES	BREAKAWAY ONLY
18 GA	85-IN WIDE AND OVER	
20 GA	55-IN - 84-IN WIDE	
22 GA	31-IN - 54-IN WIDE	
24 GA	13-IN - 30-IN WIDE	
26 GA	12-IN WIDE AND UNDER	

ACCESS DOOR SIZE	
DUCT WIDTH	DOOR SIZE
6" THRU 18"	6"x12"
19" THRU 36"	12"x18"
37" AND ABOVE	18"x18"

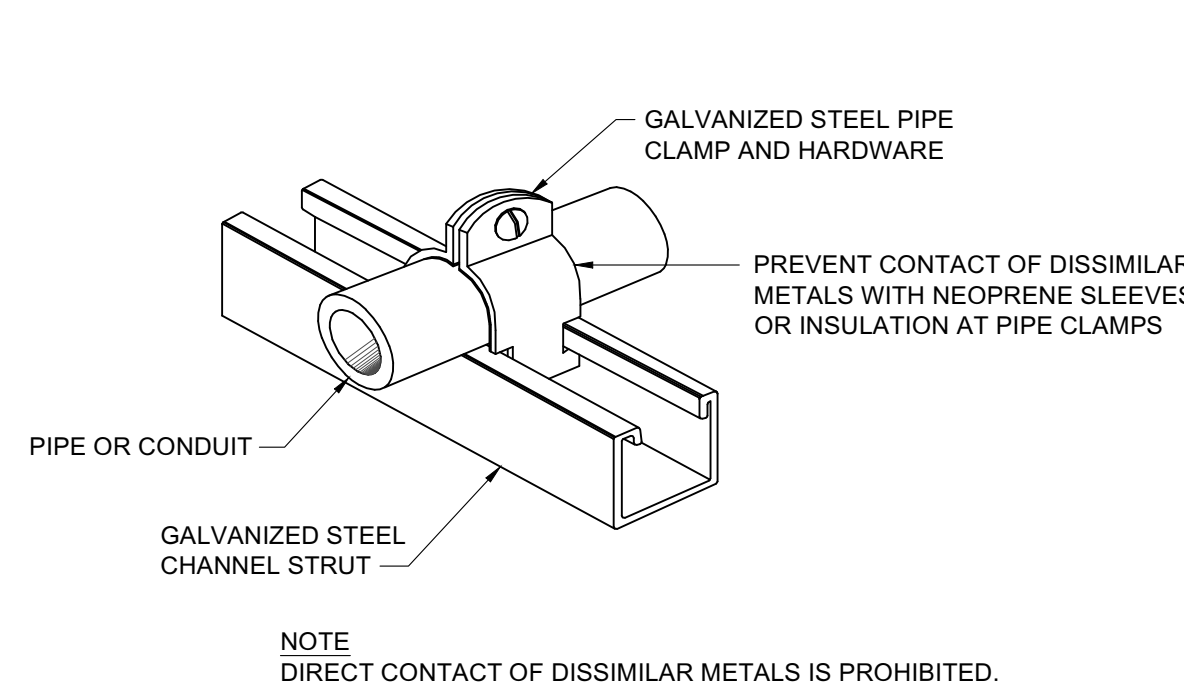
6 TYPICAL 1-1/2 HOUR TYPE B FIRE DAMPER ASSEMBLY
CM6.01 NOT TO SCALE



5 TYPICAL FLEXIBLE DUCT TO AIR DEVICE
M6.01 NOT TO SCALE

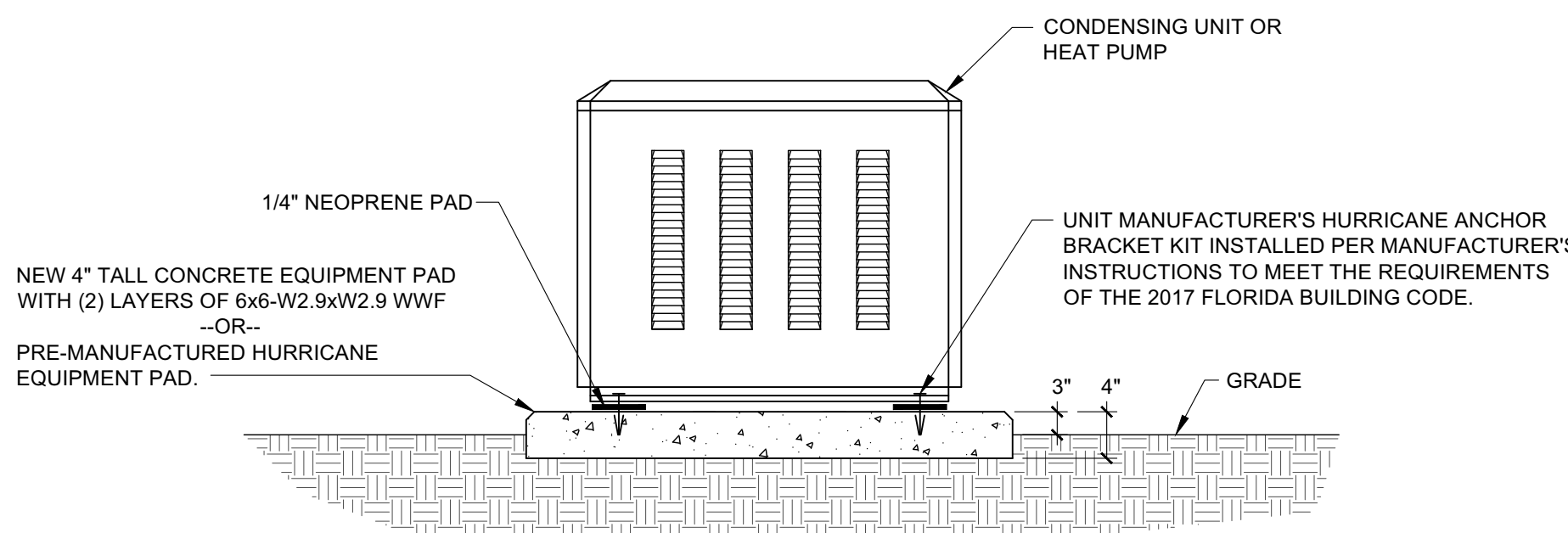


4 CLUBHOUSE AIR HANDLER SUPPORT DETAIL
M6.01 NOT TO SCALE



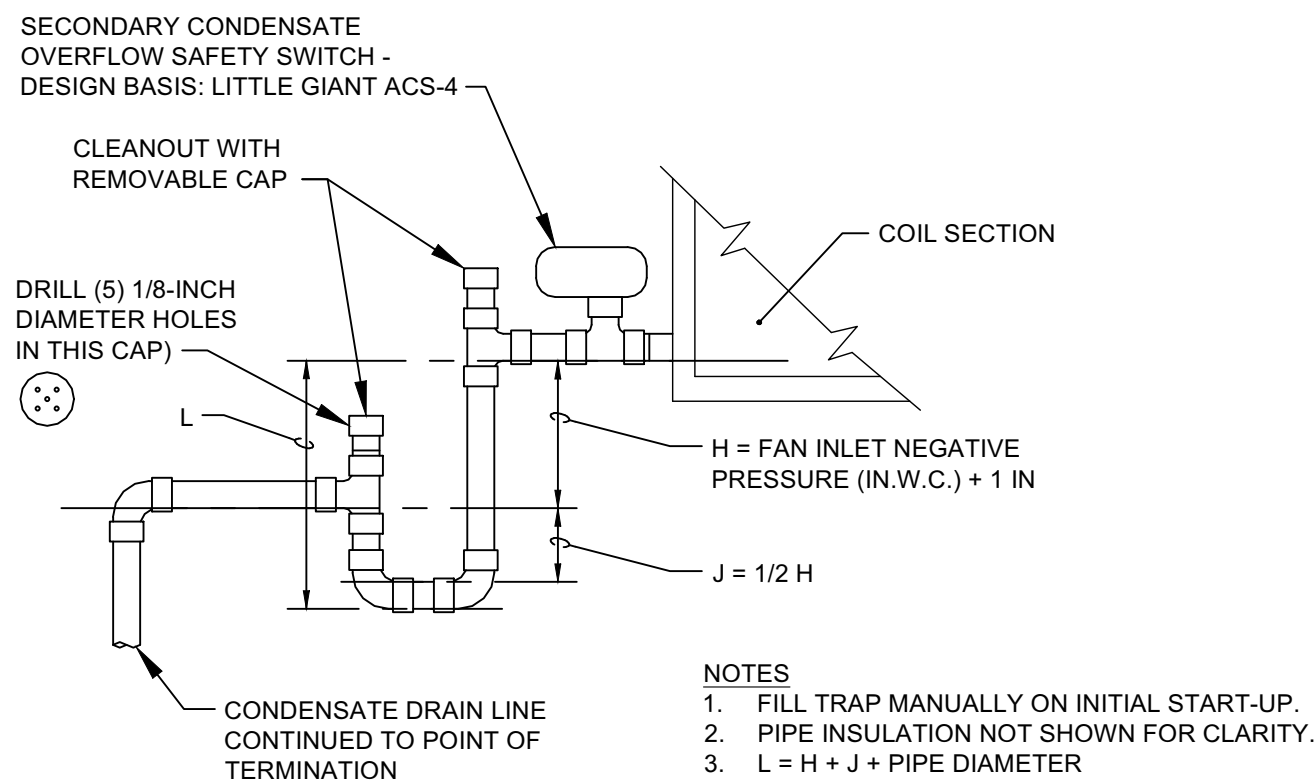
NOTE
DIRECT CONTACT OF DISSIMILAR METALS IS PROHIBITED.

3 TYPICAL WALL PIPE SUPPORT
M6.01 NOT TO SCALE



- NOTES
- THIS DETAIL IS TYPICAL FOR CONDENSING UNITS/HEAT PUMPS 5 TONS AND SMALLER.
 - SECURE THE EQUIPMENT BRACKETS TO THE CONCRETE PAD WITH TAPCONS (MIN 1-1/2 INCH EMBED).

2 CONDENSING UNIT/HEAT PUMP INSTALLATION DETAIL
M6.01 NOT TO SCALE



- NOTES
- FILL TRAP MANUALLY ON INITIAL START-UP.
 - PIPE INSULATION NOT SHOWN FOR CLARITY.
 - L = H + J + PIPE DIAMETER

1 TYPICAL CONDENSATE DRAIN
M6.01 NOT TO SCALE