AIR DEVICE SCHEDULE					
MARK	CD/XxX	RG/XxX			
MANUFACTURER	HART & COOLEY	HART & COOLEY			
MODEL	681/682/683	650			
TYPE	CEILING SUPPLY	SIDEWALL RETURN			
SIZE (INxIN)/AIRFLOW PATTERN	SEE DWG	SEE DWG			
FINISH	WHITE	WHITE			
MATERIAL	STEEL	STEEL			
ACCESSORIES	1,2	-			
NOTES	1-3	1			
PERFORMANCE					
MAX NC LEVEL	27	27			
MAX PRESS DROP (IN.W.G.)	0.04	0.04			
ACCESSORIES (PROVIDE THE FOLLOWING)					

OPPOSED BLADE DAMPER ADJUSTABLE FROM FACE OF REGISTER

. DUCT BOOT WITH RADIATION DAMPER

PAINT DUCTWORK THAT IS VISIBLE THROUGH FRONT OF AIR DEVICE MATTE BLACK.

REFER TO DRAWINGS FOR REQUIRED SUPPLY AIR DEVICE AIR FLOW PATTERN. ALL AIR DEVICES WITH RADIATION DAMPERS SHALL BE OF STEEL CONSTRUCTION.

EXHAUST FAN SCHEDULE					
MARK	EF-1	EF-2			
MANUFACTURER	BROAN	BROAN			
MODEL	670	L100			
APPLICATION	BATHROOM	DAS EQUIPMENT ROOM			
FAN	•	•			
LOCATION	WALL	CEILING			
AIR FLOW (CFM)	50	100			
STATIC PRESSURE (IN.W.G.)	0.125	0.125			
DRIVE/TYPE	DIRECT	DIRECT			
WATTS	55 W	87 W			
VOLTAGE/PHASE/HZ	115/1/60	115/1/60			
UNIT REQUIREMENTS	•	•			
MAXIMUM SONES	3.5	1.0			
OPERATING WEIGHT (LBS)	10	25			
ACCESSORIES	1,2	1-4			
NOTES	1,2	-			

ACCESSORIES (PROVIDE THE FOLLOWING)

- WHITE GRILLE
- GALVANIZED STEEL WALL CAP WITH BACKDRAFT DAMPER AND BIRDSCREEN PRIMED AND PAINTED TO MATCH BUILDING EXTERIOR RADIATION DAMPER
- LINE-VOLTAGE REVERSE ACTING THERMOSTAT SET TO ACTIVATE FAN WHEN ROOM TEMPERATURE EXCEEDS 80 DEG F

INTERLOCK WITH BATHROOM LIGHT SWITCH.

EXHAUST FANS SHALL BE INSTALLED WITHIN THE BATHROOM WALLS AS SHOWN ON THE UNIT PLANS. THE TOP OF FAN SHALL BE LOCATED 6" BELOW CEILING. PROVIDE 3" DIAMETER DUCT IN WALL AND TRANSITION TO 4" DIAMETER DUCT IN CEILING CAVITY.

VENTILATION

APARTMENT UNITS ILLUSTRATED BELOW. OPTION 1 - MECHANICAL VENTILATION

INSTALL THE OUTSIDE AIR DUCTWORK AS ILLUSTRATED ON THE CONTRACT DOCUMENTS. THE OUTSIDE AIR DUCTWORK CONNECTED TO THE AIR HANDLER WILL SATISFY THE REQUIREMENTS FOR MECHANICAL VENTILATION. THE REQUIRED AIR FLOWS ARE CALCULATED IN THE TABLE BELOW.

UNIT	S1	A1	A2S	B1	B2S	C1
UNIT AREA (SF)	534	729	815	959	1,049	1,120
NUMBER OF BEDROOMS	1	1	1	2	2	3
Qoa BASED ON EQUATION 4-9 (CFM)	21	23	23	32	33	41
SCHEDULED OUTDOOR AIR (CFM)	25	25	25	35	35	45

MECHANICAL VENTILATION: THE VENTILATION RATE FOR EACH UNIT WAS CALCULATED PER THE 2017 FBC-MECHANICAL, SECTION 403.3.2 OUTDOOR AIR FOR DWELLING UNITS. EQUATION 4-9 WAS USED TO DETERMINE THE REQUIRED OUTDOOR AIRFLOW RATE. Qoa = 0.01*Afloor + 7.5(Nbr + 1) [EQUATION 4-9]

WHERE: Qoa = OUTDOOR AIRFLOW RATE (CFM)

Afloor = FLOOR AREA (SF) Nbr = NUMBER OF BEDROOMS; NOT TO BE LESS THAN ONE

OPTION 2 - NATURAL VENTILATION

BATHROOM LIGHT SWITCH.

AT THE OWNER'S OPTION, AND WITH APPROVAL FROM THE AUTHORITY HAVING JURISDICTION (AHJ), THE CONTRACTOR MAY PURSUE THE NATURAL VENTILATION OPTION AND NOT INSTALL THE OUTSIDE AIR DUCTWORK ASSOCIATED WITH THE MECHANICAL VENTILATION. THE FLORIDA BUILDING CODE (FBC) ALLOWS DWELLING UNITS TO BE VENTILATED VIA NATURAL VENTILATION IF THE APARTMENT UNIT(S) MEET THE PERFORMANCE REQUIREMENTS OF THE POST-CONSTRUCTION BLOWER DOOR

TEST (REFER TO THE 2017 FLORIDA BUILDING CODE - MECHANICAL, SECTION 401.2 "VENTILATION REQUIRED" FOR THE BLOWER DOOR TEST REQUIREMENTS). IN PROCEEDING WITH THE NATURAL VENTILATION METHOD, THE OWNER AND CONTRACTOR ACKNOWLEDGE THE LIABILITY OF THE SYSTEM PASSING THE BLOWER DOOR TEST WITH THE USE OF NATURAL VENTILATION IN LIEU OF THE

ENGINEERED MECHANICAL VENTILATION METHOD WHICH REQUIRES NO TESTING. IF AN APARTMENT UNIT DOESN'T PASS THE POST-CONSTRUCTION BLOWER DOOR TEST, ALTERNATE METHODS WILL NEED TO BE IMPLEMENTED TO SATISFY THE VENTILATION REQUIREMENT. OPTION 1 PROVIDES THE DETAILS TO MEET THE REQUIREMENTS OF MECHANICAL VENTILATION AND WILL REMAIN ON THE CONTRACT DOCUMENTS AS AN ACCEPTABLE METHOD TO BE USED IF THE BLOWER DOOR TESTING FAILS.

LOCAL EXHAUST: LOCAL EXHAUST SYSTEMS SHALL BE PROVIDED IN KITCHENS, BATHROOMS AND TOILET ROOMS AND SHALL HAVE THE CAPACITY TO EXHAUST THE MINIMUM AIRFLOW RATE DETERMINED IN ACCORDANCE WITH TABLE 403.3.2.3.

TABLE 403.3.2.3				
MINIMUM REQUIRED LOCAL EXHAUST RATES FOR GROUP R-2, R-3, AND R-4 OCCUPANCIES				
AREA TO BE EXHAUSTED EXHAUST RATE CAPACITY				
KITCHENS	100 CFM INTERMITTENT OR 25 CFM CONTINUOUS			
BATHROOMS AND TOILET ROOMS	50 CFM INTERMITTENT OR 20 CFM CONTINUOUS			
KITCHEN EXHAUST: PER THE FBC-MECHANICAL, SECTION 505.1 DOMESTIC SYSTEMS,				
LISTED AND LABELED DUCTLESS RAN	GE HOODS ARE NOT REQUIRED TO DISCHARGE TO			

THE OUTDOORS. BATHROOM EXHAUST: EXHAUST FANS ARE SIZED FOR 50 CFM TO MEET THE REQUIREMENT FOR INTERMITTENT USE. EXHAUST FANS ARE CONTROLLED BY THE

SPLIT SYSTEM AIR HANDLER SCHEDULE LOCATION WALL-MOUNTED WALL-MOUNTED MANUFACTURER GOODMAN GOODMAN MODEL AWUF180316B AWUF240516B TOTAL AIR FLOW (CFM) OUTSIDE AIR FLOW (CFM) EXTERNAL STATIC PRESSURE (IN.W.G.) 0.4 0.4 1/5 **EVAPORATOR COIL** SENSIBLE CAPACITY (MBH) 13.4 17.9 TOTAL CAPACITY (MBH) 17.4 21.8 ENTERING AIR TEMP (DB/WB) 75.8/63.3 76.1/63.6 LEAVING AIR TEMP (DB/WB) 55.1/53.4 55.4/54.4 **AUXILIARY ELECTRIC HEATING COIL** NOMINAL CAPACITY (KW @ 240V) 5.0 5.0 CAPACITY @ 208V (KW) TEMPERATURE RISE (DEG F) 19.5 14.6 **FILTERS** TYPE DISPOSABLE DISPOSABLE **EFFICIENCY** MERV 7 MERV 7 **ELECTRICAL** VOLTS/PHASE/HZ 208/1/60 208/1/60 MINIMUM CIRCUIT AMPACITY 23.3 MAXIMUM FUSE SIZE **UNIT REQUIREMENTS** OPERATING WEIGHT (LBS) 100 100 ACCESSORIES NOTES **ACCESSORIES (PROVIDE THE FOLLOWING)** SINGLE POINT POWER CONNECTION WITH FACTORY-INSTALLED PULL-TYPE DISCONNECT

3. MANUFACTURER'S BOTTOM RETURN AIR KIT FOR THE OUTDOOR AIR DUCT CONNECTION (IF MECHANICAL

4. CONDENSATE OVERFLOW SWITCH TO SHUT DOWN THE AIR HANDLER IF THE PRIMARY CONDENSATE DRAIN

INSTALL INSULATED 3/4" CONDENSATE TRAP AND PIPE TO CONDENSATE RISER. REFER TO DETAILS FOR

MANUFACTURER'S WALL ACCESS DOOR WITH LOUVERED RETURN OPENING

CONDENSATE TRAP REQUIREMENTS. RUNNING TRAPS WILL NOT BE PERMITTED.

CONDENSING	<u>G UNIT SCHEDUI</u>	_E
MARK	CU-1	CU-2
LOCATION	GRADE	GRADE
MANUFACTURER	GOODMAN	GOODMAN
MODEL NUMBER	GSX14018	GSX14024
COMPRESSER		
OUTDOOR DESIGN TEMPERATURE (DEG F)	95	95
COMPRESSOR TYPE	SCROLL	SCROLL
NUMBER OF COMPRESSERS	1	1
CONDENSER FAN		
NUMBER OF FANS	1	1
MOTOR HP	1/8	1/8
ELECTRICAL		
VOLTAGE/PHASE/HZ	208/1/60	208/1/60
COMPRESSOR RLA	6.0	7.7
CONDENSER FAN FLA	0.7	0.7
MINIMUM CIRCUIT AMPACITY	8.2	10.3
MAXIMUM FUSE SIZE	15	15
JNIT REQUIREMENTS		
UNIT WEIGHT (LBS)	125	150
REFRIGERANT	R-410A	R-410A
SEER	14.0	14.0
ACCESSORIES	1-7	1-7
NOTES	1-3	1-3

ACCESSORIES (PROVIDE THE FOLLOWING)

LOUVERED COIL GUARD ANCHOR BRACKET KIT MEETING THE REQUIREMENTS OF THE 2017 FLORIDA BUILDING CODE UNIT INTEGRITY REQUIREMENTS FOR HURRICANE-TYPE WINDS

TIME DELAY RELAY FOR AIR HANDLER FAN TO CONTINUE OPERATING FOR 30 SECONDS AFTER COMPRESSOR

VENTILATION IS USED).

NOTES

ANTI-SHORT CYCLE KIT LOW PRESSURE SWITCHES

REFRIGERANT CHARGING VALVES LONG LINE SET APPLICATION ACCESSORIES: HARD-START KIT. THERMOSTATIC EXPANSION VALVE (TXV).

LIQUID LINE SOLENOID AT THE OUTDOOR UNIT, AND AN INVERTED REFRIGERANT TRAP AT THE INDOOR UNIT NOTES

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE EQUIPMENT MANUFACTURER FOR THE PROPER REFRIGERANT PIPE SIZING FOR THE APPLICATION.

COORDINATE OUTDOOR UNIT LOCATIONS ON A BUILDING BY BUILDING BASIS. ADJUST REFRIGERANT CHARGE FOR LONG LINE APPLICATIONS.

THERMOSTAT SCHEDULE

THERMOSTATS SHALL HAVE THE FOLLOWING FEATURES:

- 1. 5-2-DAY PROGRAMMABLE THERMOSTAT WITH ONE PROGRAM FOR THE WEEKDAYS AND A SEPARATE PROGRAM FOR THE WEEKEND WITH 4 PROGRAM PERIODS PER DAY.
- 3. LCD DISPLAY INDICATING CURRENT TEMPERATURE (DEG F) AND 12 HOUR CLOCK
- 2. TEMPERATURE CONTROL OF +/-1 DEG F

GENERAL NOTES

PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE HVAC SYSTEMS.

- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND STANDARDS.

INSTALLATION OF EQUIPMENT SHALL COMPLY WITH EQUIPMENT

THE CONTRACTOR SHALL VERIFY INSTALLATION CLEARANCES WILL BE MAINTAINED AND DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT AND ENGINEER PRIOR TO THE ACQUISITION OF EQUIPMENT

MANUFACTURER'S INSTALLATION AND CLEARANCE REQUIREMENTS.

- THE GENERAL CONTRACTOR SHALL COORDINATE THE WORK OF THE DIFFERENT TRADES SO THAT INTERFERENCE BETWEEN PIPING, EQUIPMENT, STRUCTURAL, AND ELECTRICAL WORK WILL BE AVOIDED. ALL NECESSARY OFFSETS IN DUCTWORK AND FITTINGS REQUIRED TO INSTALL THE WORK PROPERLY SHALL BE PROVIDED COMPLETE IN PLACE AT NO ADDITIONAL COST TO THE OWNER.
- ALL RFI'S SUBMITTED BY THE CONTRACTOR SHALL INCLUDE A PROPOSED SOLUTION.
- . ALL RESTROOM MAKE-UP AIR SHALL BE BY WAY OF DOOR UNDERCUTS.
- 8. ALL BEDROOM RETURN AIR SHALL PASS THROUGH THE TRANSFER GRILLES LOCATED ABOVE THE DOORS AND THROUGH DOOR
- ALL TEMPERATURE SENSORS/CONTROLS IN ADA UNITS SHALL BE LOCATED TO ALLOW THE PARALLEL APPROACH BY A PERSON IN A WHEELCHAIR AND MOUNTED 54" AFF. WHERE ONLY FORWARD APPROACH IS POSSIBLE, SENSORS/CONTROLS SHALL BE MOUNTED 48"
- 10. ALL TEMPERATURE SENSORS/CONTROLS IN NON-ADA UNITS SHALL BE MOUNTED 60" AFF.
- 11. LOCATE EXHAUST AND DRYER VENT WALL CAPS AT THE SAME ELEVATION FOR EACH FLOOR TO MAINTAIN A UNIFORM APPEARANCE. ALL WALL CAPS AND ROOF CAPS SHALL BE PRIME COATED AND PAINTED TO MATCH THE SURROUNDING AREA.
- 12. REFRIGERANT PIPING SIZING AND ROUTING DESIGN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE INTO ACCOUNT LENGTH OF RUN, ELEVATION CHANGES, AND FIELD CONDITIONS. CONTRACTOR SHALL SUBMIT CALCULATIONS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER.

DUCTWORK COORDINATION

THE DUCTWORK IS ROUTED WITHIN THE STRUCTURAL ELEMENTS AND THE CONTRACTOR IS REQUIRED TO COORDINATE WITH THESE ELEMENTS TO ENSURE THAT PATHWAYS ARE PROVIDED AND MAINTAINED FOR ALL DUCT ROUTING.

DOMESTIC CLOTHES DRYER NOTES

I. DRYER EXHAUST DUCTS SHALL BE CONSTRUCTED OF 4" DIAMETER GALVANIZED STEEL (MIN 26 GA) WITH A SMOOTH INTERIOR FINISH.

- 2. EXHAUST DUCTS SHALL BE SUPPORTED AT 4-FOOT INTERVALS AND SECURED IN PLACE. THE INSERT END OF THE DUCT SHALL EXTEND INTO THE ADJOINING DUCT OR FITTING IN THE DIRECTION OF AIRFLOW. DUCTS SHALL NOT BE JOINED WITH SCREWS OR SIMILAR FASTENERS THAT PROTRUDE INTO THE INSIDE OF THE DUCT.
- . TRANSITION (FLEXIBLE) DUCTS USED TO CONNECT THE DRYER TO THE WALL- MOUNTED DRYER BOX SHALL BE A SINGLE LENGTH THAT IS LISTED AND LABELED IN ACCORDANCE WITH UL 2158A. TRANSITION DUCTS SHALL BE A MAXIMUM OF 8 FEET IN LENGTH AND SHALL NOT BE CONCEALED WITHIN CONSTRUCTION.

PROTECTION REQUIRED

PROTECTIVE SHIELD PLATES SHALL BE PLACED WHERE NAILS OR SCREWS FROM FINISH OR OTHER WORK ARE LIKELY TO PENETRATE THE CLOTHES DRYER EXHAUST DUCT.

DUCT LENGTH

THE EQUIVALENT LENGTH OF EXHAUST DUCT SHALL BE CALCULATED AS THE TOTAL LENGTH OF DUCT FROM THE DRYER CONNECTION TO THE OUTLET TERMINAL PLUS 2.5 FEET FOR EACH 4" RADIUS MITERED 45-DEGREE ELBOW AND 5 FEET FOR EACH 4" RADIUS MITERED 90-DEGREE ELBOW.

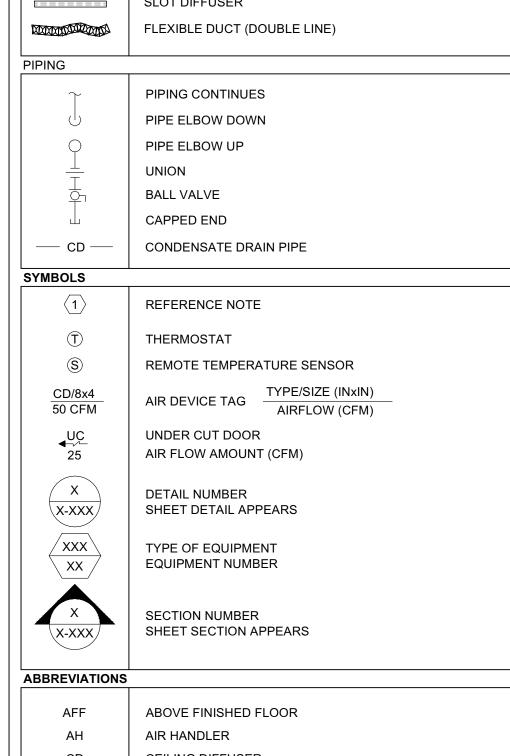
VENT DUCT LENGTH IDENTIFICATION

. THE EXHAUST DUCT WILL BE CONCEALED WITHIN THE BUILDING CONSTRUCTION. THE MECHANICAL CONTRACTOR IS REQUIRED TO NOTE THE TOTAL LENGTH OF THE EXHAUST DUCT AND QUANTITY OF FITTINGS ON A PERMANENT LABEL SECURED TO THE WALL BEHIND THE DRYER AND OUT OF DIRECT VIEW. TAGS SHALL BE THREE-LAYER PLASTIC WITH ENGRAVED WHITE LETTERS ON A BLACK BACKGROUND AND SHALL BE SIMILAR TO BELOW:

> TOTAL DRYER VENT LENGTH ____ FT 45 DEG FITTINGS ____ (QTY) 90 DEG FITTINGS ____ (QTY)

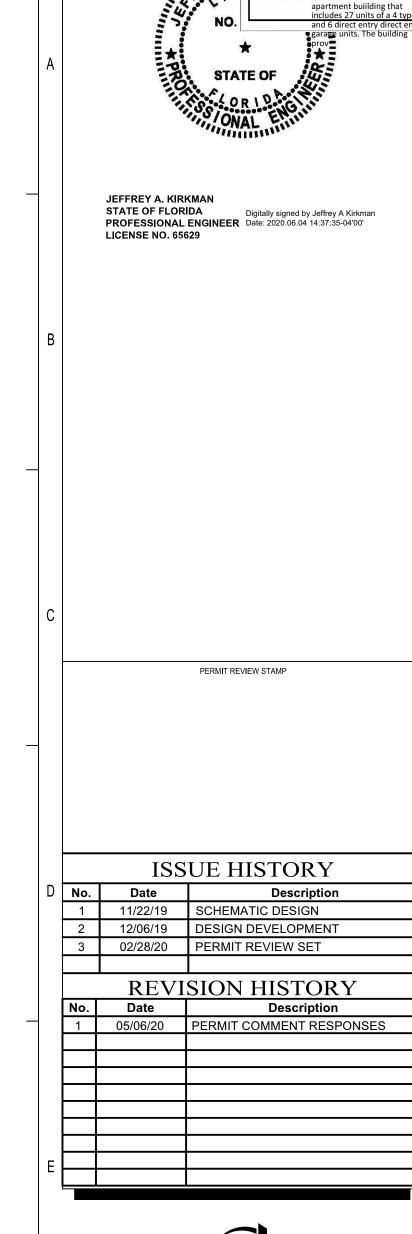
* IT IS THE <u>OWNER'S RESPONSIBILITY</u> TO PROVIDE DRYERS COMPATIBLE WITH THE DRYER VENT SYSTEM INSTALLED.

HVAC LEGEND DESCRIPTION SYMBOL **DUCTWORK** SUPPLY DUCT RISER RETURN DUCT RISER **EXHAUST DUCT RISER** SUPPLY DUCT DOWN RETURN DUCT DOWN **EXHAUST DUCT DOWN** DUCT CONTINUES MANUAL VOLUME DAMPER MOTORIZED DAMPER FIRE/SMOKE DAMPER FD FIRE DAMPER DUCT SMOKE DECTECTOR **DUCT ACCESS PANEL** DUCT RISE (R) OR DROP (D) IN DIRECTION OF FLOW ROUND/FLEXIBLE DUCT CONNECTION ROUND/FLEXIBLE DUCT CONNECTION WITH DAMPER SQUARE TO ROUND DUCT TRANSITION $\mathsf{RD}_{\scriptscriptstyle{\mathsf{v}}}$ **RADIATION DAMPER** SIDEWALL DIFFUSER/GRILLE SUPPLY DIFFUSER RETURN GRILLE **EXHAUST GRILLE** SLOT DIFFUSER ======= FLEXIBLE DUCT (DOUBLE LINE) PIPING PIPING CONTINUES PIPE ELBOW DOWN PIPE ELBOW UP



BBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
AFF	ABOVE FINISHED FLOOR
AH	AIR HANDLER
CD	CEILING DIFFUSER
CU	CONDENSING UNIT
EA	EXHAUST AIR
EF	EXHAUST FAN
Н	HEATER
HP	HEAT PUMP
LV	LOUVER
OA	OUTSIDE AIR
RA	RETURN AIR
RG	RETURN GRILLE
SA	SUPPLY AIR
SD	SUPPLY DIFFUSER
SG	SIDEWALL SUPPLY GRILLE

	HVA	AC DE	SIGN	DATA	
OCATION		FORT MYERS, FLORIDA			
IMATE ZONE	1A				
UTDOOR AIR	SUN	имеr	WINTER BUILDING CONSTRUCT		ICTION
ESIGN	DB	WB	DB	SLAB EDGE R-VALUE	N/A
ONDITIONS	(DEG F)	(DEG F)	(DEG F)	FLOOR R-VALUE	19
	95	78	45	WALL R-VALUE	13
DOOR AIR	SUN	MER	WINTER	ROOF R-VALUE	38
ESIGN	DB	RELATIVE	DB	WINDOW GLAZING	DOUBLE
ONDITIONS	(DEG F)	HUMIDITY	(DEG F)	WINDOW U-FACTOR	0.40
L UNITS	75	50%	72	WINDOW SHGC	0.25



OPERTY ADDRESS: 3810 OLD BERRY POINT





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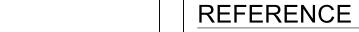
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THE ROBERT 09/10/2019 FT. MYERS, FL

LEGENDS AND SCHEDULES -**MECHANICAL**

GENERAL NOTES

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



1-1/2" DIA, INSULATEI

DATE APPROVED: 06/17/20
PERMIT NUMBER: BLD2020-00848
PROPERTY ADDRESS: 3810 OLD BERRY POINT CONDENSATE DRAIN

| INSTALL A WALL CLEANOU | DET GARGE units. The building PENETRATING FLOOR SLAB. SLABOV

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.

PENETRATION SHALL BE WATER-TIGHT.

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.

 $\langle 7 \rangle$ 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.

 $\overline{(8)}$ 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		
	DEMICION HICTORY			

REVISION HISTORY Date Description 05/06/20 PERMIT COMMENT RESPONSES

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



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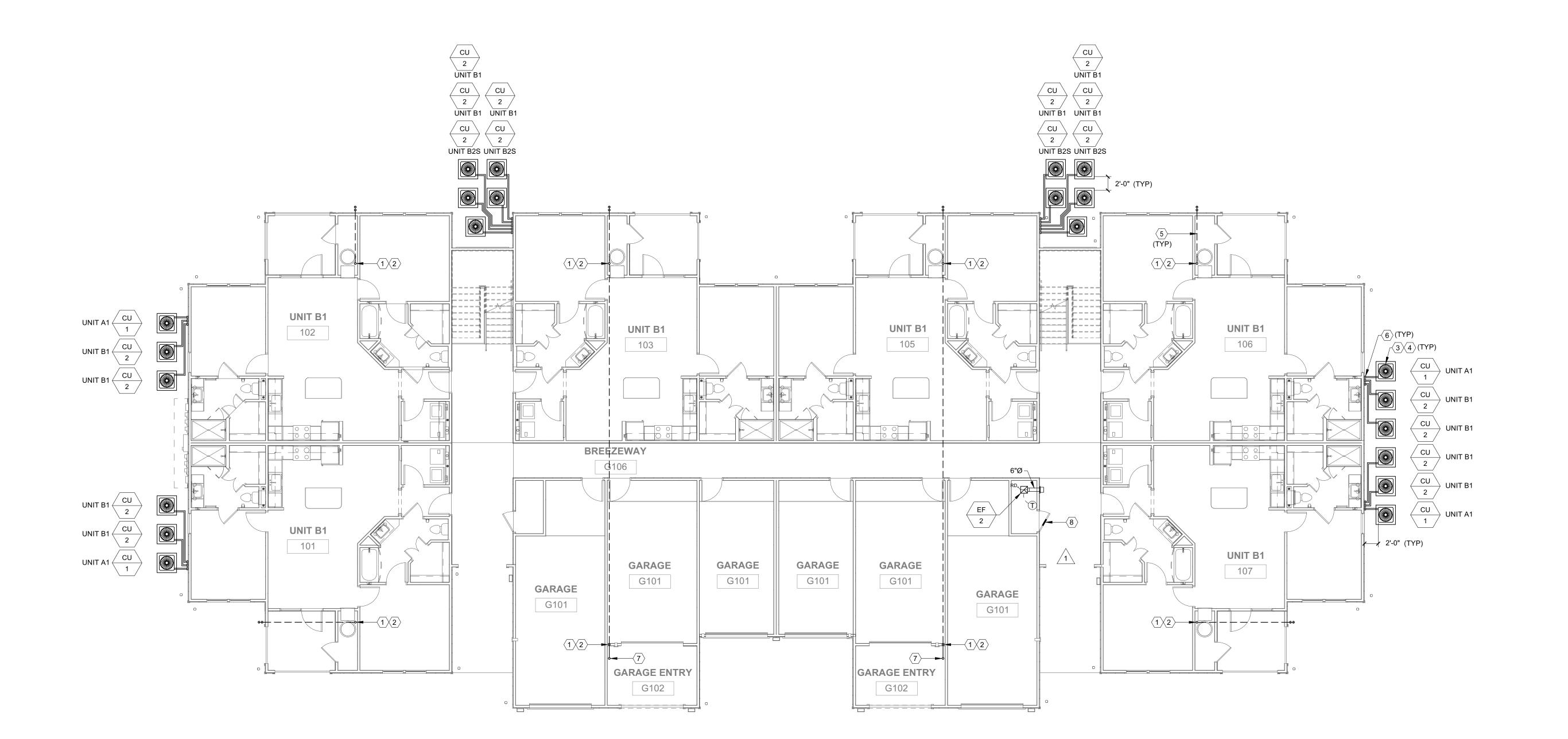
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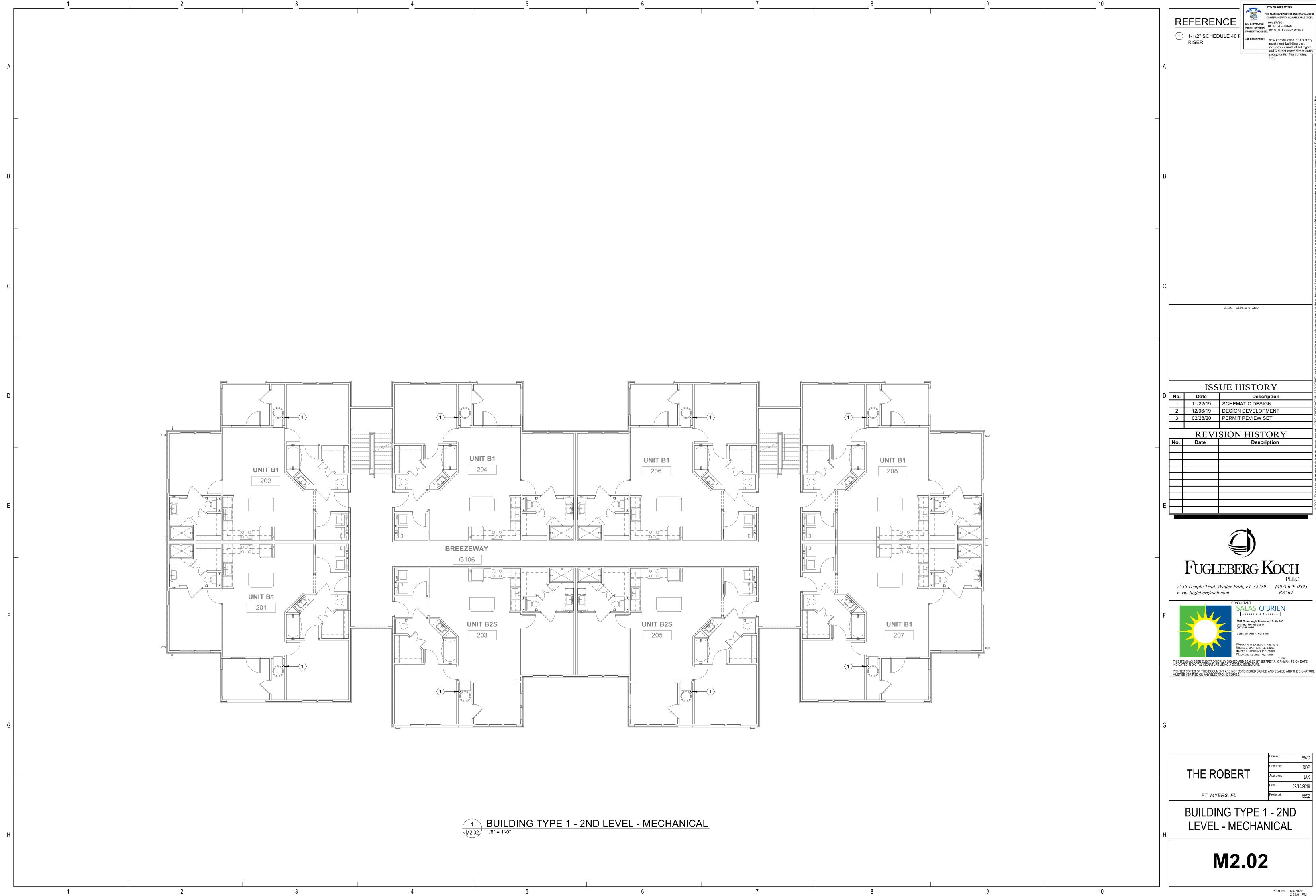
FT. MYERS, FL

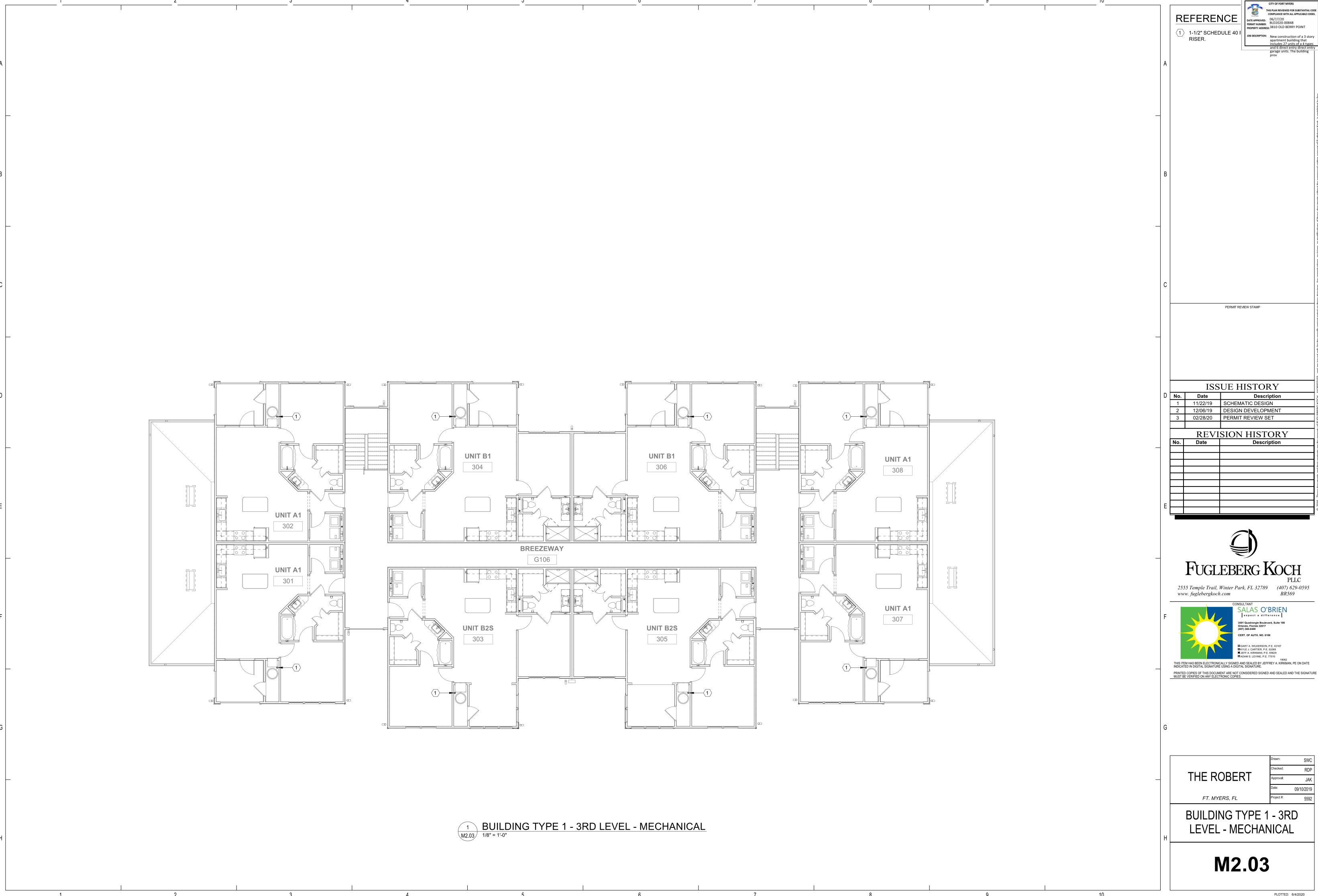
BUILDING TYPE 1 - GROUND

LEVEL - MECHANICAL

M2.01







GENERAL NOTES

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



 $\langle 1 \rangle$ 1-1/2" DIA, INSULATEI

DATE APPROVED: 06/17/20
PERMIT NUMBER: BLD2020-00848
PROPERTY ADDRESS: 3810 OLD BERRY POINT CONDENSATE DRAIN

2 INSTALL A WALL CLEANOU I DET GARGE units. The building PENETRATING FLOOR SLAB. SLABOV 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.

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.

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(8) DOOR INTAKE LOUVER - REFER TO ARCHITECTURAL PLANS.

PERMIT REVIEW STAMP

ISSUE HISTORY

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2	12/06/19	DESIGN DEVELOPMENT
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	DEMI	CION HICTORY

REVISION HISTORY Date Description 05/06/20 PERMIT COMMENT RESPONSES

FUGLEBERG KOCH

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



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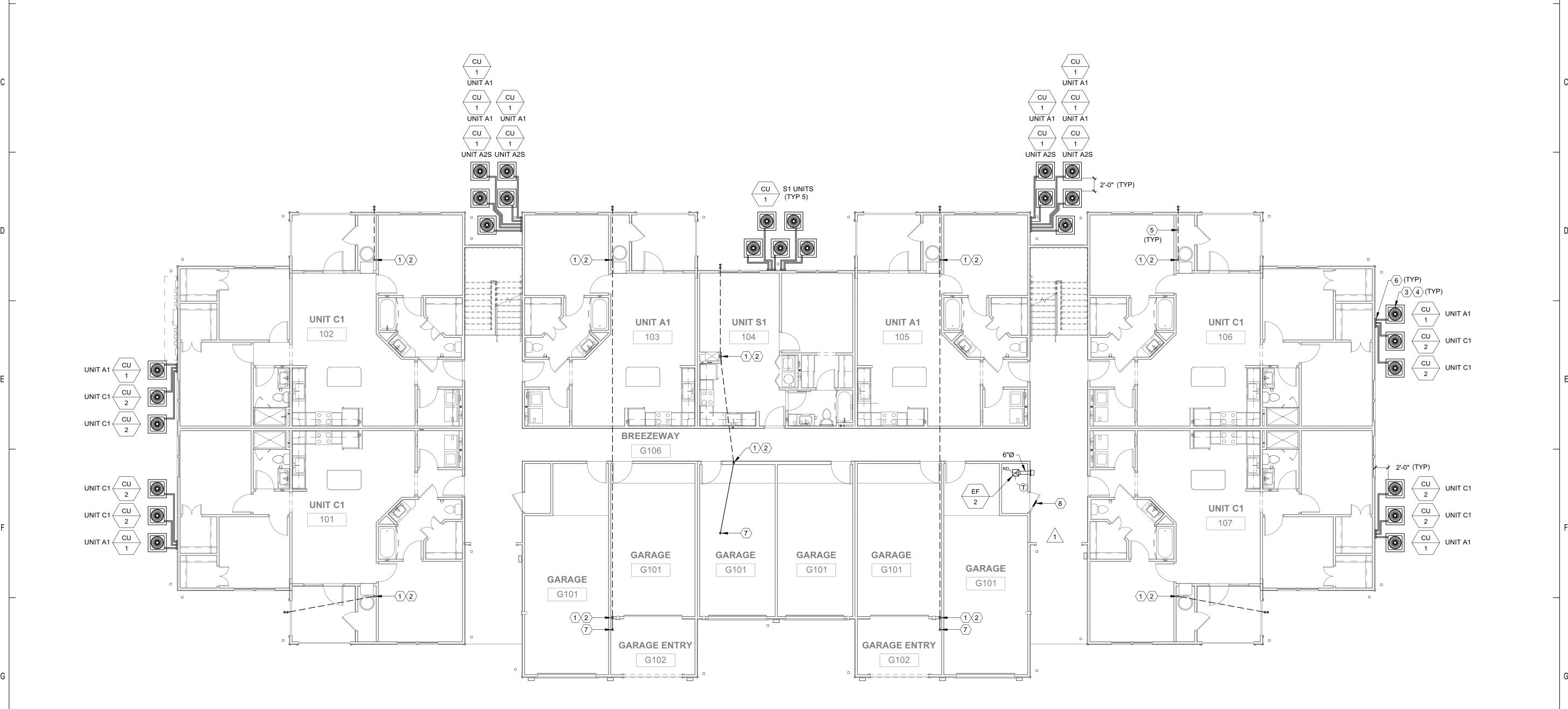
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FT. MYERS, FL

BUILDING TYPE 2 - GROUND

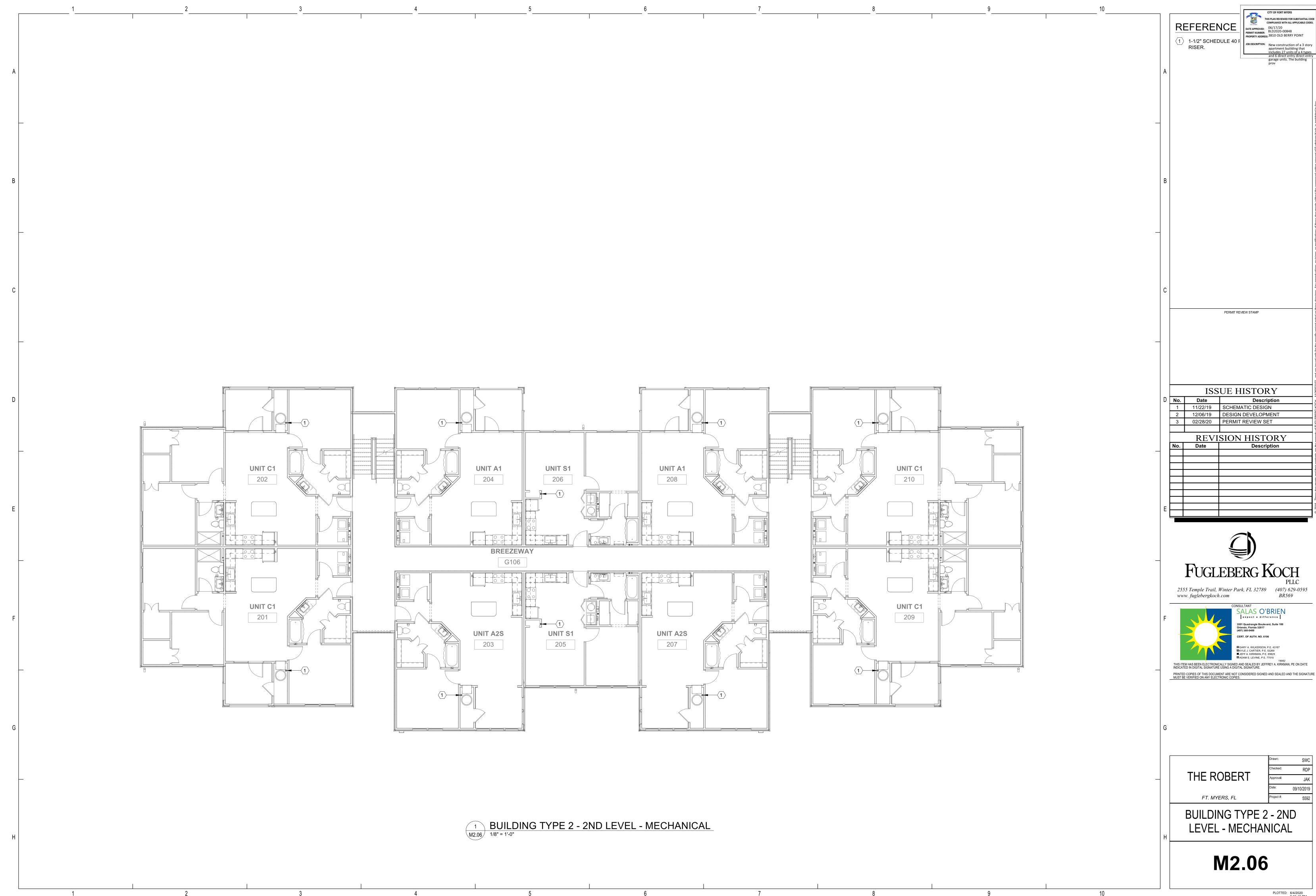
LEVEL - MECHANICAL

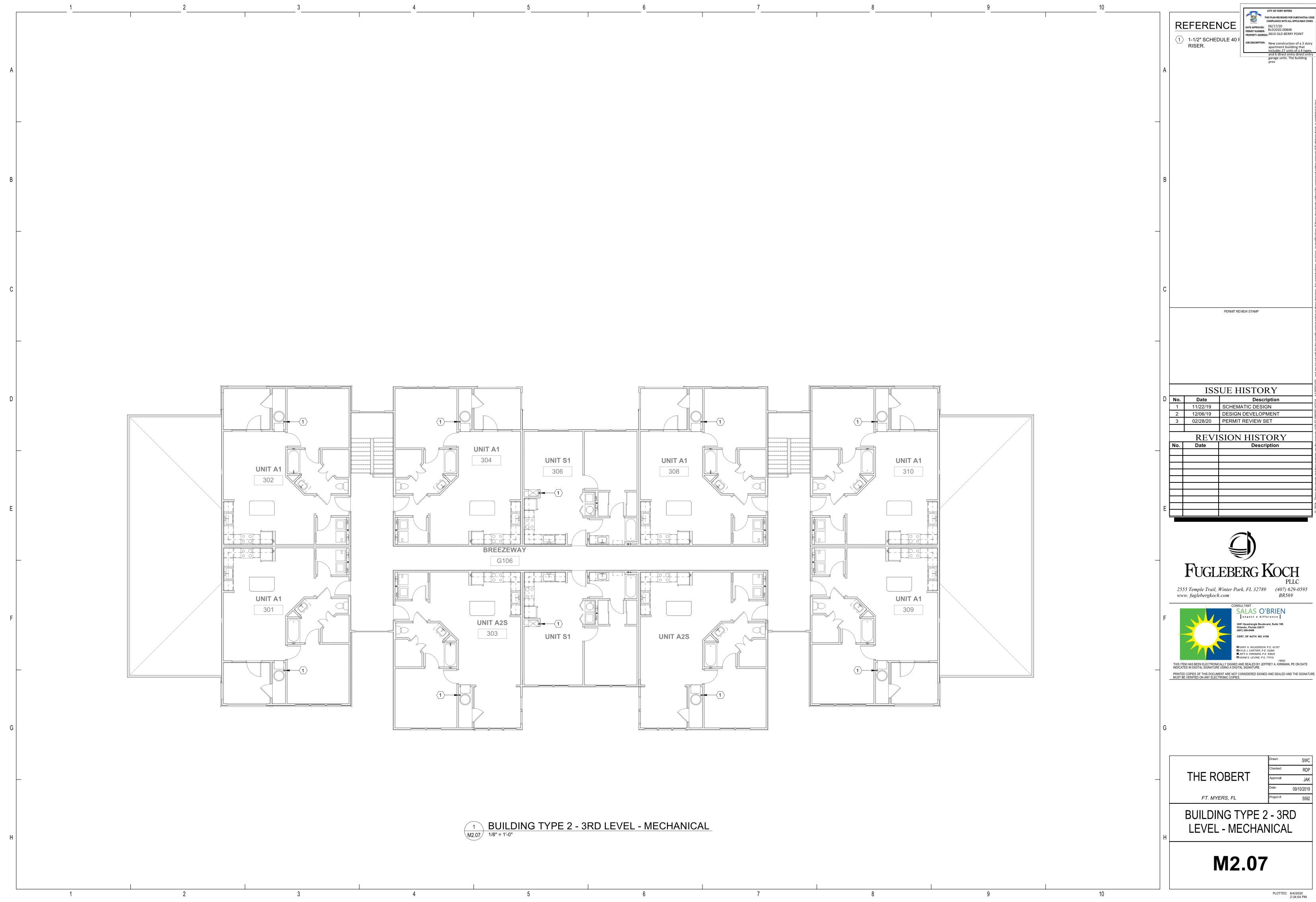
M2.05



BUILDING TYPE 2 - GROUND LEVEL - MECHANICAL

1/8" = 1'-0"





GENERAL NOTES

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



 $\langle 1 \rangle$ 1-1/2" DIA, INSULATEI

COMPLIANCE WITH ALL APPLICABLE CODES. DATE APPROVED: 06/17/20
PERMIT NUMBER: BLD2020-00848
PROPERTY ADDRESS: 3810 OLD BERRY POINT CONDENSATE DRAIN

THIS PLAN REVIEWED FOR SUBSTANTIAL CODE

2 INSTALL A WALL CLEANOU I DET WATER units. The building PENETRATING FLOOR SLAB. SLABOV 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.

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PERMIT REVIEW STAMP

(8) DOOR INTAKE LOUVER - REFER TO ARCHITECTURAL PLANS.

ISSUE HISTORY						
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	2	12/06/19	DESIGN DEVELOPMENT			
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		REVI	SION HISTORY			
	No.	Date	Description			
	1	05/06/20	PERMIT COMMENT RESPONSES			



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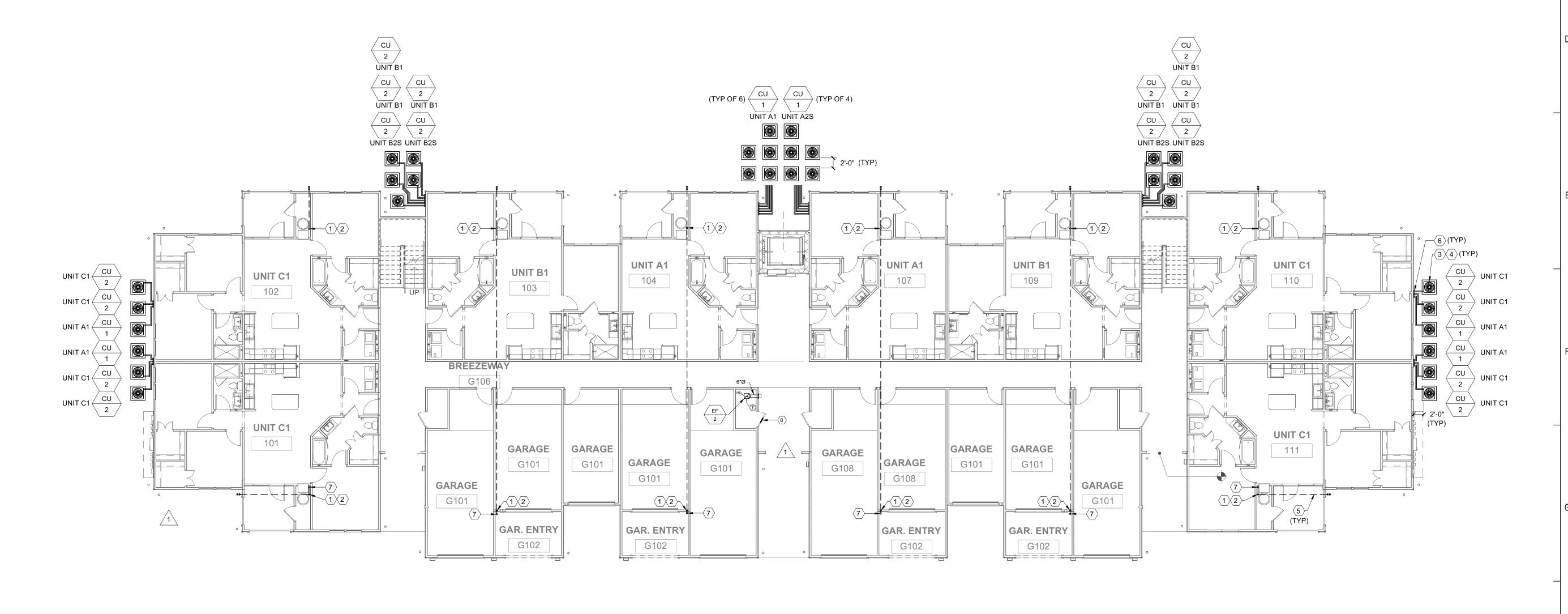
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FT. MYERS, FL

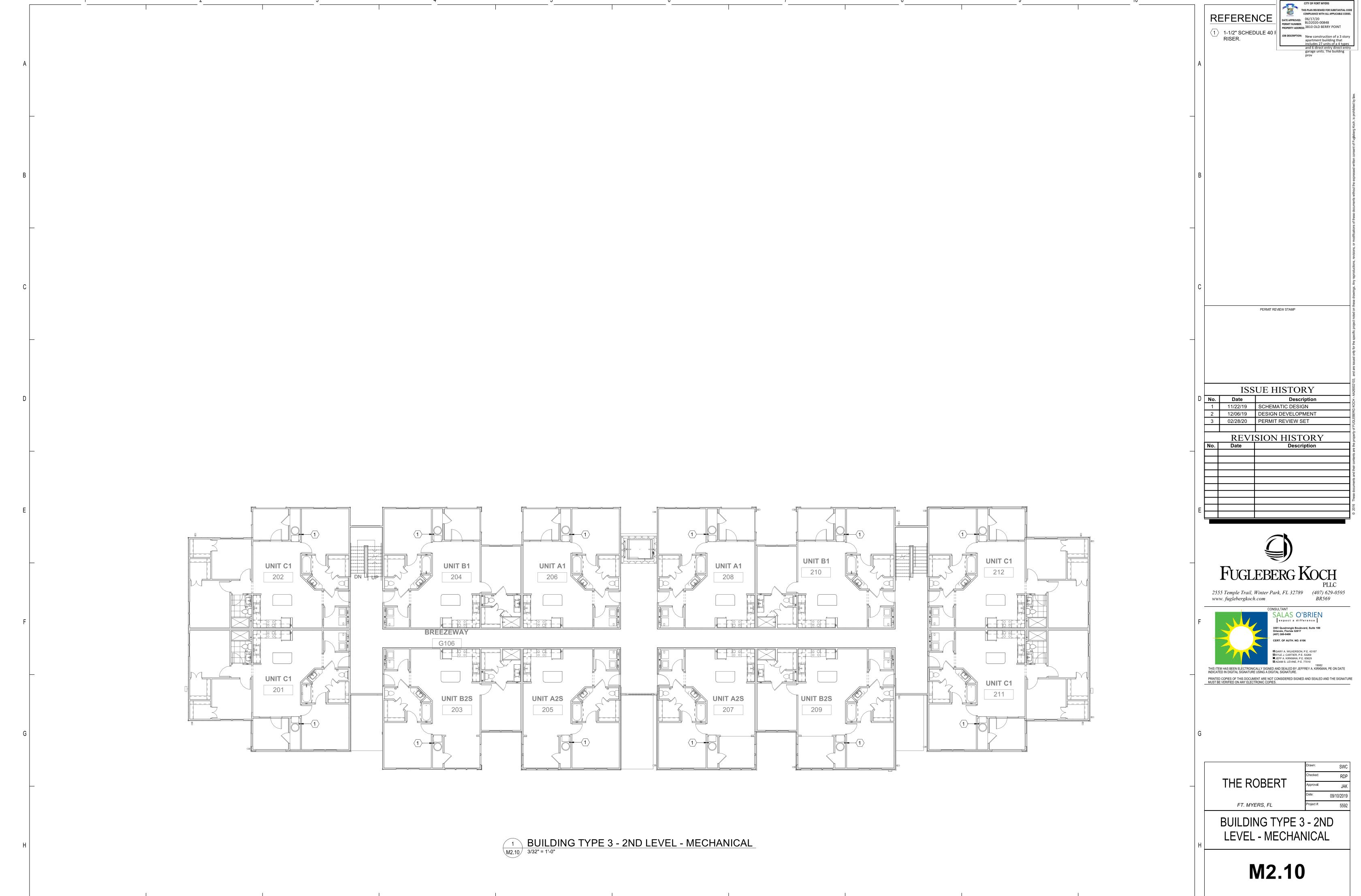
09/10/2019 5592

BUILDING TYPE 3 - GROUND LEVEL - MECHANICAL

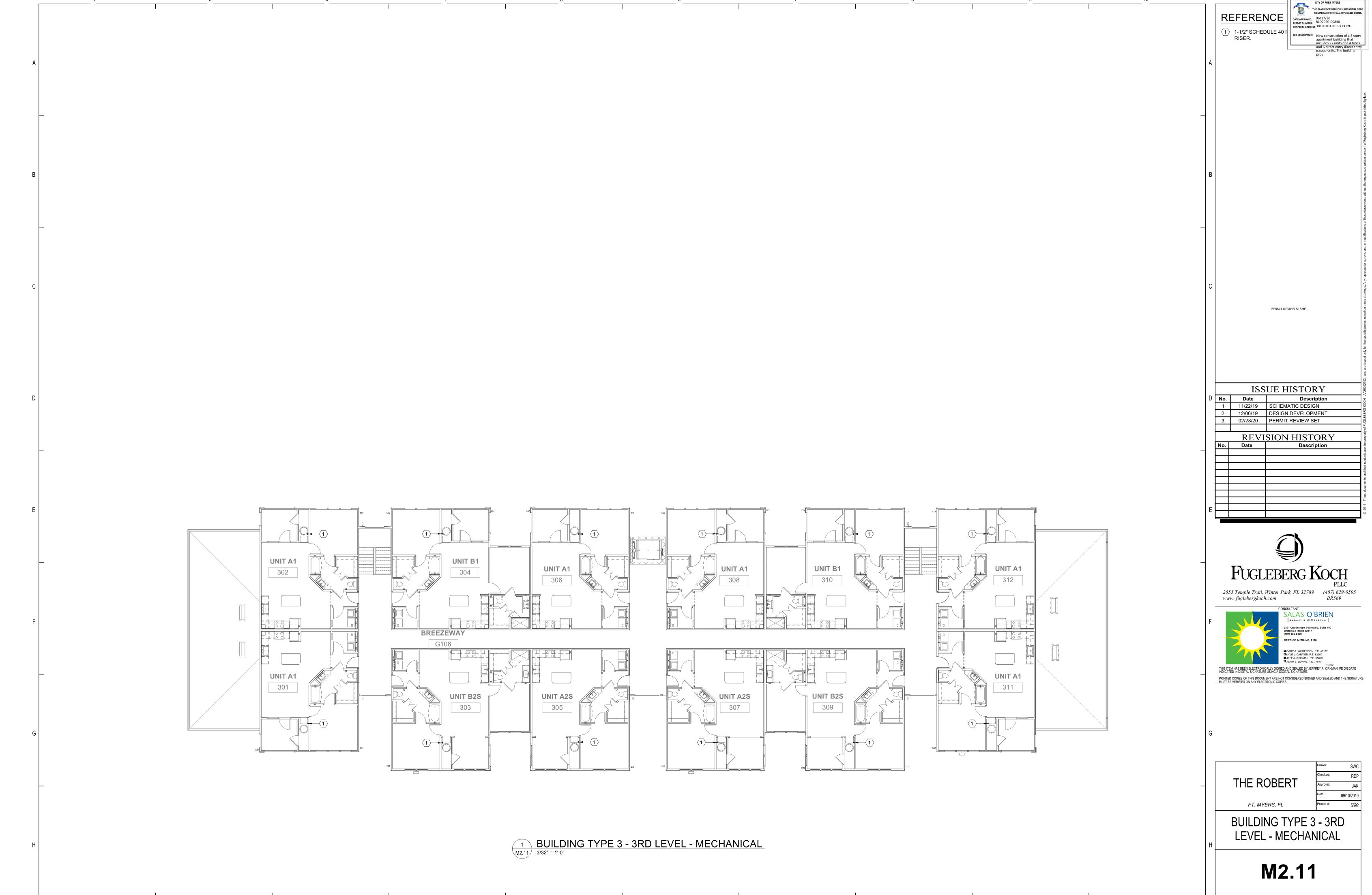
M2.09



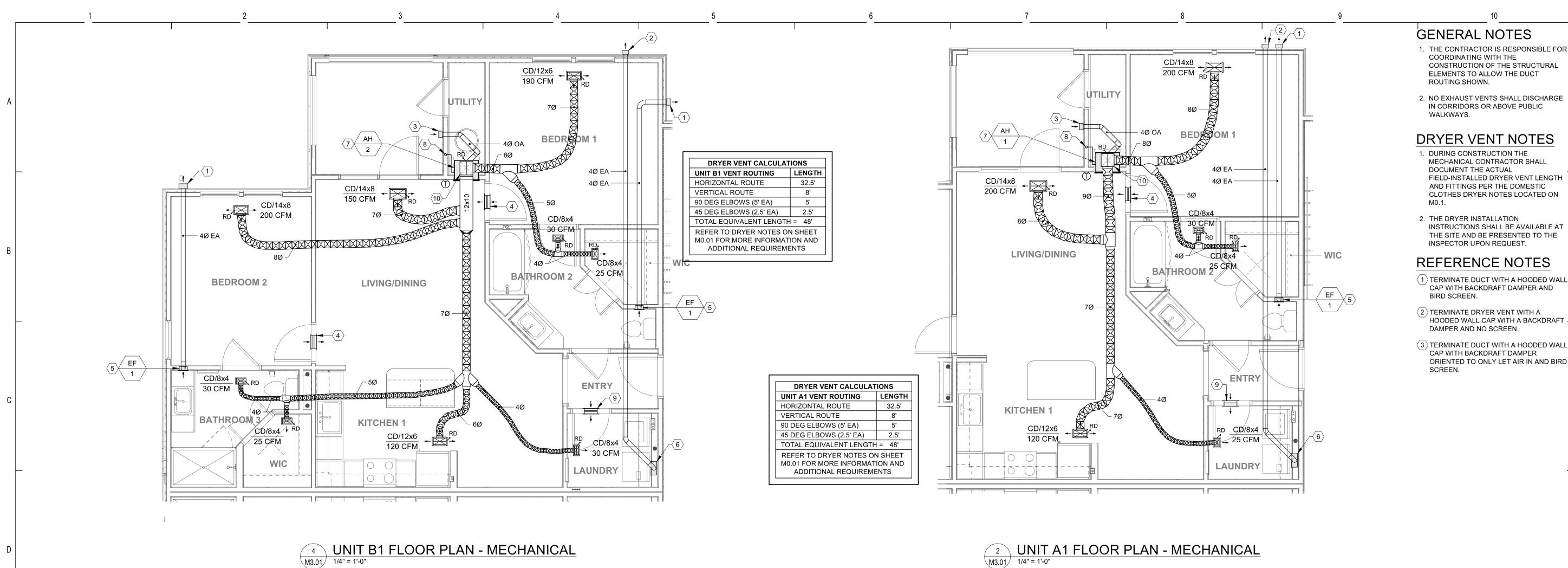
BUILDING TYPE 3 - GROUND LEVEL - MECHANICAL
M2.09 3/32" = 1'-0"



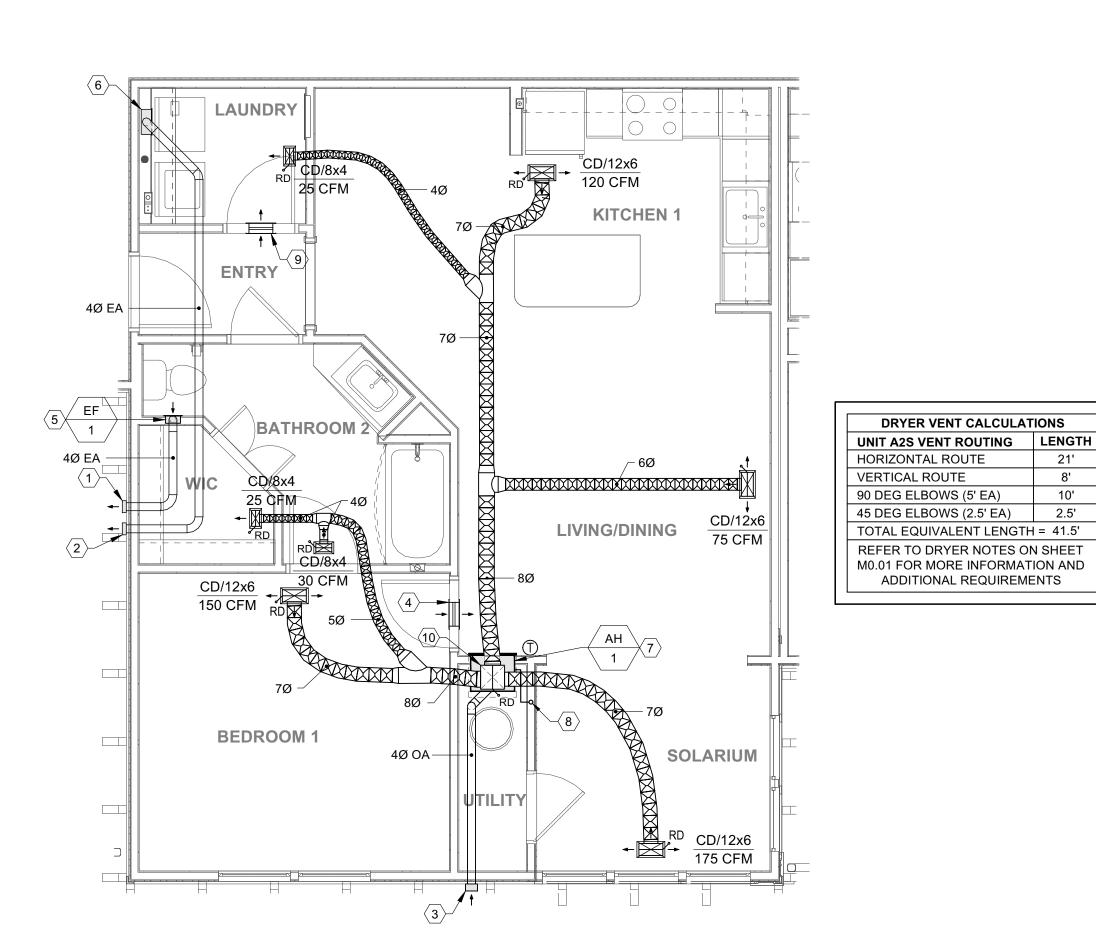
LOTTED: 6/4/2020 2:34:38 PM



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



10'



3 UNIT A2S FLOOR PLAN - MECHANICAL

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

LIVING/DINING **LAUNDRY** CD/12x6

UNIT S1 FLOOR PLAN - MECHANICAL

30 CFM

225 CFM

4Ø EA –

BEDROOM 1

GENERAL NOTES REFERENCE N

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE CONSTRUCTION OF THE STRUCTURAL ELEMENTS TO ALLOW THE DUCT

ROUTING SHOWN.

WALKWAYS.

IN CORRIDORS OR ABOVE PUBLIC

MECHANICAL CONTRACTOR SHALL

AND FITTINGS PER THE DOMESTIC

FIELD-INSTALLED DRYER VENT LENGTH

CLOTHES DRYER NOTES LOCATED ON

INSTRUCTIONS SHALL BE AVAILABLE AT

THE SITE AND BE PRESENTED TO THE

CAP WITH BACKDRAFT DAMPER AND

HOODED WALL CAP WITH A BACKDRAFT -

ORIENTED TO ONLY LET AIR IN AND BIRD

INSPECTOR UPON REQUEST.

DAMPER AND NO SCREEN.

CAP WITH BACKDRAFT DAMPER

BIRD SCREEN.

SCREEN.

DRYER VENT CALCULATIONS UNIT S1 VENT ROUTING LENGTH

TOTAL EQUIVALENT LENGTH = 33' REFER TO DRYER NOTES ON SHEET

M0.01 FOR MORE INFORMATION AND ADDITIONAL REQUIREMENTS

HORIZONTAL ROUTE

90 DEG ELBOWS (5' EA)

45 DEG ELBOWS (2.5' EA)

VERTICAL ROUTE

DOCUMENT THE ACTUAL

ABOVE DOOR. REFER TRANSFER GRILLE DE

ROUTING SHOWN.

INSTALL TWO 12x6 TYF

EXHAUST FAN LOCATE IN VVALL Vgarage units if he brilding INTAKE GRILLE LOCATED 6" BELOW™EILING.

WALL-MOUNTED DRYER VENT BOX BEHIND DRYER

PROPERTY ADDRESS: 3810 OLD BERRY POINT

12x12 SUPPLY DUCT UP WITH A RADIATION DAMPER AT THE RATED ASSEMBLY PENETRATION. ROUTE THE CONDENSATE DRAIN LINE WITH P-TRAP TO THE DRAIN RISER. THE REFRIGERANT PIPING AND CONTROL WIRING SHALL BE FIELD-ROUTED BY THE INSTALLING CONTRACTOR

INSULATED CONDENSATE RISER WITH WALL CLEANOUT LOCATED IN FIRST FLOOR UNIT.

UNDERCUT DOOR 1" AND INSTALL TWO 12x6 TYPE RG TRANSFER GRILLES ABOVE DOOR. REFER TO

SHEET M6.01 FOR TRANSFER GRILLE DETAIL. THE CONTRACTOR IS REQUIRED TO COORDINATE WITH THE STRUCTURAL DESIGN TO ACCOMMODATE THE INSTALLATION OF THE DUCT

ACCESS PANEL LOCATED HIGH ON WALL AND ALIGNED WITH DUCT ACCESS PANEL TO ALLOW FOR RADIATION DAMPER SERVICE AND INSPECTION. ACCESS PANEL SHALL BE FRAMED WITH CONCEALED HARDWARE AND BE PAINTED TO MATCH WALL.

PERMIT REVIEW STAMP

ISSUE HISTORY

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

REVISION HISTORY Date Description

FUGLEBERG KOCH

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CERT. OF AUTH. NO. 6106

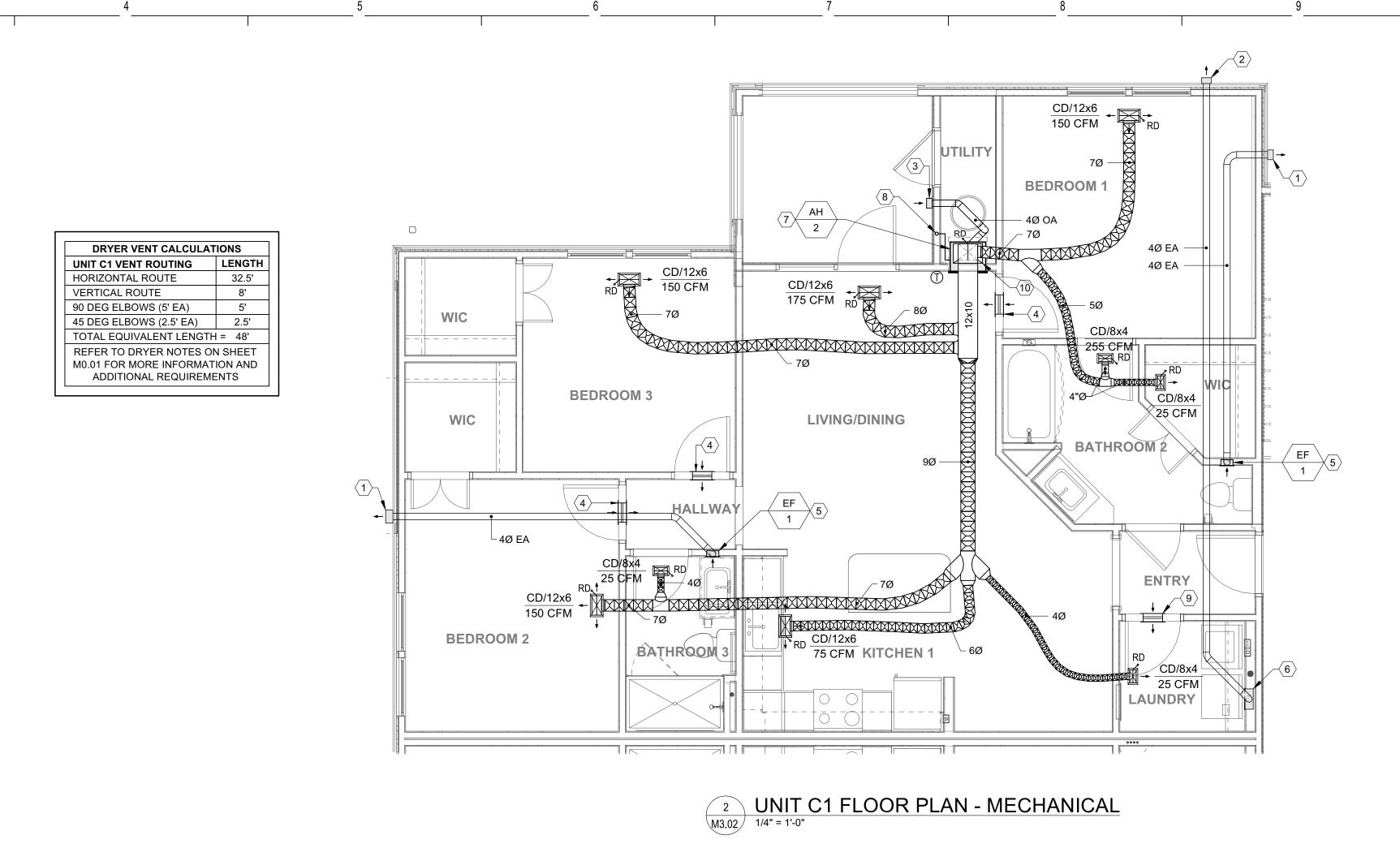
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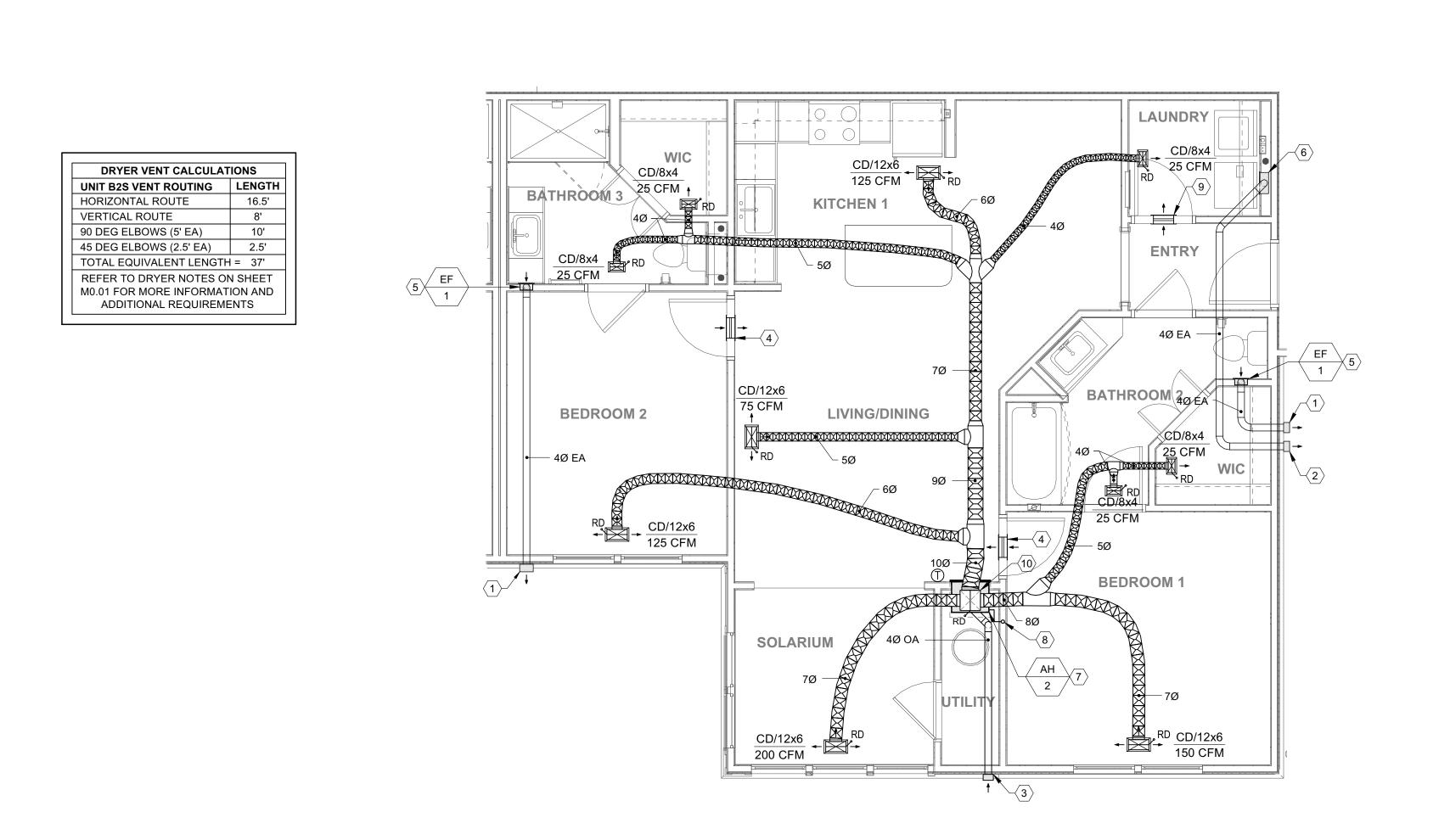
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UNIT PLANS - MECHANICAL

M3.01





M3.02 1/4" = 1'-0"

UNIT B2S FLOOR PLAN - MECHANICAL

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE CONSTRUCTION OF THE STRUCTURAL ELEMENTS TO ALLOW THE DUCT

ROUTING SHOWN. 2. NO EXHAUST VENTS SHALL DISCHARGE IN CORRIDORS OR ABOVE PUBLIC

DRYER VENT NOTES

WALKWAYS.

- 1. DURING CONSTRUCTION THE MECHANICAL CONTRACTOR SHALL DOCUMENT THE ACTUAL FIELD-INSTALLED DRYER VENT LENGTH AND FITTINGS PER THE DOMESTIC CLOTHES DRYER NOTES LOCATED ON
- 2. THE DRYER INSTALLATION INSTRUCTIONS SHALL BE AVAILABLE AT THE SITE AND BE PRESENTED TO THE INSPECTOR UPON REQUEST.

REFERENCE

SCREEN.

TERMINATE DUCT WIT

DATE APPROVED: 06/17/20
PERMIT NUMBER: BLD2020-00848
PROPERTY ADDRESS: 3810 OLD BERRY POINT WITH BACKDRAFT DAN TERMINATE DRYER VE CAP WITH A BACKDRAIL

TERMINATE DUCT WITH A HOODED WALL CAP WITH BACKDRAFT DAMPER ORIENTED TO ONLY LET AIR IN AND BIRD SCREEN.

 $\langle 4 \rangle$ INSTALL TWO 12x6 TYPE RG TRANSFER GRILLES ABOVE DOOR. REFER TO SHEET M6.01 FOR TRANSFER GRILLE DETAIL.

EXHAUST FAN LOCATED IN WALL WITH TOP OF

 $\langle 6 \rangle$ WALL-MOUNTED DRYER VENT BOX BEHIND

INTAKE GRILLE LOCATED 6" BELOW CEILING.

12x12 SUPPLY DUCT UP WITH A RADIATION DAMPER AT THE RATED ASSEMBLY PENETRATION. ROUTE THE CONDENSATE DRAIN LINE WITH P-TRAP TO THE DRAIN RISER. THE REFRIGERANT

FIELD-ROUTED BY THE INSTALLING CONTRACTOR.

(8) INSULATED CONDENSATE RISER WITH WALL CLEANOUT LOCATED IN FIRST FLOOR UNIT.

PIPING AND CONTROL WIRING SHALL BE

9 UNDERCUT DOOR 1" AND INSTALL TWO 12x6 TYPE RG TRANSFER GRILLES ABOVE DOOR. REFER TO SHEET M6.01 FOR TRANSFER GRILLE DETAIL.

(10) THE CONTRACTOR IS REQUIRED TO COORDINATE WITH THE STRUCTURAL DESIGN TO ACCOMMODATE THE INSTALLATION OF THE DUCT ROUTING SHOWN.

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		
	DELUCIONILICEODII			

REVISION HISTORY Date Description

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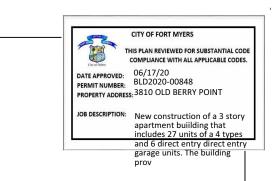
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UNIT PLANS - MECHANICAL

M3.02



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ISSUE HISTORY

REVISION HISTORY

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CERT. OF AUTH. NO. 6106

KYLE J. CARTIER, P.E. 53269

■ JEFF A. KIRKMAN, P.E. 65629

SCHEMATIC DESIGN

DESIGN DEVELOPMENT

Description

PERMIT REVIEW SET

Date

11/22/19

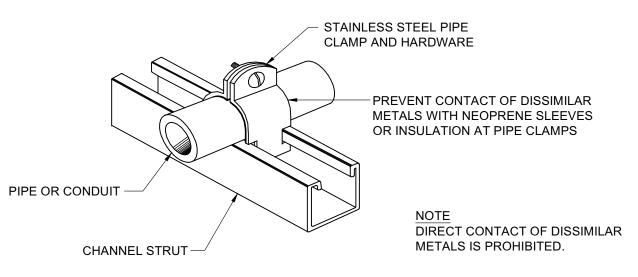
12/06/19

02/28/20

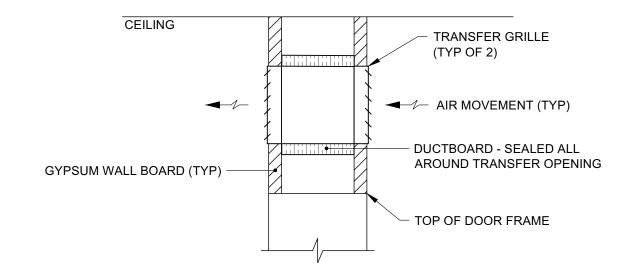
Date

www. fuglebergkoch.com

No.



TYPICAL WALL PIPE SUPPORT

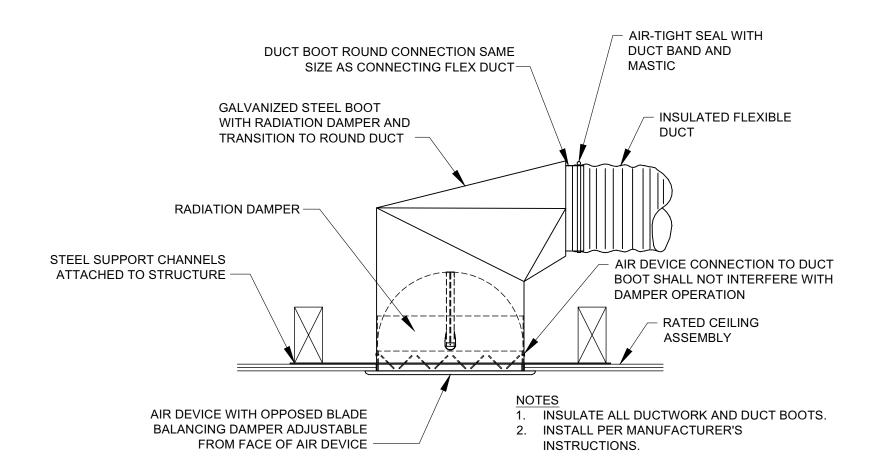


TRANSFER GRILLES SHALL BE SIZED FOR 50 SQUARE INCHES OF GRILLE AREA FOR EVERY 100 CFM OF SUPPLY AIR TO THE ROOM.

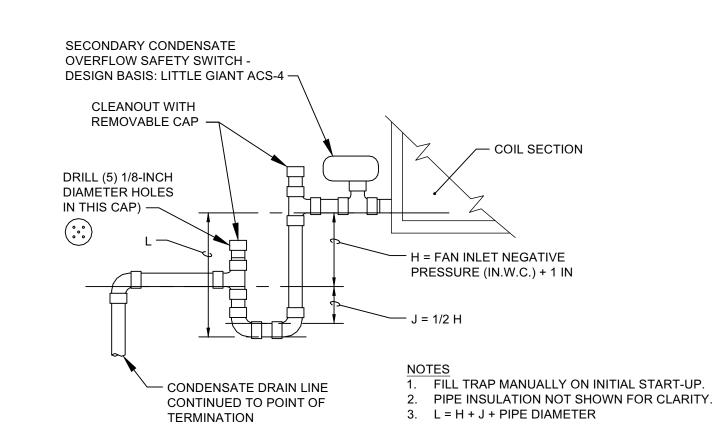
2. BEDROOM DOORS SHALL HAVE A 1-INCH UNDERCUT. 3. TRANSFER GRILLES SHALL BE NO SMALLER THAN 12x6.

ABOVE-DOOR AIR TRANSFER GRILLES

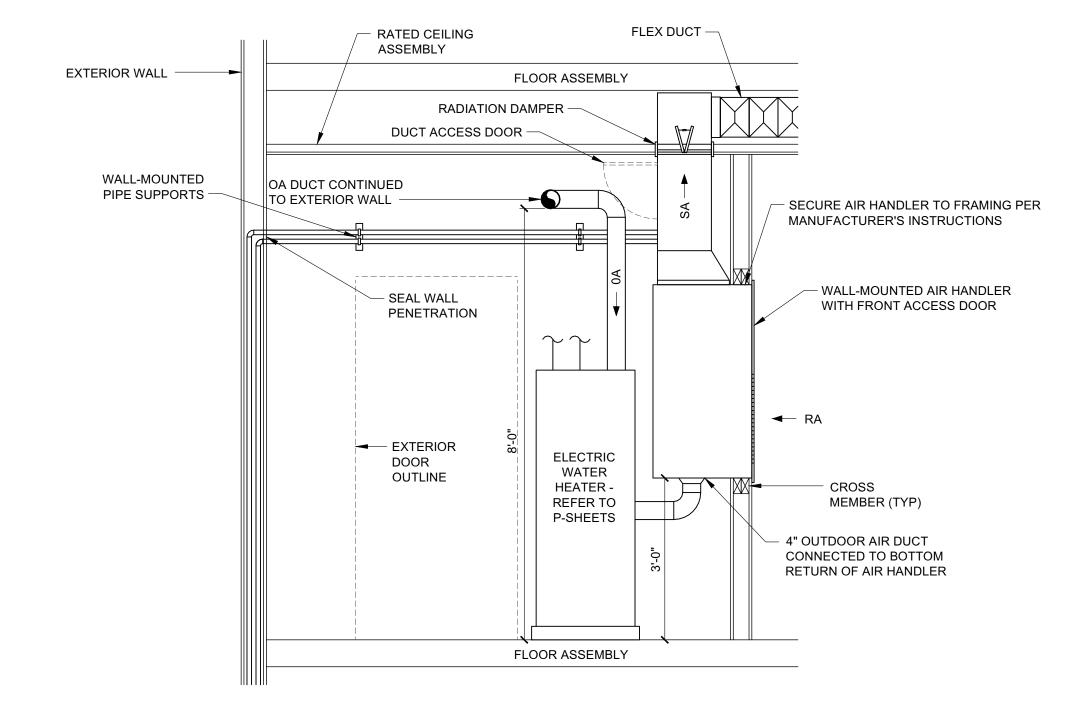
M6.01/ NOT TO SCALE



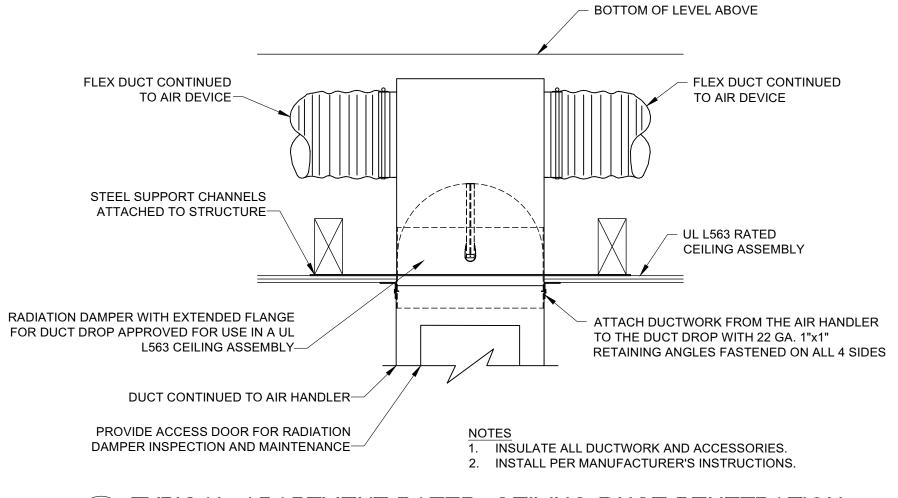
TYPICAL FLEXIBLE DUCT TO AIR DEVICE W/RADIATION DAMPER M6.01 NOT TO SCALE



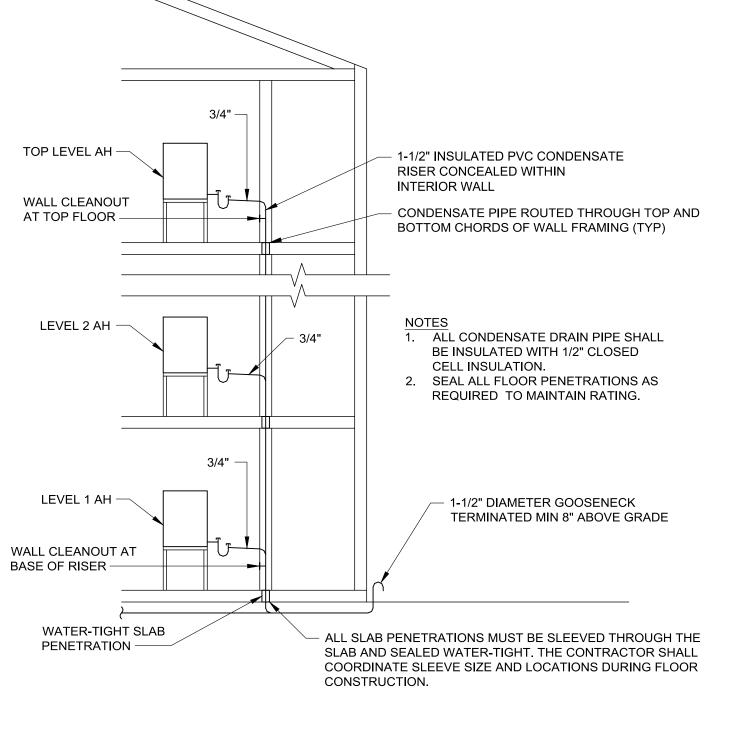
TYPICAL CONDENSATE DRAIN



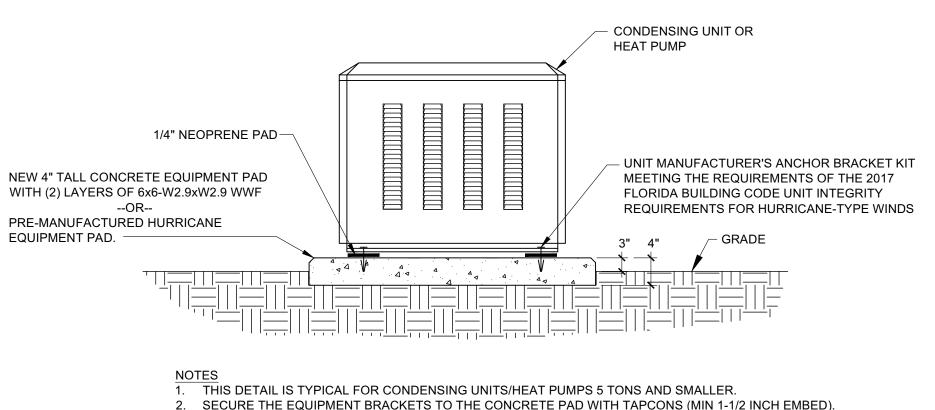
TYPICAL APARTMENT UTILITY CLOSET EQUIPMENT DETAIL M6.01 NOT TO SCALE



TYPICAL APARTMENT RATED-CEILING DUCT PENETRATION M6.01 NOT TO SCALE



TYPICAL CONDENSATE RISER SCHEMATIC



2. SECURE THE EQUIPMENT BRACKETS TO THE CONCRETE PAD WITH TAPCONS (MIN 1-1/2 INCH EMBED).

CONDENSING UNIT/HEAT PUMP INSTALLATION DETAIL

THE ROBERT 09/10/2019 FT. MYERS, FL **DETAILS - MECHANICAL**

M6.01

CLUBHOUSE AIR DEVICE SCHEDULE							
MARK	CS-A	CS-B	CS/XxX	CR/XxX			
MANUFACTURER		HART & CO	OLEY				
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

- PAINT DUCTWORK THAT IS VISIBLE THROUGH FRONT OF AIR DEVICE MATTE BLACK.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE AIR DEVICE FRAME WITH THE CEILING OR WALL TYPE.
- 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

- THERMOSTATS SHALL HAVE THE FOLLOWING FEATURES: 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.

_				
F	<u>AN SCHI</u>	EDULE		
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
DRIVE/TYPE	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)	23	12	12	12
ACCESSORIES	1,2	1,2	1-3	1,2,4
NOTES	1	1	2	-
ACCESSORIES (PROVIDE THE FOLLOW	ING)			

FORMS.

210 CFM

CS/14x8 205 CFM

(TYP 3)

- GALVANIZED STEEL WALL CAP WITH BACKDRAFT DAMPER AND BIRDSCREEN PRIMED AND PAINTED TO MATCH BUILDING EXTERIOR
- WALL-MOUNTED (SINGLE-GANG BOX) 24 HOUR PROGRAMMABLE TIMER IN LIEU OF A WALL SWITCH - DESIGN BASIS: BROAN MODEL T24H
- LINE-VOLTAGE THERMOSTAT SET TO ACTIVATE FAN WHEN ROOM TEMPERATURE RISES ABOVE 85 DEG F (ADJUSTABLE).
- FAN SHALL BE POWERED BY THE BATHROOM LIGHT SWITCH. 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

- 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.
- 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: 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

610 CFM

CR/18x18 CR/18x18

CLUBHOUSE FLOOR PLAN - MECHANICAL

125 CFM (TYP 2)

190 CFM

(TYP 4)

COIL ENTERING AND LEAVING AIR TEMPERATURES (DRY BULB AND WET BULB).

E. SUBMIT REPORTS ON AABC NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE OR NEBB

4. BALANCE AIR DEVICES TO WITHIN 10% OF DESIGN AIR QUANTITIES.

AIR HANDI	LER SCH	DULE	
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)

- SINGLE POINT POWER CONNECTION
- BUILT-IN FILTER RACK WITH TOOL-LESS ACCESS
- MULTI-SPEED ECM MOTOR HEATER KIT WITH UNIT-MOUNTED BREAKER
- 120V OPEN/CLOSE DAMPER AND MANUAL BALANCING DAMPER IN OUTDOOR AIR DUCT.
- SECONDARY CONDENSATE OVERFLOW SAFETY SWITCH WHICH WILL SHUT DOWN THE AIR HANDLER IF THE PRIMARY CONDENSATE DRAIN LINE CLOGS.

 $^{\prime}$ EF $^{\circ}$ (4C)

50 CFM

- EQUIPMENT STAND TO ALLOW FOR BOTTOM RETURN DUCT CONNECTION.
- REFER TO DETAILS FOR CONDENSATE TRAP REQUIREMENTS. RUNNING TRAPS WILL NOT BE PERMITTED.

CONDENSIN	IG UNIT SC	HEDULE	
MARK	CU-1C	CU-2C	CU-3C
LOCATION	GRADE	GRADE	GRADE
MANUFACTURER	GOODMAN	GOODMAN	GOODMAN
MODEL NUMBER	GSX140421K	GSX140241L	GSX140301K
NOMINAL TONS	3.5	2.0	2.5
REFRIGERANT CIRCUITS (QTY)	1	1	1
REFRIGERANT	R-410A	R-410A	R-410A
COMPRESSER			
OUTDOOR DESIGN TEMP (DEG F)	95	95	95
NUMBER OF STAGES	1	1	1
NUMBER OF COMPRESSERS	1	1	1
CONDENSER FAN			
NUMBER OF FANS	1	1	1
MOTOR HP	1/6	1/8	1/6
ELECTRICAL	<u>.</u>		
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

- ACCESSORIES (PROVIDE THE FOLLOWING) LOUVERED COIL GUARD
- MANUFACTURER'S ANCHOR BRACKET KIT
- ANTI-SHORT CYCLE KIT
- HIGH AND LOW PRESSURE SWITCHES REFRIGERANT CHARGING VALVES
- 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 PROGRAMMABLE THERMOSTAT - SEE THERMOSTAT SCHEDULE ON THIS SHEET

NOTES

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE EQUIPMENT MANUFACTURER FOR THE PROPER REFRIGERANT PIPE SIZING FOR THE APPLICATION.

DEMAND CONTROL VENTILATION REQUIREMENTS

NOT ALWAYS BE REQUIRED. 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 ½ INCH PLATED STEEL AND TURN INSIDE AN OIL-IMPREGNATED BRONZE 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 SHOULD NOT EXCEED 4 WATTS. THE SYSTEM MUST CARRY A 5 YEAR PARTS

DESIGN BASIS: YOUNG REGULATOR DA-CO2-XX

	HV	AC DE	ESIG	N DATA	
LOCATION		F	ORT MYE	RS, FLORIDA	
CLIMATE ZONE				1A	
OUTDOOR AIR	SUN	MMER	WINTER	BUILDING CONSTRU	ICTION
DESIGN	DB	WB	DB	SLAB EDGE R-VALUE	N/A
CONDITIONS	(DEG F)	(DEG F)	(DEG F)	FLOOR R-VALUE	19
	95	78	45	WALL R-VALUE	13
INDOOR AIR	SUN	MER	WINTER	ROOF R-VALUE	38
DESIGN	DB	RELATIVE	DB	WINDOW GLAZING	DOUBLE
CONDITIONS	(DEG F)	HUMIDITY	(DEG F)	WINDOW U-FACTOR	0.40
ALL UNITS	75	50%	72	WINDOW SHGC	0.25

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.

> Voz = THE CODE REQUIRED MINIMUM VENTILATION RATE. SINGLE ZONE SYSTEMS: Vot = Voz Vot = Vbz/Ez

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)

IND CONTROL VENTILATION REQUIREMENTS			2	
	:	I	2	
	ll		. 3	
-1C SERVES A SPACE WITH TRANSIENT OCCUPANCY AND THE FULL VENTILATION RATE WILL	ll	t	-	_
TO DELIVED A DI AGE VIIIII IIV MOIEM OCCON AND THE FOLE VENTILATION WILL				

	HV	AC DE	ESIG	N DATA	
LOCATION		F	ORT MYE	RS, FLORIDA	
CLIMATE ZONE				1A	
OUTDOOR AIR	SUN	MMER	WINTER	BUILDING CONSTRU	ICTION
DESIGN	DB	WB	DB	SLAB EDGE R-VALUE	N/A
CONDITIONS	(DEG F)	(DEG F)	(DEG F)	FLOOR R-VALUE	19
	95	78	45	WALL R-VALUE	13
INDOOR AIR	SUN	MER	WINTER	ROOF R-VALUE	38
DESIGN	DB	RELATIVE	DB	WINDOW GLAZING	DOUBLE
CONDITIONS	(DEG F)	HUMIDITY	(DEG F)	WINDOW U-FACTOR	0.40
ALL UNITS	75	50%	72	WINDOW SHGC	0.25

 $Vbz = A \times Ra + P \times Rp$, Ez = 1.0,

THE APPROPRIATE PEOPLE OUTDOOR AIR RATE (Rp) AND THE AREA OUTDOOR AIR RATES (Ra) WERE SELECTED FROM TABLE 403.3 BASED ON THE OCCUPANCY CATEGORY FOR EACH

MOUNT UNIT ON HOUSE | DATE APPROVED: 06/17/20 | BLD2020-00848 SECURE THE UNIT TO T PROPERTY ADDRESS: 3810 OLD BERRY POINT DETAIL ON CM6.01 FOR JOB DESCRIPTION: New construction of a 3 story

REFRIGERANT LINES AN ROUTED BY THE CONTRACTOR BETWEEN'S THE DUILDING 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.

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

 \langle 5 \rangle 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.

 $\langle 8 \rangle$ PROGRAMMABLE THERMOSTAT WITH CLEAR, VENTED, AND LOCKING COVER. KEY THE LOCKS TO USE THE SAME KEY.

 $\langle 9 \rangle$ REMOTE TEMPERATURE SENSOR FOR AVERAGING.

(10) INSTALL DEMAND CONTROL VENTILATION CO2 SENSOR ADJACENT TO THERMOSTAT.

PERMIT REVIEW STAMP

ISSUE HISTORY

11/22/19 SCHEMATIC DESIGN 12/06/19 DESIGN DEVELOPMENT 02/28/20 PERMIT REVIEW SET **REVISION HISTORY** Date Description 05/06/20 PERMIT COMMENT RESPONSES

No. Date

06/03/20 PERMIT COMMENT RESPONSES



www.fuglebergkoch.com

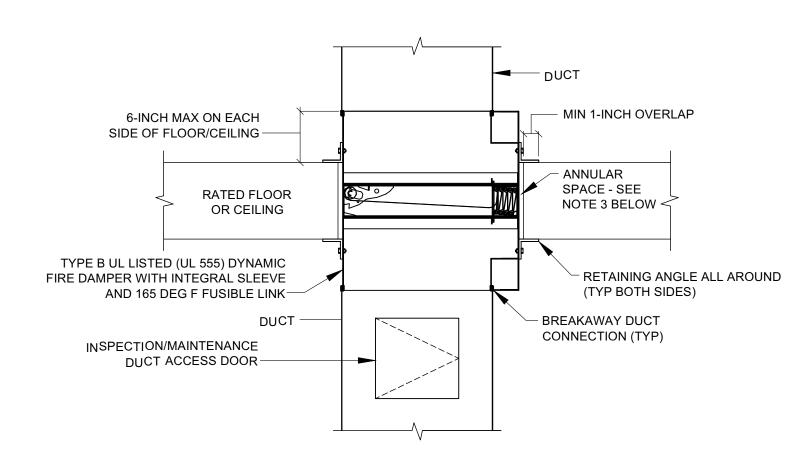


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THE ROBERT 09/10/2019 FT. MYERS, FL

CLUBHOUSE FLOOR PLAN **MECHANICAL**

CM2.01



NOTES

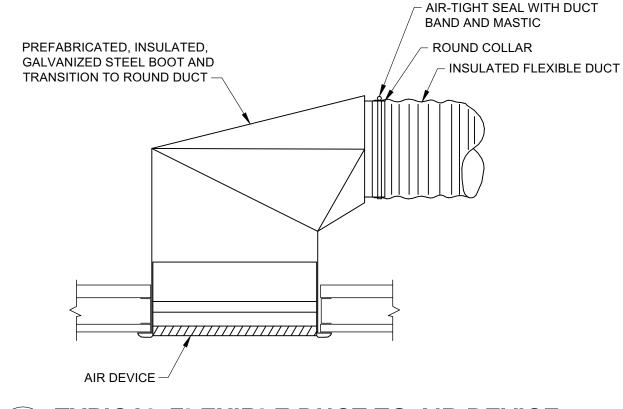
- 1. THE DESIGN BASIS IS A GREENHECK DFD-150X, TYPE B FIRE DAMPER. THE ACTUAL INSTALLED FIRE DAMPER'S INSTALLATION MANUAL WILL SUPERCEDE THIS DETAIL AND BE BASED ON THE THE WALL TYPE IN WHICH IT IS INSTALLED.
- 2. MAINTAIN A COPY OF THE FIRE DAMPER MANUFACTURER'S INSTALLATION INSTRUCTIONS ON SITE AND 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.

 5. 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.
- A MINIMUM OF 1-1/4-INCHES. 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
- 1/4-INCH BOLTS AND NUTS
 3/16-INCH STEEL POP RIVETS
- 7. 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.
- 8. RETAINING ANGLE ATTACHMENT TO WALL/FLOOR FOR TWO-SIDED ANGLE INSTALLATIONS THE RETAINING ANGLES SHALL NOT BE ATTACHED TO THE WALL.
- 9. 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.
- 10. SIZE THE ACCESS DOOR TO ALLOW INSPECTION AND REPLACEMENT OF THE FUSIBLE LINK. SEE TABLE BELOW FOR SIZES.

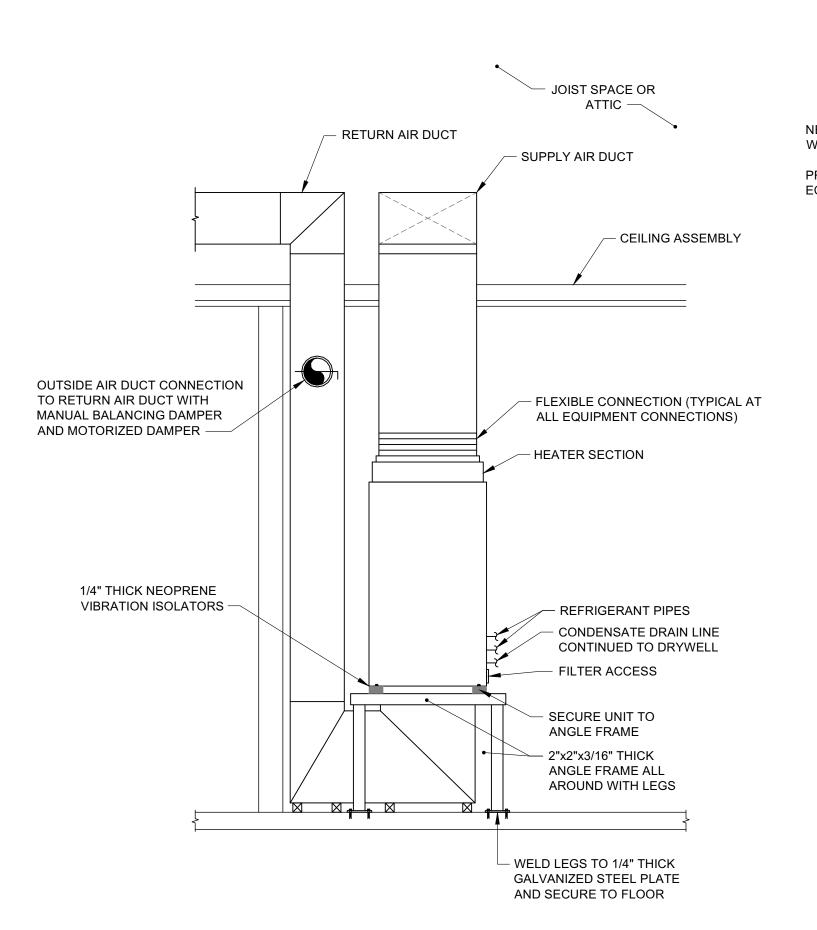
SLEE	VE REQUIREME	NTS
SLEEVE GAUGE	DUCT DIMENSIONS	DUCT TO SLEEVE CONNECTION
14 GA - 10 GA	ALL DUCT SIZES	RIGID OR BREAKAWAY
16 GA	36-IN MAX WIDTH 24-IN MAX HEIGHT 24-IN MAX DIA	RIGID OR BREAKAWAY
16 GA	ALL DUCT SIZES	BREAKAWAY
18 GA	85-IN WIDE AND OVER	ONLY
20 GA	55-IN - 84-IN WIDE	
22 GA	31-IN - 54-IN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

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

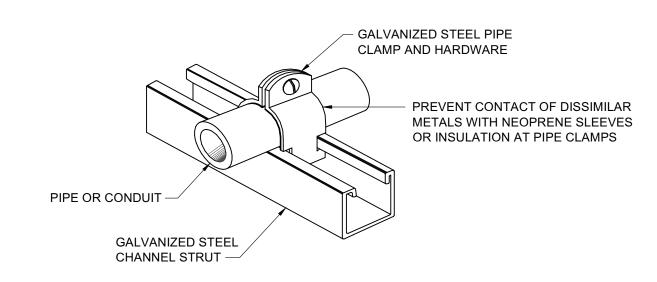
6 TYPICAL 1-1/2 HOUR TYPE B FIRE DAMPER ASSEMBLY
CM6.01 NOT TO SCALE



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

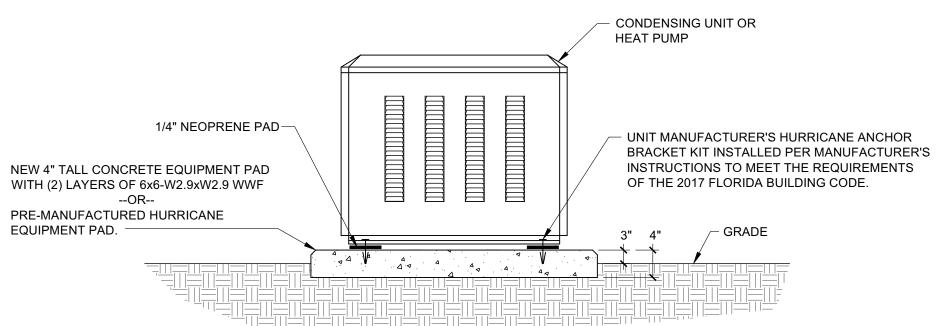






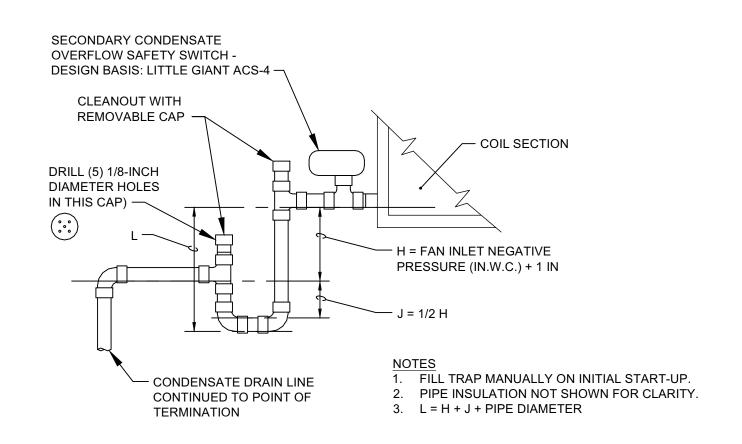
3 TYPICAL WALL PIPE SUPPORT NOT TO SCALE

DIRECT CONTACT OF DISSIMILAR METALS IS PROHIBITED.



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



1 TYPICAL CONDENSATE DRAIN
M6.01 NOT TO SCALE

THIS PLAN REVIEWED FOR SUBSTANTIAL CODI COMPLIANCE WITH ALL APPLICABLE CODES.

DATE APPROVED:
PERMIT NUMBER:
PROPERTY ADDRESS: 3810 OLD BERRY POINT



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DETAILS - MECHANICAL

CM6.01

PLOTTED: 6/4