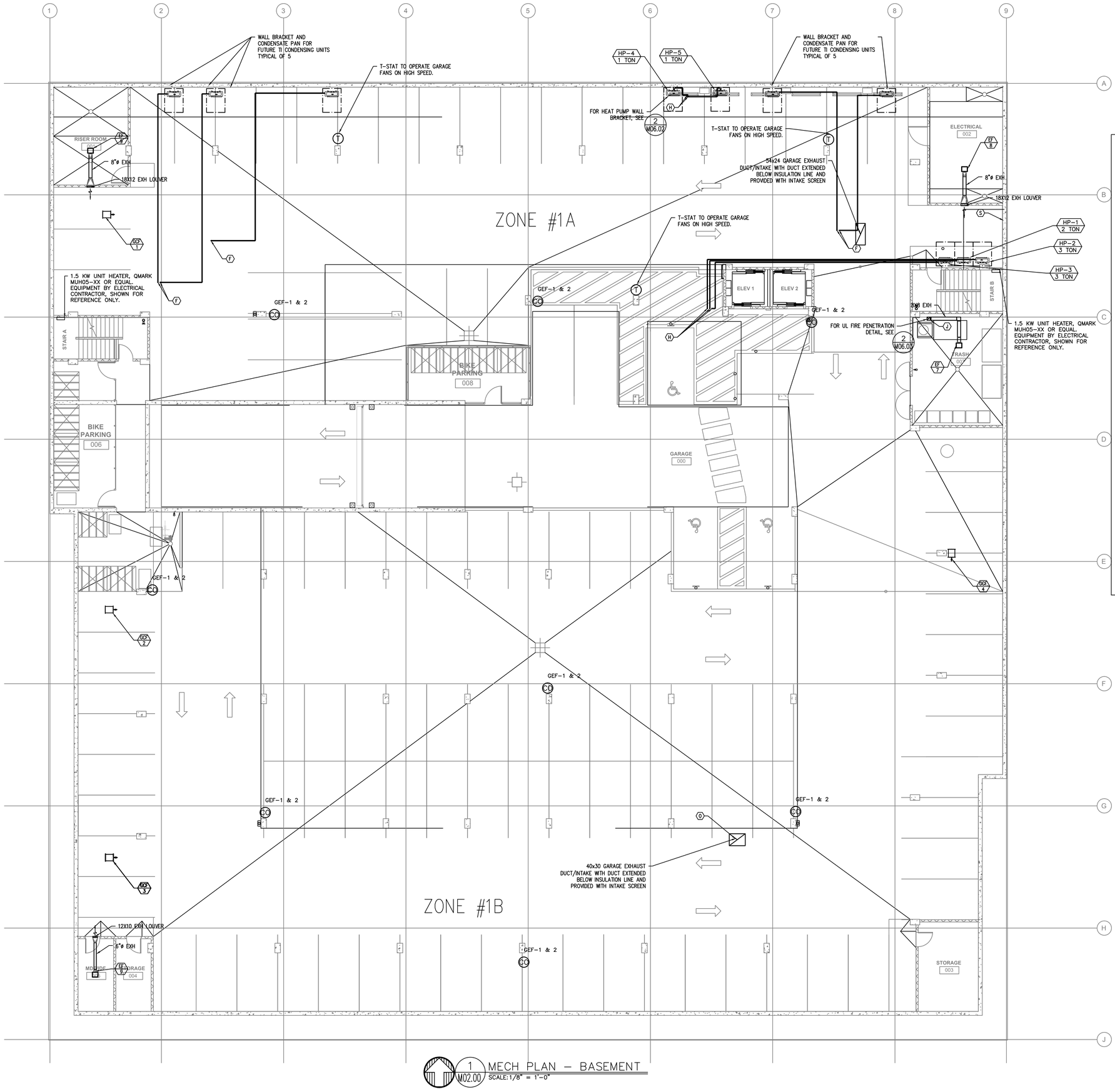

1 M02.00 MECH PLAN – BASEMENT
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- (A) SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING – TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF, SEE CHART.
- (B) SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE 1/M06.01 FOR GRILLE INSTALLATION, AND SEE 2/M06.01 FOR TYPICAL F/S INSTALLATION, AND CONTROLS.
- (C) 44X32 & 51X32 (SHOWN IN ARCH) INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS – COORDINATE WITH SOFFIT/STORE FRONT SYSTEM 3/M06.03 (1)
- (D) 4" DRYER EXHAUST ROUTED SIDEWALL, SEE 8/M06.01
- (E) TYPICAL DRYER DUCT TO BE CONSTRUCTED AS FOLLOWS: MATERIAL SHALL HAVE A SMOOTH INTERIOR FINISH AND 0.016 INCH THICK. RIVETS OR SCREWS PENETRATING THE DUCT WALL ARE NOT ACCEPTABLE. DRYER DUCT SHALL BE SUPPORTED EVERY 4 FOOT INTERVAL.
- (F) REFRIGERANT LINES CAPPED AND SEALED FOR FUTURE TI CONNECTION. ROUTED FROM 1ST FLOOR CEILING SPACE TO WALL BRACKET FOR FUTURE CONDENSING UNIT.
- (G) 10"ø OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2-POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES. DAMPER TO BE A LOW LEAK CLASS 1 DAMPER.
- (H) REFRIGERANT LINES ROUTED FROM PARKING GARAGE TO 1ST FLOOR FAN COILS.
- (I) 20X20 GREASE EXHAUST (WITH FIRE WRAP IN 30X30 SHAFT) ROUTED FROM ROOF (CAPPED) TO TI SPACE (CAPPED FOR FUTURE TI). PROVIDE VENTED CURB ADAPTER AND CAP FOR FUTURE GREASE EXHAUST FAN.
- (J) FOUR 4"ø & 8X8 TRASH EXHAUST UP TO ROOF DOG HOUSE.
- (K) DWELLING UNIT BATHROOM EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR. MECHANICAL TO PROVIDE VENTING FROM FAN TO SIDE WALL DISCHARGE. 6/M06.01 EF-1
- (L) 6" RANGE HOOD EXHAUST ROUTED FROM RANGE TO EXTERIOR WALL, KEEP DUCT AS HIGH IN SPACE AS POSSIBLE, AND TERMINATE WITH A SIDE WALL VENT, WITH A BACKDRAFT DAMPER. INSULATE FINAL 5' OF DUCTWORK.
- (M) PTHP DETAIL, SEE 7/M06.01
- (N) EXTERIOR EXHAUST PLENUM, SEE 5/M06.01
- (O) 54X24 OR 40X30 GARAGE EXHAUSTS UP FROM GARAGE, THROUGH PT AND UP THROUGH ROOF (1)
- (P) 8X8 BASEMENT TRASH EXHAUST, TRANSITION TO 10"ø INTO GREENHECK GRSR WITH 10"ø THROAT.
- (Q) 4"ø BATH EXHAUST FROM 1ST LEVEL TO CONNECT INTO 6"ø BATH EXHAUST FROM 2ND LEVEL LOFT TO SIDEWALL PLENUM.
- (R) VENT TYPE-2 RANGE HOOD TO SIDE WALL TERMINATION.
- (S) 4"ø BATH EXHAUST & DRYER AND 6"ø RANGE VENT UP TO LEVEL 2.

SEQUENCE OF OPERATIONS CO & NO2 SENSORS:

PROVIDE A COMBINATION ELECTROCHEMICAL CARBON MONOXIDE & NITROGEN DIOXIDE SENSOR (SYSTEM) TO OPERATE GEF-1 & 2 (VFD HIGH SPEED SETTING) AND GCF 1, 2 & 3 WHENEVER SPACE CO & NO2 LEVELS RISE ABOVE SET POINT.
SYSTEM TO BE SET TO FAIL WITH THE FAN (S) IN THE "HIGH SPEED" SETTING. SET SENSORS AT 60"AFF.
PROVIDE 8 SENSOR(S) AS SHOWN ON THE PLAN, AND WIRE TO A CENTRAL CONTROLLER TO OPERATE GEF-1&2 AND GCF 1, 2 & 3 ON HIGH SPEED WHENEVER ANY SENSOR(S) CALLS FOR OPERATION.
SENSORS TO BE RATED FOR MIN 50' RADIUS

SOO:

- GEF-1 & 2 TO OPERATE CONTINUOUSLY AT LOW SPEED VFD SET POINT.
- RISING TRIP POINT – ENGAGE VFD HIGH SPEED WHEN CO LEVELS RISE ABOVE 35 PPM AND NO2 LEVELS RISE ABOVE 2.0 PPM.
- FALLING TRIP POINT – DISENGAGE VFD HIGH SPEED WHEN CO LEVELS DROP TO 15 PPM AND NO2 LEVELS DROP TO 1.0 PPM.
- PROVIDE WITH AUDIBLE ALARM WHEN CO LEVELS RISE ABOVE 50 PPM AND NO2 LEVELS RISE ABOVE 2.8 PPM.

GARAGE EXHAUST CALCULATIONS:

Zone #1A – Basement North

16,577 sq ft x 0.05 cfm/sq ft = 828 CFM
16,577 sq ft x 0.75 cfm/sq ft = 12,432 CFM

54X24 EXH DUCT
ONE FAN (13,000 CFM) 2-SPEED VFD

Zone #1B – Basement South

16,577 sq ft X 0.05 cfm/sq ft = 828 CFM
16,577 sq ft X 0.75 cfm/sq ft = 12,432 CFM

54X24 EXH DUCT
ONE FAN (13,000 CFM) 2-SPEED VFD

2-12-20

REGISTERED PROFESSIONAL ENGINEER
54,607 PE
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JULY 11, 2005
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Project Title:
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2200 NW 2ND AVENUE SUITE 900
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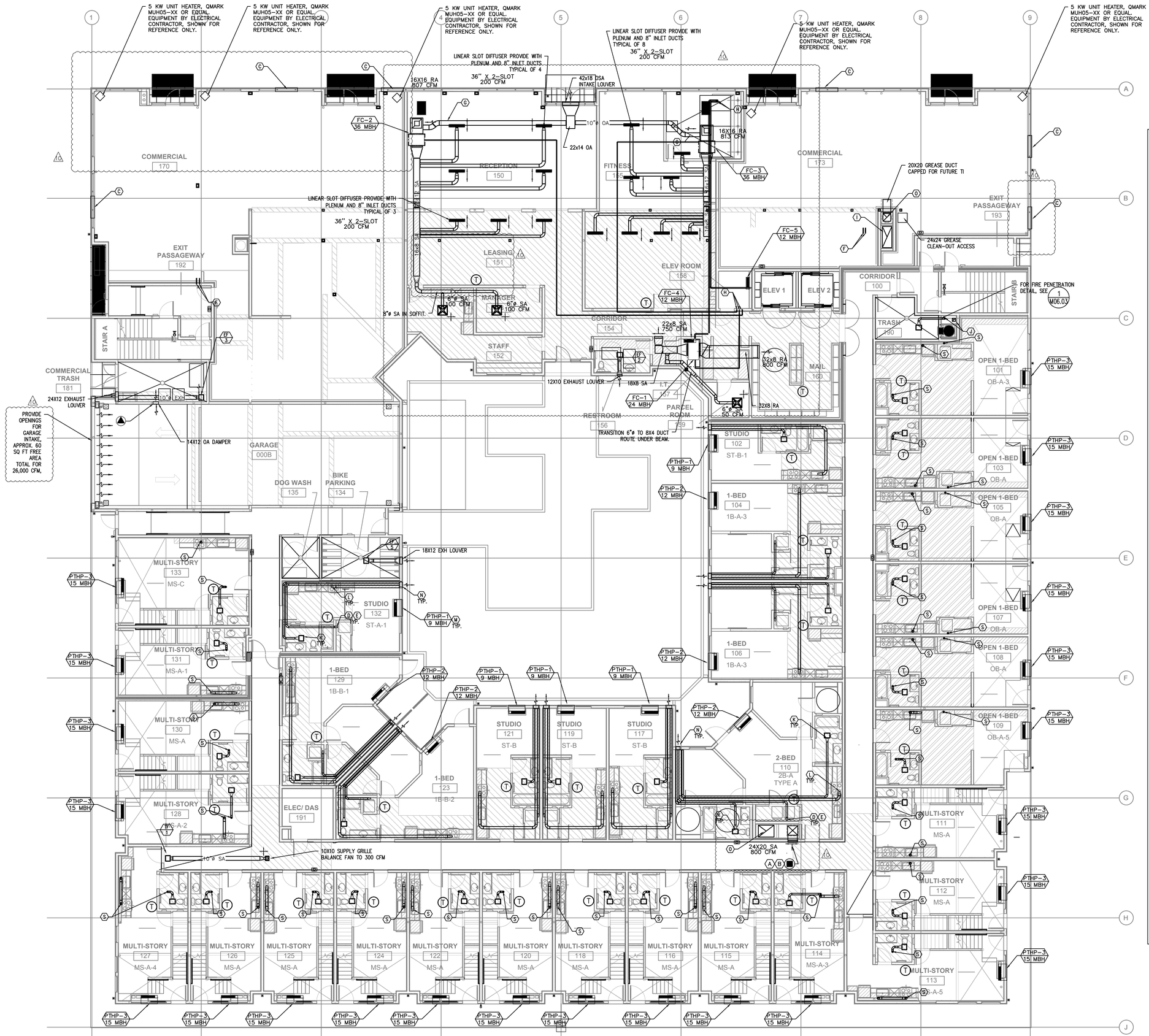
Drawing Title:
MECH PLAN - BASEMENT

Revision:
4.29.20 - ADD #2: Permit Checksheet Response #2
ASI 07.8.17.20 - Plan Check / GMP
ASI 10 - 9.16.22 Construction Set Revisions

Date: 12.20.19
Drawn by: MFIA/Jacobs
Project No.: A18-20

M02.00



1 M02.01 MECH PLAN – LEVEL 1
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

- (A) SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING – TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF, SEE CHART.
- (B) SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE 1/M06.01 FOR GRILLE INSTALLATION, AND SEE 2/M06.01 FOR TYPICAL F/S INSTALLATION, AND CONTROLS.
- (C) 44X32 & 51X32 (SHOWN IN ARCH) INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS – COORDINATE WITH SOFFIT/STORE FRONT SYSTEM. 3/M06.03
- (D) 4" DRYER EXHAUST ROUTED SIDEWALL, SEE 8/M06.01
- (E) TYPICAL DRYER DUCT TO BE CONSTRUCTED AS FOLLOWS: MATERIAL SHALL HAVE A SMOOTH INTERIOR FINISH AND 0.016 INCH THICK. RIVETS OR SCREWS PENETRATING THE DUCT WALL ARE NOT ACCEPTABLE. DRYER DUCT SHALL BE SUPPORTED EVERY 4 FOOT INTERVAL.
- (F) REFRIGERANT LINES CAPPED AND SEALED FOR FUTURE TI CONNECTION. ROUTED FROM 1ST FLOOR CEILING SPACE TO WALL BRACKET FOR FUTURE CONDENSING UNIT.
- (G) 10"ø OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2–POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES. DAMPER TO BE A LOW LEAK CLASS 1 DAMPER.
- (H) REFRIGERANT LINES ROUTED FROM PARKING GARAGE TO 1ST FLOOR FAN COILS.
- (I) 20X20 GREASE EXHAUST (WITH FIRE WRAP IN 30X30 SHAFT) ROUTED FROM ROOF (CAPPED) TO TI SPACE (CAPPED FOR FUTURE TI). PROVIDE VENTED CURB ADAPTER AND CAP FOR FUTURE GREASE EXHAUST FAN.
- (J) FOUR 4"ø & 8X8 TRASH EXHAUST UP TO ROOF DOG HOUSE.
- (K) DWELLING UNIT BATHROOM EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR. MECHANICAL TO PROVIDE VENTING FROM FAN TO SIDE WALL DISCHARGE. 6/M06.01 EF-1
- (L) 6" RANGE HOOD EXHAUST ROUTED FROM RANGE TO EXTERIOR WALL, KEEP DUCT AS HIGH IN SPACE AS POSSIBLE, AND TERMINATE WITH A SIDE WALL VENT, WITH A BACKDRAFT DAMPER. INSULATE FINAL 5' OF DUCTWORK.
- (M) PTHP DETAIL, SEE 7/M06.01
- (N) EXTERIOR EXHAUST PLENUM, SEE 5/M06.01
- (O) 54X24 OR 40X30 GARAGE EXHAUSTS UP FROM GARAGE, THROUGH PT AND UP THROUGH ROOF
- (P) 8X8 BASEMENT TRASH EXHAUST, TRANSITION TO 10"ø INTO GREENHECK GRSR WITH 10"ø THROAT.
- (Q) 4"ø BATH EXHAUST FROM 1ST LEVEL TO CONNECT INTO 6"ø BATH EXHAUST FROM 2ND LEVEL LOFT TO SIDEWALL PLENUM.
- (R) VENT TYPE–2 RANGE HOOD TO SIDE WALL TERMINATION.
- (S) 4"ø BATH EXHAUST & DRYER AND 6"ø RANGE VENT UP TO LEVEL 2.

SHAFT DUCT SIZES					
FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 26	4000	NA	NA	RTU–1
5TH	24 X 26	4000	NA	NA	RTU–1
4TH	24 X 24	3200	NA	NA	RTU–1
3RD	24 X 24	2400	NA	NA	RTU–1
2ND	24 X 22	1600	NA	NA	RTU–1
1ST	24 X 20	800	NA	NA	RTU–1

SHAFT DUCT SIZES					
FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 26	4000	NA	NA	RTU–2
5TH	24 X 26	4000	NA	NA	RTU–2
4TH	24 X 24	3000	NA	NA	RTU–2
3RD	24 X 24	2000	NA	NA	RTU–2
2ND	24 X 24	1000	NA	NA	RTU–2

VENTILATION CALCULATIONS:

ALL DWELLING UNITS ARE VENTILATED BY MECHANICAL VENTILATION, BATHROOM EXHAUST FANS RUN CONTINUOUSLY (SIZED PER ASHRAE 62.2) AND MAKE UP AIR IS PROVIDED BY PTHP'S.

COMMON SPACES AND HALLWAYS ARE VENTILATED BY PACKAGED ROOF TOP UNITS SIZED TO EXCEED THE MINIMUM 0.06 CFM/SQ FT REQUIREMENT

SEE VENTILATION SCHEDULES FOR OTHER UNITS

2-12-20

REGISTERED PROFESSIONAL ENGINEER
54,607 PE
OREGON
JULY 11, 2005
MARK R. DENTER
EXPIRES: 31DEC21

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Project Title:
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2200 NW 2ND AVENUE SUITE 900
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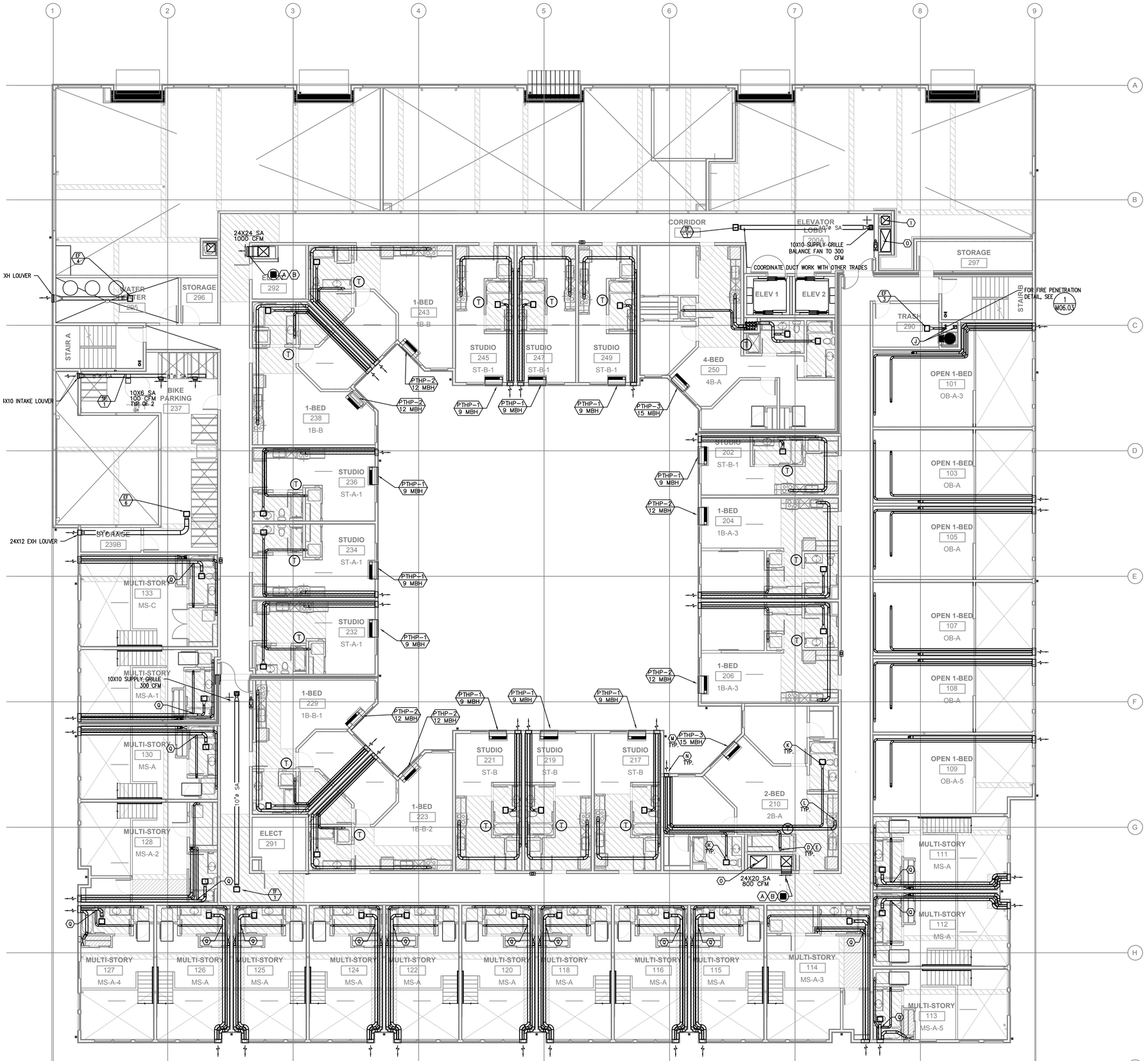
Drawing Title:
MECH PLAN - LEVEL 1

Revision:	
4.29.20 - ADD #2: Permit Checksheet Response #2	
ASI 07.9.17.20 - Plan Check / GMP	
ASI 10 - 9.16.22 Construction Set Revisions	

Date: 12.20.19
Drawn by: MFIA/Jacobs
Project No.: A18-20

M02.01



1 M02.02 MECH PLAN – LEVEL 2
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

(A) SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING – TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF, SEE CHART.

(B) SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE 1/M06.01 FOR GRILLE INSTALLATION, AND SEE 2/M06.01 FOR TYPICAL F/S INSTALLATION, AND CONTROLS.

(C) 44X32 & 51X32 (SHOWN IN ARCH) INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS – COORDINATE WITH SOFFIT/STORE FRONT SYSTEM. 3/M06.03 (10)

(D) 4" DRYER EXHAUST ROUTED SIDEWALL, SEE 8/M06.01

(E) TYPICAL DRYER DUCT TO BE CONSTRUCTED AS FOLLOWS: MATERIAL SHALL HAVE A SMOOTH INTERIOR FINISH AND 0.016 INCH THICK. RIVETS OR SCREWS PENETRATING THE DUCT WALL ARE NOT ACCEPTABLE. DRYER DUCT SHALL BE SUPPORTED EVERY 4 FOOT INTERVAL.

(F) REFRIGERANT LINES CAPPED AND SEALED FOR FUTURE TI CONNECTION. ROUTED FROM 1ST FLOOR CEILING SPACE TO WALL BRACKET FOR FUTURE CONDENSING UNIT.

(G) 10"ø OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2-POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES. DAMPER TO BE A LOW LEAK CLASS 1 DAMPER.

(H) REFRIGERANT LINES ROUTED FROM PARKING GARAGE TO 1ST FLOOR FAN COILS.

(I) 20X20 GREASE EXHAUST (WITH FIRE WRAP IN 30X30 SHAFT) ROUTED FROM ROOF (CAPPED) TO TI SPACE (CAPPED FOR FUTURE TI). PROVIDE VENTED CURB ADAPTER AND CAP FOR FUTURE GREASE EXHAUST FAN.

(J) FOUR 4"ø & 8X8 TRASH EXHAUST UP TO ROOF DOG HOUSE.

(K) DWELLING UNIT BATHROOM EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR. MECHANICAL TO PROVIDE VENTING FROM FAN TO SIDE WALL DISCHARGE. 6/M06.01 EF-1

(L) 6" RANGE HOOD EXHAUST ROUTED FROM RANGE TO EXTERIOR WALL, KEEP DUCT AS HIGH IN SPACE AS POSSIBLE, AND TERMINATE WITH A SIDE WALL VENT, WITH A BACKDRAFT DAMPER. INSULATE FINAL 5' OF DUCTWORK.

(M) PTHP DETAIL, SEE 7/M06.01

(N) EXTERIOR EXHAUST PLENUM, SEE 5/M06.01

(O) 54X24 OR 40X30 GARAGE EXHAUSTS UP FROM GARAGE, THROUGH PT AND UP THROUGH ROOF (1)

(P) 8X8 BASEMENT TRASH EXHAUST, TRANSITION TO 10"ø INTO GREENHECK GRSR WITH 10"ø THROAT.

(Q) 4"ø BATH EXHAUST FROM 1ST LEVEL TO CONNECT INTO 6"ø BATH EXHAUST FROM 2ND LEVEL LOFT TO SIDEWALL PLENUM.

(R) VENT TYPE-2 RANGE HOOD TO SIDE WALL TERMINATION.

(S) 4"ø BATH EXHAUST & DRYER AND 6"ø RANGE VENT UP TO LEVEL 2.

SHAFT DUCT SIZES					
FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 26	4000	NA	NA	RTU-1
5TH	24 X 26	4000	NA	NA	RTU-1
4TH	24 X 24	3200	NA	NA	RTU-1
3RD	24 X 24	2400	NA	NA	RTU-1
2ND	24 X 22	1600	NA	NA	RTU-1
1ST	24 X 20	800	NA	NA	RTU-1

SHAFT DUCT SIZES					
FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 26	4000	NA	NA	RTU-2
5TH	24 X 26	4000	NA	NA	RTU-2
4TH	24 X 24	3000	NA	NA	RTU-2
3RD	24 X 24	2000	NA	NA	RTU-2
2ND	24 X 24	1000	NA	NA	RTU-2

VENTILATION CALCULATIONS:

ALL DWELLING UNITS ARE VENTILATED BY MECHANICAL VENTILATION, BATHROOM EXHAUST FANS RUN CONTINUOUSLY (SIZED PER ASHRAE 62.2) AND MAKE UP AIR IS PROVIDED BY PTHP'S.

COMMON SPACES AND HALLWAYS ARE VENTILATED BY PACKAGED ROOF TOP UNITS SIZED TO EXCEED THE MINIMUM 0.06 CFM/SQ FT REQUIREMENT

SEE VENTILATION SCHEDULES FOR OTHER UNITS

2-12-20

REGISTERED PROFESSIONAL ENGINEER
54,607
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MARK R. DENTEN
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Drawing Title:
MECH PLAN - LEVEL 2

Revision:
4-29-20 - ADD #2, Permit Checksheet Response #2
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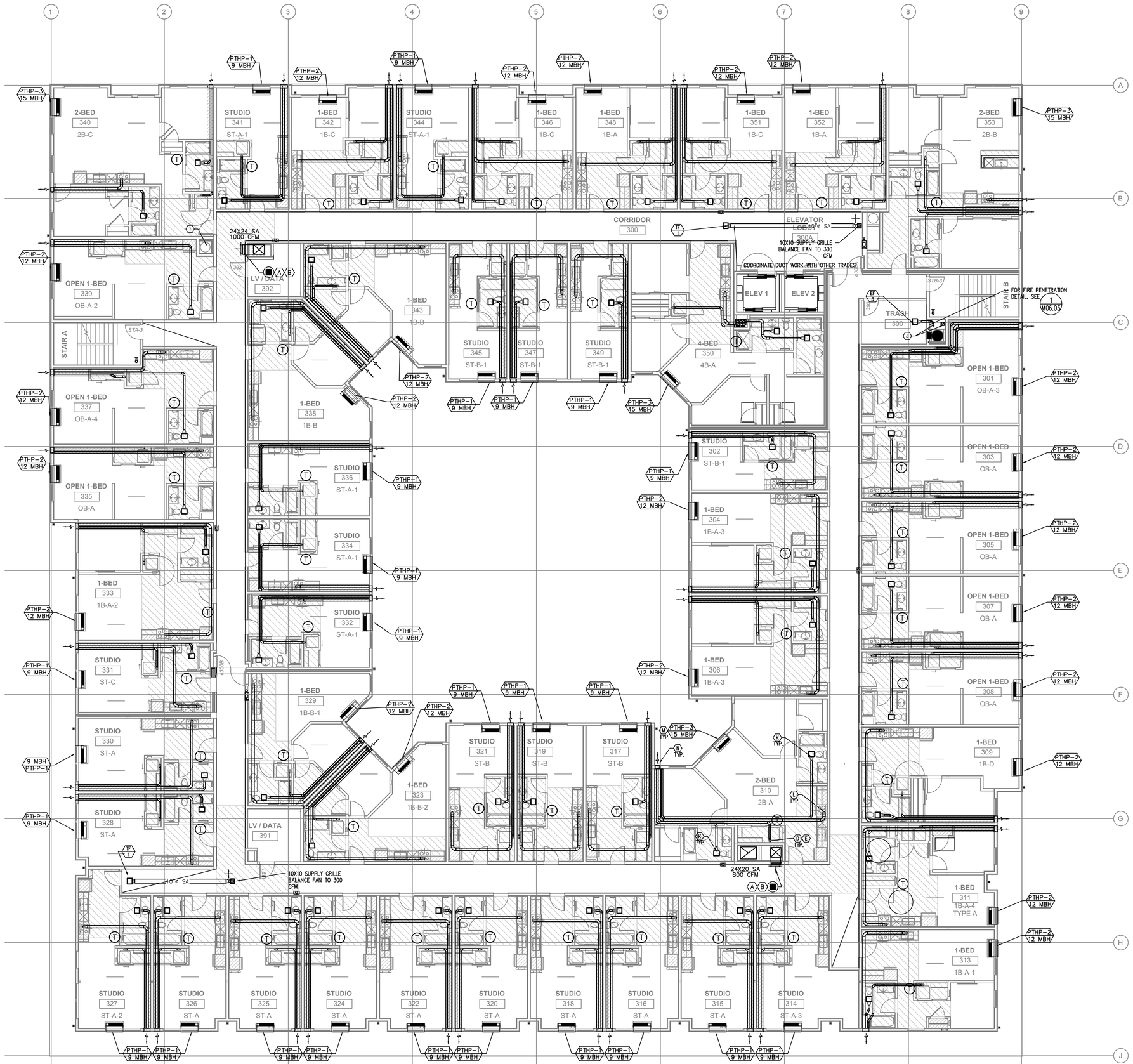
ASI 10 - 9.16.22 Construction Set Revisions

Date: 12.20.19
Drawn by: MFIA/Jacobs
Project No.: A18-20

M02.02



1 M02.03 MECH PLAN – LEVEL 3
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A — SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING – TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF, SEE CHART.

B — SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE 1 M06.01 FOR GRILLE INSTALLATION, AND SEE 2 M06.01 FOR TYPICAL F/S INSTALLATION, AND CONTROLS.

C — 44X32 & 51X32 (SHOWN IN ARCH) INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS – COORDINATE WITH SOFFIT/STORE FRONT SYSTEM 3 M06.03

D — 4" DRYER EXHAUST ROUTED SIDEWALL, SEE 8 M06.01

E — TYPICAL DRYER DUCT TO BE CONSTRUCTED AS FOLLOWS: MATERIAL SHALL HAVE A SMOOTH INTERIOR FINISH AND 0.016 INCH THICK. RIVETS OR SCREWS PENETRATING THE DUCT WALL ARE NOT ACCEPTABLE. DRYER DUCT SHALL BE SUPPORTED EVERY 4 FOOT INTERVAL.

F — REFRIGERANT LINES CAPPED AND SEALED FOR FUTURE TI CONNECTION. ROUTED FROM 1ST FLOOR CEILING SPACE TO WALL BRACKET FOR FUTURE CONDENSING UNIT.

G — 10"ø OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2–POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES. DAMPER TO BE A LOW LEAK CLASS 1 DAMPER.

H — REFRIGERANT LINES ROUTED FROM PARKING GARAGE TO 1ST FLOOR FAN COILS.

I — 20X20 GREASE EXHAUST (WITH FIRE WRAP IN 30X30 SHAFT) ROUTED FROM ROOF (CAPPED) TO TI SPACE (CAPPED FOR FUTURE TI). PROVIDE VENTED CURB ADAPTER AND CAP FOR FUTURE GREASE EXHAUST FAN.

J — FOUR 4"ø & 8X8 TRASH EXHAUST UP TO ROOF DOG HOUSE.

K — DWELLING UNIT BATHROOM EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR. MECHANICAL TO PROVIDE VENTING FROM FAN TO SIDE WALL DISCHARGE. 6 M06.01 EF 1

L — 6" RANGE HOOD EXHAUST ROUTED FROM RANGE TO EXTERIOR WALL, KEEP DUCT AS HIGH IN SPACE AS POSSIBLE, AND TERMINATE WITH A SIDE WALL VENT, WITH A BACKDRAFT DAMPER. INSULATE FINAL 5' OF DUCTWORK.

M — PTHP DETAIL, SEE 7 M06.01

N — EXTERIOR EXHAUST PLENUM, SEE 5 M06.01

O — 54X24 OR 40X30 GARAGE EXHAUSTS UP FROM GARAGE, THROUGH PT AND UP THROUGH ROOF

P — 8X8 BASEMENT TRASH EXHAUST, TRANSITION TO 10"ø INTO GREENHECK GRSR WITH 10"ø THROAT.

Q — 4"ø BATH EXHAUST FROM 1ST LEVEL TO CONNECT INTO 6"ø BATH EXHAUST FROM 2ND LEVEL LOFT TO SIDEWALL PLENUM.

R — VENT TYPE–2 RANGE HOOD TO SIDE WALL TERMINATION.

S — 4"ø BATH EXHAUST & DRYER AND 6"ø RANGE VENT UP TO LEVEL 2.

SHAFT DUCT SIZES					
FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 26	4000	NA	NA	RTU–1
5TH	24 X 26	4000	NA	NA	RTU–1
4TH	24 X 24	3200	NA	NA	RTU–1
3RD	24 X 24	2400	NA	NA	RTU–1
2ND	24 X 22	1600	NA	NA	RTU–1
1ST	24 X 20	800	NA	NA	RTU–1

SHAFT DUCT SIZES					
FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 26	4000	NA	NA	RTU–2
5TH	24 X 26	4000	NA	NA	RTU–2
4TH	24 X 24	3000	NA	NA	RTU–2
3RD	24 X 24	2000	NA	NA	RTU–2
2ND	24 X 24	1000	NA	NA	RTU–2

VENTILATION CALCULATIONS:

ALL DWELLING UNITS ARE VENTILATED BY MECHANICAL VENTILATION, BATHROOM EXHAUST FANS RUN CONTINUOUSLY (SIZED PER ASHRAE 62.2) AND MAKE UP AIR IS PROVIDED BY PTHP'S.

COMMON SPACES AND HALLWAYS ARE VENTILATED BY PACKAGED ROOF TOP UNITS SIZED TO EXCEED THE MINIMUM 0.06 CFM/SQ FT REQUIREMENT

SEE VENTILATION SCHEDULES FOR OTHER UNITS

2-12-20

REGISTERED PROFESSIONAL ENGINEER
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JULY 11, 2005
MARK B. DENTER
EXPIRES: 31DEC21

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2320 NW 2ND AVENUE SUITE 900
PORTLAND, OR 97209

Drawing Title:
MECH PLAN - LEVEL 3

Date: 12.20.19
Drawn by: MFIA/Jacobs
Project No.: A18-20

Revision:
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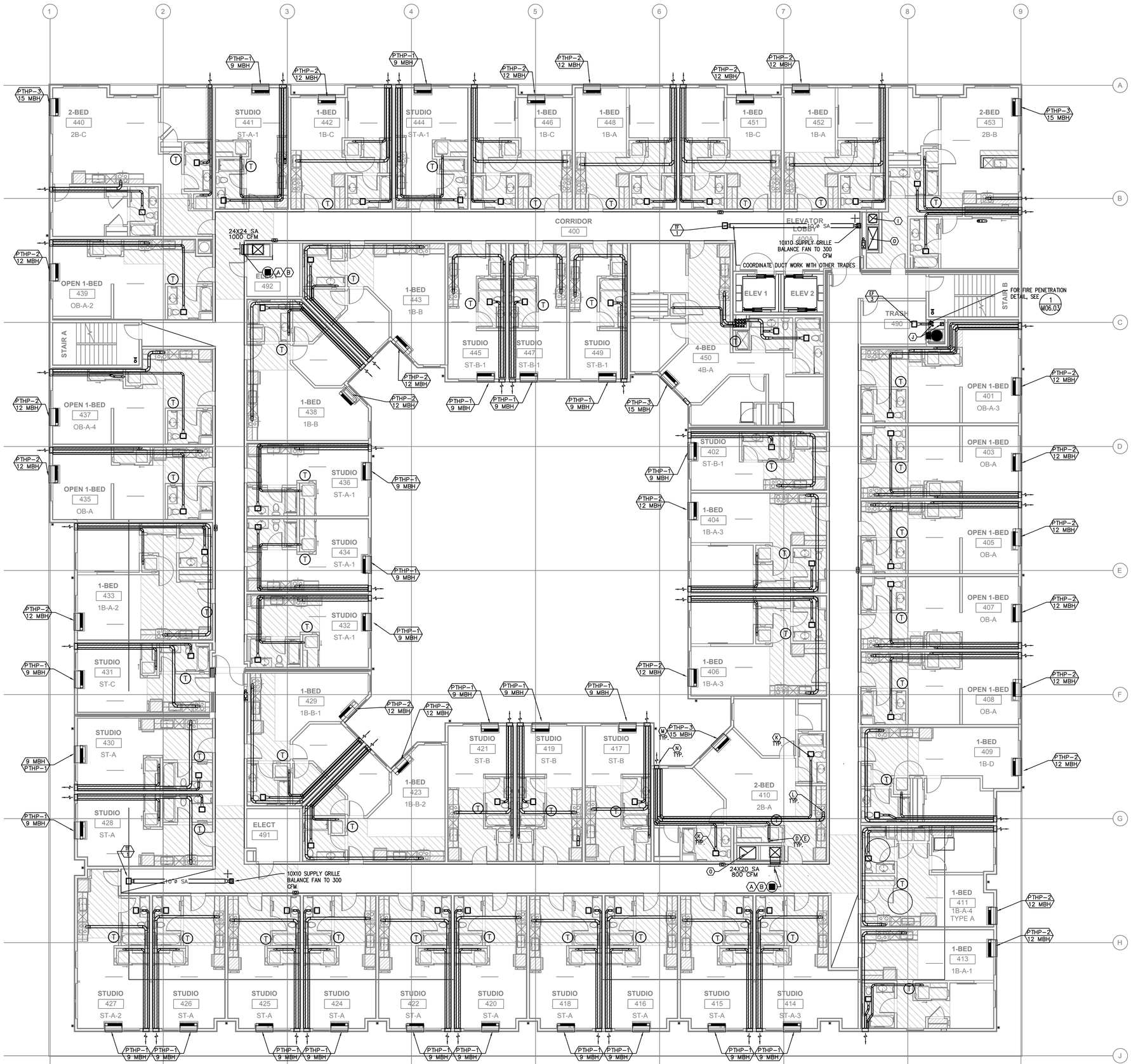
ASI 10 - 9.16.22 Construction Set Revisions

M02.03



1 MECH PLAN – LEVEL 4
M02.04
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A — SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING – TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF, SEE CHART.

B — SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE 1/M06.01 FOR GRILLE INSTALLATION, AND SEE 2/M06.01 FOR TYPICAL F/S INSTALLATION, AND CONTROLS.

C — 44X32 & 51X32 (SHOWN IN ARCH) INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS – COORDINATE WITH SOFFIT/STORE FRONT SYSTEM 3/M06.03 (1)

D — 4" DRYER EXHAUST ROUTED SIDEWALL, SEE 8/M06.01

E — TYPICAL DRYER DUCT TO BE CONSTRUCTED AS FOLLOWS: MATERIAL SHALL HAVE A SMOOTH INTERIOR FINISH AND 0.016 INCH THICK. RIVETS OR SCREWS PENETRATING THE DUCT WALL ARE NOT ACCEPTABLE. DRYER DUCT SHALL BE SUPPORTED EVERY 4 FOOT INTERVAL.

F — REFRIGERANT LINES CAPPED AND SEALED FOR FUTURE TI CONNECTION. ROUTED FROM 1ST FLOOR CEILING SPACE TO WALL BRACKET FOR FUTURE CONDENSING UNIT.

G — 10"ø OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2–POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES. DAMPER TO BE A LOW LEAK CLASS 1 DAMPER.

H — REFRIGERANT LINES ROUTED FROM PARKING GARAGE TO 1ST FLOOR FAN COILS.

I — 20X20 GREASE EXHAUST (WITH FIRE WRAP IN 30X30 SHAFT) ROUTED FROM ROOF (CAPPED) TO TI SPACE (CAPPED FOR FUTURE TI). PROVIDE VENTED CURB ADAPTER AND CAP FOR FUTURE GREASE EXHAUST FAN.

J — FOUR 4"ø & 8X8 TRASH EXHAUST UP TO ROOF DOG HOUSE.

K — DWELLING UNIT BATHROOM EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR, MECHANICAL TO PROVIDE VENTING FROM FAN TO SIDE WALL DISCHARGE. 6/M06.01 EF 1

L — 6" RANGE HOOD EXHAUST ROUTED FROM RANGE TO EXTERIOR WALL, KEEP DUCT AS HIGH IN SPACE AS POSSIBLE, AND TERMINATE WITH A SIDE WALL VENT, WITH A BACKDRAFT DAMPER. INSULATE FINAL 5' OF DUCTWORK.

M — PTHP DETAIL, SEE 7/M06.01

N — EXTERIOR EXHAUST PLENUM, SEE 5/M06.01

O — 54X24 OR 40X30 GARAGE EXHAUSTS UP FROM GARAGE, THROUGH PT AND UP THROUGH ROOF (1)

P — 8X8 BASEMENT TRASH EXHAUST, TRANSITION TO 10"ø INTO GREENHECK GRSR WITH 10"ø THROAT.

Q — 4"ø BATH EXHAUST FROM 1ST LEVEL TO CONNECT INTO 6"ø BATH EXHAUST FROM 2ND LEVEL LOFT TO SIDEWALL PLENUM.

R — VENT TYPE–2 RANGE HOOD TO SIDE WALL TERMINATION.

S — 4"ø BATH EXHAUST & DRYER AND 6"ø RANGE VENT UP TO LEVEL 2.

SHAFT DUCT SIZES					
FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 26	4000	NA	NA	RTU–1
5TH	24 X 26	4000	NA	NA	RTU–1
4TH	24 X 24	3200	NA	NA	RTU–1
3RD	24 X 24	2400	NA	NA	RTU–1
2ND	24 X 22	1600	NA	NA	RTU–1
1ST	24 X 20	800	NA	NA	RTU–1

SHAFT DUCT SIZES					
FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 26	4000	NA	NA	RTU–2
5TH	24 X 26	4000	NA	NA	RTU–2
4TH	24 X 24	3000	NA	NA	RTU–2
3RD	24 X 24	2000	NA	NA	RTU–2
2ND	24 X 24	1000	NA	NA	RTU–2

VENTILATION CALCULATIONS:

ALL DWELLING UNITS ARE VENTILATED BY MECHANICAL VENTILATION, BATHROOM EXHAUST FANS RUN CONTINUOUSLY (SIZED PER ASHRAE 62.2) AND MAKE UP AIR IS PROVIDED BY PTHP'S.

COMMON SPACES AND HALLWAYS ARE VENTILATED BY PACKAGED ROOF TOP UNITS SIZED TO EXCEED THE MINIMUM 0.06 CFM/SQ FT REQUIREMENT

SEE VENTILATION SCHEDULES FOR OTHER UNITS

2-12-20

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Project Title:
MODERA WOODSTOCK
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MILL CREEK RESIDENTIAL
2300 NW 2ND AVENUE SUITE 900
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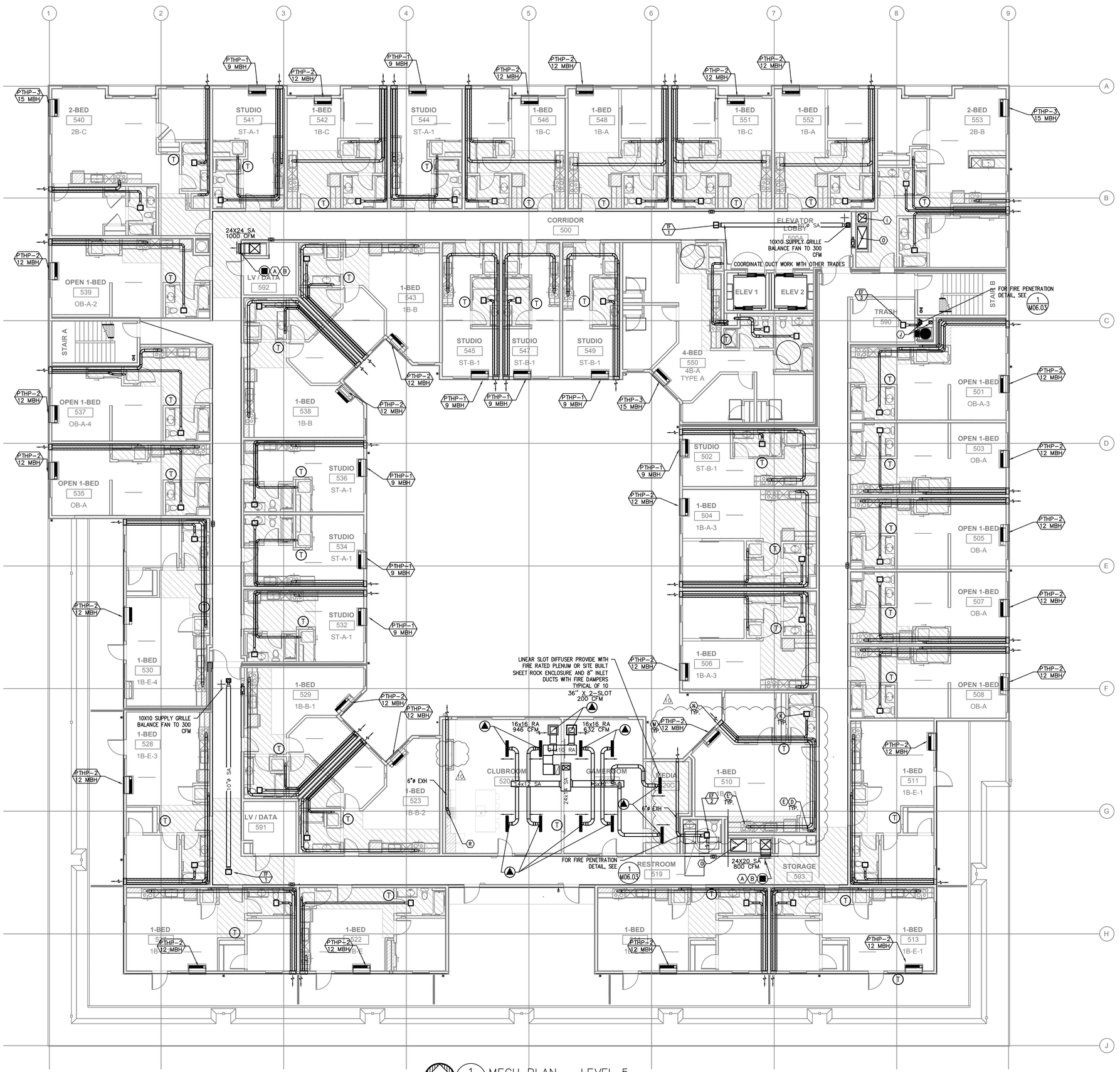
Drawing Title:
MECH PLAN - LEVEL 4

Date: 12.20.19
Drawn by: MFIA/Jacobs
Project No.: A18-20

Revision:
1 4.29.20 - ADD #2 Permit Checksheet Response #2
2 ASI 07.9.17.20 - Plan Check / GMP
3 ASI 10 - 9.16.22 Construction Set Revisions

M02.04



1 M02.05 MECH PLAN – LEVEL 5
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A — SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING – TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF, SEE CHART.

B — SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE 1/M06.01 FOR GRILLE INSTALLATION, AND SEE 2/M06.01 FOR TYPICAL F/S INSTALLATION, AND CONTROLS.

C — 44X32 & 51X32 (SHOWN IN ARCH) INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS – COORDINATE WITH SOFFIT/STORE FRONT SYSTEM. 3/M06.03

D — 4" DRYER EXHAUST ROUTED SIDEWALL, SEE 8/M06.01

E — TYPICAL DRYER DUCT TO BE CONSTRUCTED AS FOLLOWS: MATERIAL SHALL HAVE A SMOOTH INTERIOR FINISH AND 0.016 INCH THICK. RIVETS OR SCREWS PENETRATING THE DUCT WALL ARE NOT ACCEPTABLE. DRYER DUCT SHALL BE SUPPORTED EVERY 4 FOOT INTERVAL.

F — REFRIGERANT LINES CAPPED AND SEALED FOR FUTURE TI CONNECTION. ROUTED FROM 1ST FLOOR CEILING SPACE TO WALL BRACKET FOR FUTURE CONDENSING UNIT.

G — 10"ø OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2–POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES. DAMPER TO BE A LOW LEAK CLASS 1 DAMPER.

H — REFRIGERANT LINES ROUTED FROM PARKING GARAGE TO 1ST FLOOR FAN COILS.

I — 20X20 GREASE EXHAUST (WITH FIRE WRAP IN 30X30 SHAFT) ROUTED FROM ROOF (CAPPED) TO TI SPACE (CAPPED FOR FUTURE TI). PROVIDE VENTED CURB ADAPTER AND CAP FOR FUTURE GREASE EXHAUST FAN.

J — FOUR 4"ø & 8X8 TRASH EXHAUST UP TO ROOF DOG HOUSE.

K — DWELLING UNIT BATHROOM EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR, MECHANICAL TO PROVIDE VENTING FROM FAN TO SIDE WALL DISCHARGE. 6/M06.01 EF 1

L — 6" RANGE HOOD EXHAUST ROUTED FROM RANGE TO EXTERIOR WALL, KEEP DUCT AS HIGH IN SPACE AS POSSIBLE, AND TERMINATE WITH A SIDE WALL VENT, WITH A BACKDRAFT DAMPER, INSULATE FINAL 5' OF DUCTWORK.

M — PTHP DETAIL, SEE 7/M06.01

N — EXTERIOR EXHAUST PLENUM, SEE 5/M06.01

O — 54X24 OR 40X30 GARAGE EXHAUSTS UP FROM GARAGE, THROUGH PT AND UP THROUGH ROOF

P — 8X8 BASEMENT TRASH EXHAUST, TRANSITION TO 10"ø INTO GREENHECK GRSR WITH 10"ø THROAT.

Q — 4"ø BATH EXHAUST FROM 1ST LEVEL TO CONNECT INTO 6"ø BATH EXHAUST FROM 2ND LEVEL LOFT TO SIDEWALL PLENUM.

R — VENT TYPE–2 RANGE HOOD TO SIDE WALL TERMINATION.

S — 4"ø BATH EXHAUST & DRYER AND 6"ø RANGE VENT UP TO LEVEL 2.

SHAFT DUCT SIZES					
FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 26	4000	NA	NA	RTU–1
5TH	24 X 26	4000	NA	NA	RTU–1
4TH	24 X 24	3200	NA	NA	RTU–1
3RD	24 X 24	2400	NA	NA	RTU–1
2ND	24 X 22	1600	NA	NA	RTU–1
1ST	24 X 20	800	NA	NA	RTU–1

SHAFT DUCT SIZES					
FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 26	4000	NA	NA	RTU–2
5TH	24 X 26	4000	NA	NA	RTU–2
4TH	24 X 24	3000	NA	NA	RTU–2
3RD	24 X 24	2000	NA	NA	RTU–2
2ND	24 X 24	1000	NA	NA	RTU–2

VENTILATION CALCULATIONS:

ALL DWELLING UNITS ARE VENTILATED BY MECHANICAL VENTILATION, BATHROOM EXHAUST FANS RUN CONTINUOUSLY (SIZED PER ASHRAE 62.2) AND MAKE UP AIR IS PROVIDED BY PTHP'S.

COMMON SPACES AND HALLWAYS ARE VENTILATED BY PACKAGED ROOF TOP UNITS SIZED TO EXCEED THE MINIMUM 0.06 CFM/SQ FT REQUIREMENT

SEE VENTILATION SCHEDULES FOR OTHER UNITS

2-12-20

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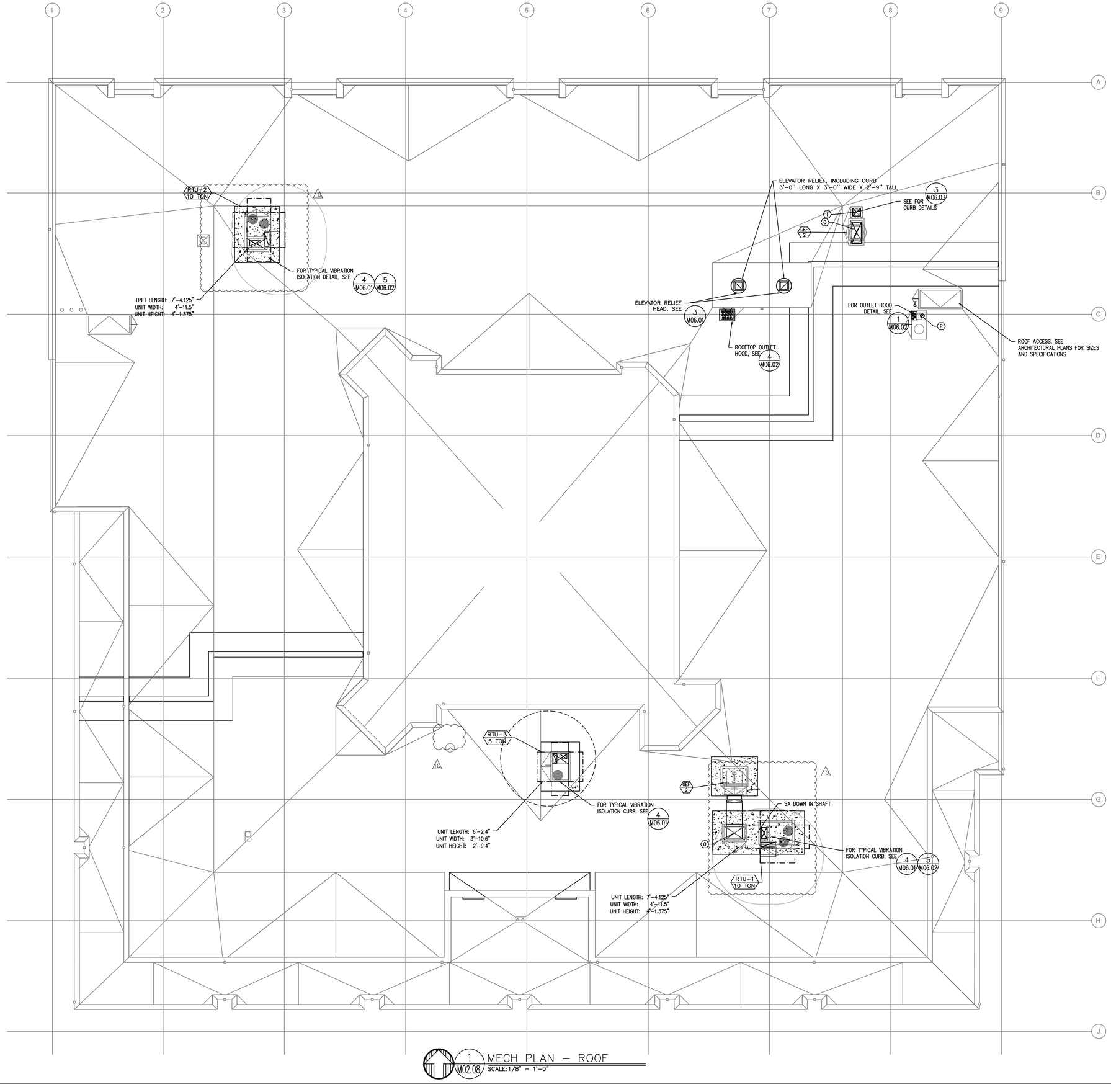
Drawing Title:
MECH PLAN - LEVEL 5

Revision:
4.29.20 - ADD #2, Permit Checksheet Response #2
ASI 07.8.17.20 - Plan Check / GAP
ASI 10 - 9.16.22 Construction Set Revisions

Date: 12.20.19
Drawn by: MFIA/Jacobs
Project No.: A18-20

M02.05



1 M02.08 MECH PLAN – ROOF
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

A — SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING – TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF, SEE CHART.

B — SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE 1/M06.01 FOR GRILLE INSTALLATION, AND SEE 2/M06.01 FOR TYPICAL F/S INSTALLATION, AND CONTROLS.

C — 44X32 & 51X32 (SHOWN IN ARCH) INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS – COORDINATE WITH SOFFIT/STORE FRONT SYSTEM. 3/M06.03

D — 4" DRYER EXHAUST ROUTED SIDEWALL, SEE 8/M06.01

E — TYPICAL DRYER DUCT TO BE CONSTRUCTED AS FOLLOWS: MATERIAL SHALL HAVE A SMOOTH INTERIOR FINISH AND 0.016 INCH THICK. RIVETS OR SCREWS PENETRATING THE DUCT WALL ARE NOT ACCEPTABLE. DRYER DUCT SHALL BE SUPPORTED EVERY 4 FOOT INTERVAL.

F — REFRIGERANT LINES CAPPED AND SEALED FOR FUTURE TI CONNECTION. ROUTED FROM 1ST FLOOR CEILING SPACE TO WALL BRACKET FOR FUTURE CONDENSING UNIT.

G — 10"ø OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2–POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES. DAMPER TO BE A LOW LEAK CLASS 1 DAMPER.

H — REFRIGERANT LINES ROUTED FROM PARKING GARAGE TO 1ST FLOOR FAN COILS.

I — 20X20 GREASE EXHAUST (WITH FIRE WRAP IN 30X30 SHAFT) ROUTED FROM ROOF (CAPPED) TO TI SPACE (CAPPED FOR FUTURE TI). PROVIDE VENTED CURB ADAPTER AND CAP FOR FUTURE GREASE EXHAUST FAN.

J — FOUR 4"ø & 8X8 TRASH EXHAUST UP TO ROOF DOG HOUSE.

K — DWELLING UNIT BATHROOM EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR. MECHANICAL TO PROVIDE VENTING FROM FAN TO SIDE WALL DISCHARGE. 6/M06.01 EF 1

L — 6" RANGE HOOD EXHAUST ROUTED FROM RANGE TO EXTERIOR WALL, KEEP DUCT AS HIGH IN SPACE AS POSSIBLE, AND TERMINATE WITH A SIDE WALL VENT, WITH A BACKDRAFT DAMPER. INSULATE FINAL 5' OF DUCTWORK.

M — PTHP DETAIL, SEE 7/M06.01

N — EXTERIOR EXHAUST PLENUM, SEE 5/M06.01

O — 54X24 OR 40X30 GARAGE EXHAUSTS UP FROM GARAGE, THROUGH PT AND UP THROUGH ROOF

P — 8X8 BASEMENT TRASH EXHAUST, TRANSITION TO 10"ø INTO GREENHECK GRSR WITH 10"ø THROAT.

Q — 4"ø BATH EXHAUST FROM 1ST LEVEL TO CONNECT INTO 6"ø BATH EXHAUST FROM 2ND LEVEL LOFT TO SIDEWALL PLENUM.

R — VENT TYPE–2 RANGE HOOD TO SIDE WALL TERMINATION.

S — 4"ø BATH EXHAUST & DRYER AND 6"ø RANGE VENT UP TO LEVEL 2.

SHAFT DUCT SIZES					
FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 26	4000	NA	NA	RTU–1
5TH	24 X 26	4000	NA	NA	RTU–1
4TH	24 X 24	3200	NA	NA	RTU–1
3RD	24 X 24	2400	NA	NA	RTU–1
2ND	24 X 22	1600	NA	NA	RTU–1
1ST	24 X 20	800	NA	NA	RTU–1

SHAFT DUCT SIZES					
FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 26	4000	NA	NA	RTU–2
5TH	24 X 26	4000	NA	NA	RTU–2
4TH	24 X 24	3000	NA	NA	RTU–2
3RD	24 X 24	2000	NA	NA	RTU–2
2ND	24 X 24	1000	NA	NA	RTU–2

VENTILATION CALCULATIONS:

ALL DWELLING UNITS ARE VENTILATED BY MECHANICAL VENTILATION, BATHROOM EXHAUST FANS RUN CONTINUOUSLY (SIZED PER ASHRAE 62.2) AND MAKE UP AIR IS PROVIDED BY PTHP'S.

COMMON SPACES AND HALLWAYS ARE VENTILATED BY PACKAGED ROOF TOP UNITS SIZED TO EXCEED THE MINIMUM 0.06 CFM/SQ FT REQUIREMENT

SEE VENTILATION SCHEDULES FOR OTHER UNITS

2-12-20

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Drawing Title:
MECH PLAN - ROOF

Revision:	
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Date: 12.20.19
Drawn by: MFIA/Jacobs
Project No.: A18-20

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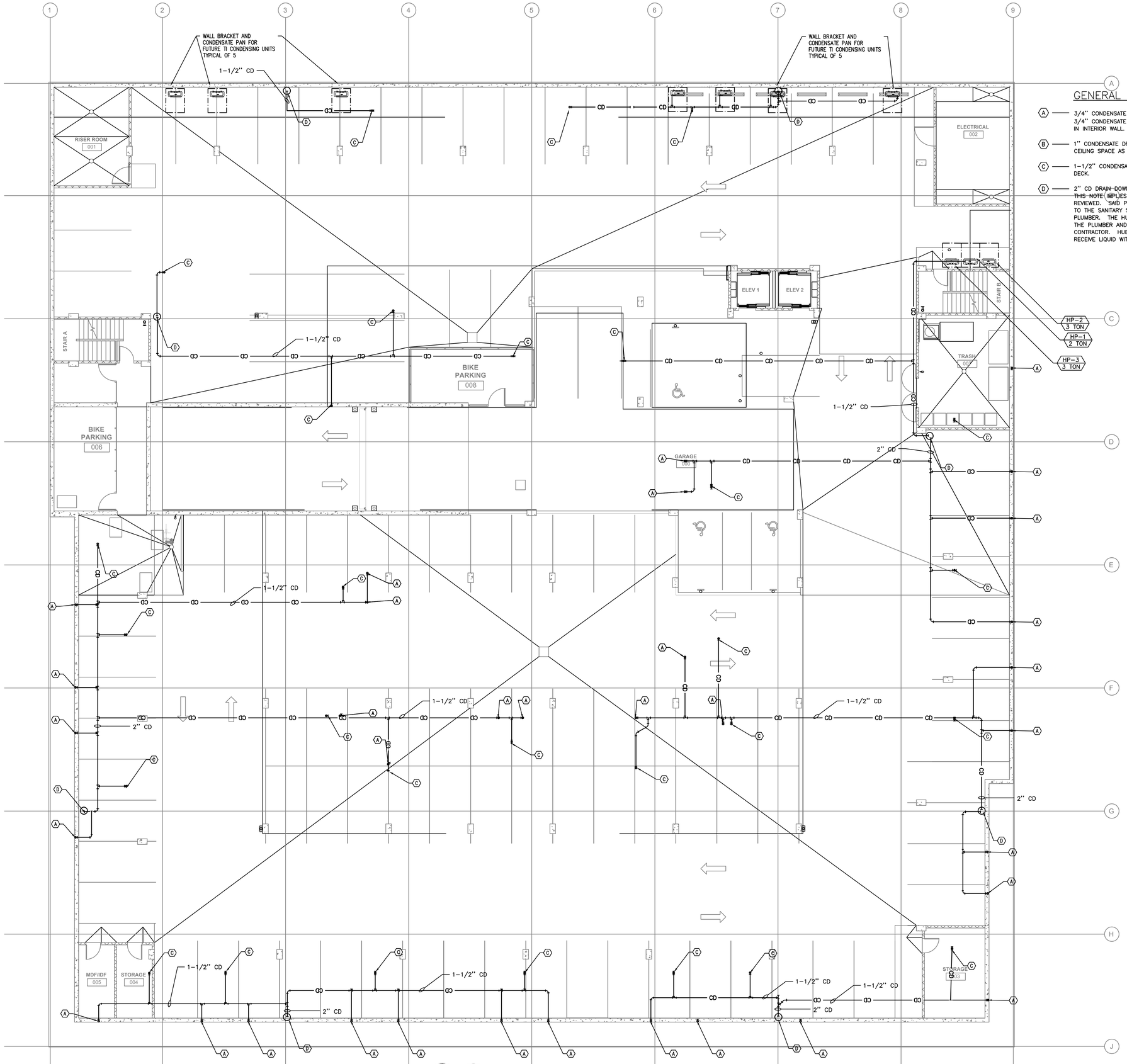

GENERAL NOTES:

(A) 3/4" CONDENSATE DRAIN FROM PTHP ROUTED DOWN TO FLOOR CAVITY BELOW. 3/4" CONDENSATE DRAIN FROM PTHP ABOVE ROUTED THROUGH JOISTS TO CD RISER IN INTERIOR WALL.

(B) 1" CONDENSATE DRAIN RISER DOWN IN INTERIOR WALL TO FIRST OR SECOND FLOOR CEILING SPACE AS SHOWN ON THE PLANS.

(C) 1-1/2" CONDENSATE DRAIN LINE ROUTED DOWN TO PARKING GARAGE THROUGH PT DECK.

(D) 2" CD DRAIN DOWN TO HUB DRAIN BY PLUMBER, SEE PLUMBING PLANS. ~~THIS NOTE~~ IMPLIES THE PLUMBING PLANS SHOULD BE ACTUALLY OPENED AND REVIEWED. SAID PLUMBING PLANS WILL SHOW THE THE HUB DRAINS ARE CONNECTED TO THE SANITARY SEWER SYSTEM THAT IS DESIGNED, SPECIFIED AND INSTALLED BY THE PLUMBER. THE HUB DRAINS – AS INDICATED ABOVE ARE SUPPLIED AND INSTALLED BY THE PLUMBER AND ARE THEREFORE NOT IN THE SCOPE OF THE MECHANICAL CONTRACTOR. HUB DRAINS ARE SPECIFICALLY DESIGNED AS AN AIR GAP FITTING TO RECEIVE LIQUID WITHOUT SPLASHING OR SPILLING.

1 M03.00 CONDENSATE PLAN – BASEMENT
SCALE: 1/8" = 1'-0"

2-12-20

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Drawing Title:
CONDENSATE PLAN - BASEMENT

Revision:
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ASI 07.9.17.20 - Plan Check / GMP
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Date: 12.20.19
Drawn by: MFIA/Jacobs
Project No.: A18-20

M03.00

GENERAL NOTES:

A — 3/4" CONDENSATE DRAIN FROM PTHP ROUTED DOWN TO FLOOR CAVITY BELOW. 3/4" CONDENSATE DRAIN FROM PTHP ABOVE ROUTED THROUGH JOISTS TO CD RISER IN INTERIOR WALL.

B — 1" CONDENSATE DRAIN RISER DOWN IN INTERIOR WALL TO FIRST OR SECOND FLOOR CEILING SPACE AS SHOWN ON THE PLANS.

C — 1-1/2" CONDENSATE DRAIN LINE ROUTED DOWN TO PARKING GARAGE THROUGH PT DECK.

D — 2" CD DRAIN-DOWN TO HUB DRAIN BY PLUMBER, SEE PLUMBING PLANS.

1 M03.01 CONDENSATE PLAN – LEVEL 1
SCALE: 1/8" = 1'-0"

2-12-20

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Drawing Title:
CONDENSATE PLAN - LEVEL 1

Revision:	
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Date: 12.20.19
Drawn by: MPM/Jkostie
Project No.: A18-20

M03.01

GENERAL NOTES:

A — 3/4" CONDENSATE DRAIN FROM PTHP ROUTED DOWN TO FLOOR CAVITY BELOW. 3/4" CONDENSATE DRAIN FROM PTHP ABOVE ROUTED THROUGH JOISTS TO CD RISER IN INTERIOR WALL.

B — 1" CONDENSATE DRAIN RISER DOWN IN INTERIOR WALL TO FIRST OR SECOND FLOOR CEILING SPACE AS SHOWN ON THE PLANS.

C — 1-1/2" CONDENSATE DRAIN LINE ROUTED DOWN TO PARKING GARAGE THROUGH PT DECK.

D — 2" CD DRAIN-DOWN TO HUB DRAIN BY PLUMBER, SEE PLUMBING PLANS.

1 M03.02 CONDENSATE PLAN – LEVEL 2
SCALE: 1/8" = 1'-0"

2-12-20

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Drawing Title:
CONDENSATE PLAN - LEVEL 2

Revision:	Date:
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Date: 12.20.19
Drawn by: MFA/Jacobs
Project No.: A18-20

M03.02

GENERAL NOTES:

A — 3/4" CONDENSATE DRAIN FROM PTHP ROUTED DOWN TO FLOOR CAVITY BELOW. 3/4" CONDENSATE DRAIN FROM PTHP ABOVE ROUTED THROUGH JOISTS TO CD RISER IN INTERIOR WALL.

B — 1" CONDENSATE DRAIN RISER DOWN IN INTERIOR WALL TO FIRST OR SECOND FLOOR CEILING SPACE AS SHOWN ON THE PLANS.

C — 1-1/2" CONDENSATE DRAIN LINE ROUTED DOWN TO PARKING GARAGE THROUGH PT DECK.

D — 2" CD DRAIN DOWN TO HUB DRAIN BY PLUMBER, SEE PLUMBING PLANS.

1 M03.03 CONDENSATE PLAN – LEVEL 3
SCALE: 1/8" = 1'-0"

2-12-20

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Drawing Title:
CONDENSATE PLAN - LEVEL 3

Revision:
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ASI 10 - 9.16.22 Construction Set Revisions

Date: 12.20.19
Drawn by: MFIA/Jacobs
Project No.: A18-20

M03.03

GENERAL NOTES:

A — 3/4" CONDENSATE DRAIN FROM PTHP ROUTED DOWN TO FLOOR CAVITY BELOW. 3/4" CONDENSATE DRAIN FROM PTHP ABOVE ROUTED THROUGH JOISTS TO CD RISER IN INTERIOR WALL.

B — 1" CONDENSATE DRAIN RISER DOWN IN INTERIOR WALL TO FIRST OR SECOND FLOOR CEILING SPACE AS SHOWN ON THE PLANS.

C — 1-1/2" CONDENSATE DRAIN LINE ROUTED DOWN TO PARKING GARAGE THROUGH PT DECK.

D — 2" CD DRAIN DOWN TO HUB DRAIN BY PLUMBER, SEE PLUMBING PLANS.

1 M03.04 CONDENSATE PLAN – LEVEL 4
SCALE: 1/8" = 1'-0"

2-12-20

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Project Title:
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Drawing Title:
CONDENSATE PLAN - LEVEL 4

Revision:	Date:
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ASI 07.9.17.20 - Plan Check / GMP	
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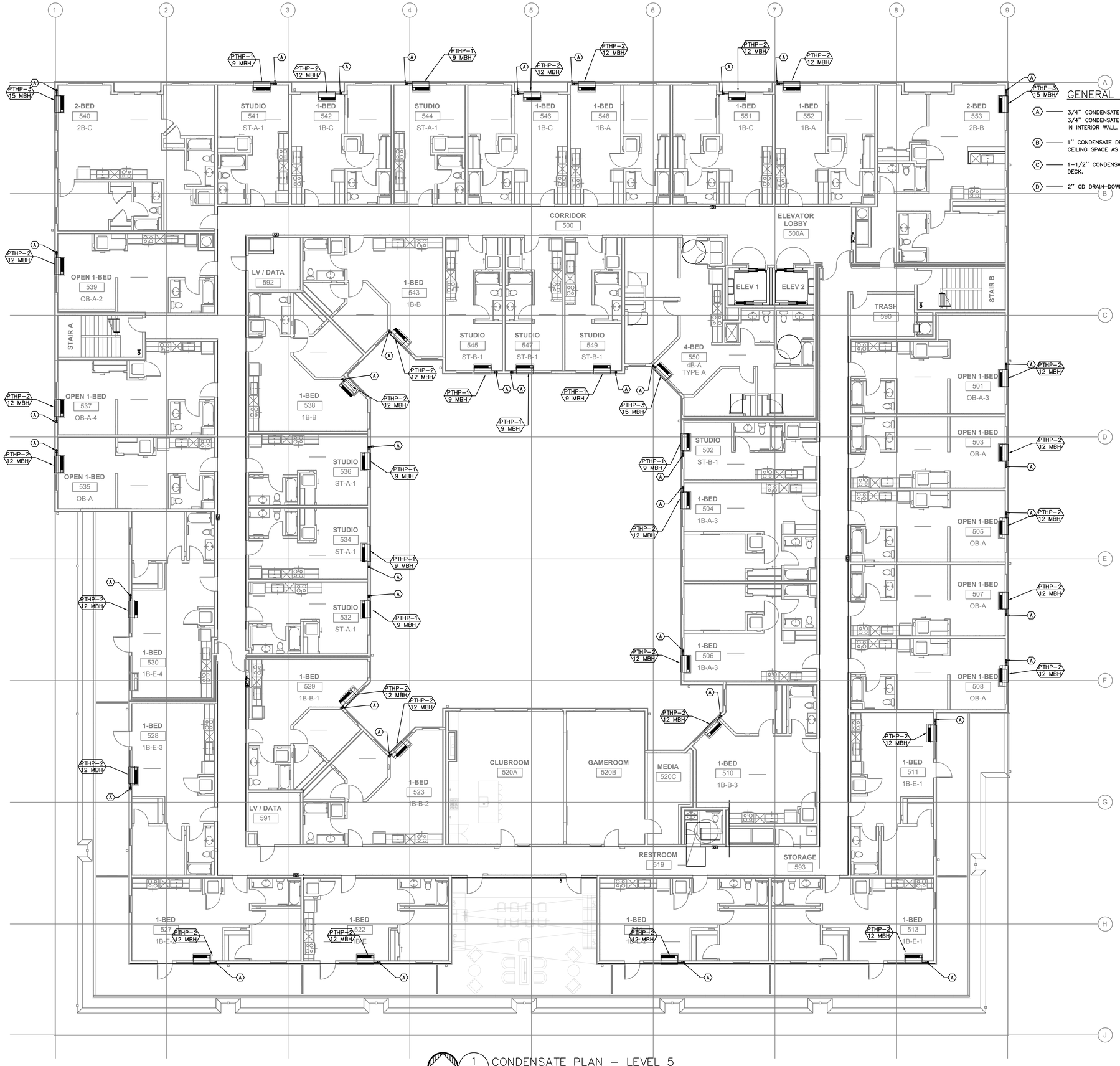
Date: 12.20.19
Drawn by: MFIA/Jacobs
Project No.: A18-20

M03.04



GENERAL NOTES:

(A) 3/4" CONDENSATE DRAIN FROM PTHP ROUTED DOWN TO FLOOR CAVITY BELOW. 3/4" CONDENSATE DRAIN FROM PTHP ABOVE ROUTED THROUGH JOISTS TO CD RISER IN INTERIOR WALL.

(B) 1" CONDENSATE DRAIN RISER DOWN IN INTERIOR WALL TO FIRST OR SECOND FLOOR CEILING SPACE AS SHOWN ON THE PLANS.

(C) 1-1/2" CONDENSATE DRAIN LINE ROUTED DOWN TO PARKING GARAGE THROUGH PT DECK.

(D) 2" CD DRAIN DOWN TO HUB DRAIN BY PLUMBER, SEE PLUMBING PLANS.

1 M03.05 CONDENSATE PLAN – LEVEL 5
SCALE: 1/8" = 1'-0"

2-12-20

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Drawing Title:
CONDENSATE PLAN - LEVEL 5

Revision:
4.29.20 - ADD #2, Permit Checksheet Response #2
ASI 07.17.20 - Plan Check / GMP
ASI 10 - 9.16.22 Construction Set Revisions

Date: 12.20.19
Drawn by: MFH/Jacobs
Project No.: A18-20

M03.05

MECHANICAL LEGEND

- SUPPLY AIR DIFFUSER
- RETURN AIR GRILLE
- EXHAUST AIR GRILLE
- PERFORATED RETURN AIR PANEL
- OR — DIRECTIONAL AIR FLOW
- MANUAL VOLUME DAMPER
- SUPPLY OR OUTSIDE AIR DUCT UP & DOWN
- RETURN AIR DUCT UP & DOWN
- EXHAUST AIR DUCT UP & DOWN
- SUPPLY OR OUTSIDE AIR DUCT UP & DOWN
- RETURN AIR DUCT UP & DOWN
- EXHAUST AIR DUCT UP & DOWN
- VAV TERMINAL UNIT
- VVT TERMINAL UNIT
- (E) EXISTING
- CONNECT TO EXISTING
- (7) AC-4 THERMOSTAT OR TEMP. SENSOR
- (7) NOTE
- XX / 7 EQUIPMENT DESIGNATOR
- BALL VALVE
- GATE VALVE
- CHECK VALVE
- BALANCING VALVE
- THERMOMETER
- DIRECTION OF FLOW
- PUMP
- STRAINER
- PRESSURE GAUGE
- PETE'S PLUG
- DOUBLE CHECK ASSEMBLY
- PRESSURE REDUCING VALVE
- UNION
- 2-WAY CONTROL VALVE
- 3-WAY CONTROL VALVE
- CAP
- S SMOKE DETECTOR
- MOTORIZED DAMPER

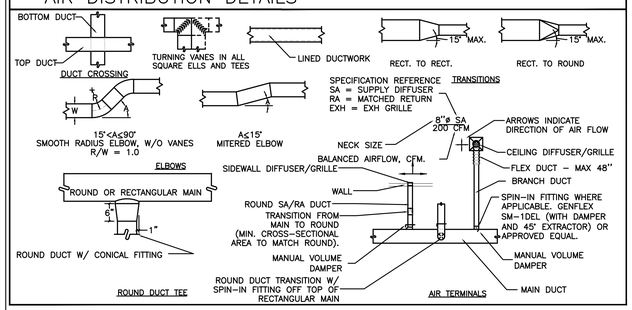
AFF	ABOVE FINISH FLOOR
AHU	AIR HANDLING UNIT
B.D.	BOTTOM OF DUCT
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNITS
CFM	CUBIC FEET PER MINUTE
CONN.	CONNECTION
CONT.	CONTINUATION
CW	DOMESTIC COLD WATER
DB	DRY BULB
DIA.	DIAMETER
DIST.	DISTRIBUTION
EA	EXHAUST AIR
EDB	ENTERING DRY BULB TEMPERATURE
EWB	ENTERING WET BULB TEMPERATURE
EWT	ENTERING WATER TEMPERATURE
FF	FINISH FLOOR
FIXT.	FIXTURE
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT.	FEET / FOOT
GA.	GAUGE
GPM	GALLONS PER MINUTE
H	HEIGHT
HP	HORSEPOWER
I.D.	INSIDE DIAMETER
IN.	INCHES
L	LENGTH
LBS.	POUNDS
LDB	LEAVING DRY BULB
LWB	LEAVING WET BULB
LWT	LEAVING WATER TEMPERATURE
MAX.	MAXIMUM
MBH	THOUSANDS OF BTUs PER HOUR
MIN.	MINIMUM
NC	NOISE CRITERIA
N.C.	NORMALLY CLOSED
N.I.M.	NOT IN MECHANICAL
NO.	NUMBER
N.O.	NORMALLY OPEN
O.A.	OUTSIDE AIR
P	PERSON
PSI	POUNDS PER SQUARE INCH
P/T	PRESSURE / TEMPERATURE
R.A.	RETURN AIR
RECT.	RECTANGULAR
REQ'D	REQUIRED
S.A.	SUPPLY AIR
S.P.	STATIC PRESSURE
SQ.	SQUARE
TEMP.	TEMPERATURE
TYP.	TYPICAL
VAV	VARIABLE AIR VOLUME
W	WIDTH
WB	WET BULB
WPD	WATER PRESSURE DROP
ø	DIAMETER

- (E) EXISTING
- (D) DEMOLISH
- NEW WORK
- HWS (HWS) HEATING WATER SUPPLY
- HWR (HWR) HEATING WATER RETURN
- FIRE DAMPER
- FIRE / SMOKE DAMPER
- SMOKE DAMPER

SEISMIC BRACING

- LATERAL BRACING
- LONGITUDINAL BRACING
- LONGITUDINAL & LATERAL BRACING

AIR DISTRIBUTION DETAILS



EXHAUST FANS

MARK NUMBER	EF 1	EF 2	EF 3	EF 4	EF 5	EF 6	EF 7	EF 8	EF 9	EF 10	TF 1
TYPE	CEILING CABINET	CEILING CABINET	CEILING CABINET	CEILING CABINET	CEILING CABINET	CEILING CABINET	CEILING CABINET	CEILING CABINET	CEILING CABINET	CEILING CABINET	CEILING CABINET
SYSTEM	BATHROOM	RESTROOM	COMM. TRASH	WATER HEATER ROOM	BIKE PARKING	BIKE STORAGE	TRASH ROOM BASEMENT	ELECTRICAL 002	WATER 001	MDF/IDF	CORRIDOR
CFM	30/80	110	300	200	200	300	300	200	200	100	300
TOTAL SP. (IN H20)	0.20	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125
RPM	1062/1146	1190	2500	740	740	2500	2500	740	740	1250	2500
TIP SPEED (FPM)	NA	--	--	--	--	--	--	--	--	–	--
MOTOR WATTS OR HP	5/11.7 W	47.3 W	135 W	127 W	127 W	135 W	135 W	127 W	127 W	100 W	135 W
CONTROLLED BY	**	LIGHTS	CONTINUOUS	T-STAT	HUMIDISTAT	HUMIDISTAT	CONTINUOUS	T-STAT	T-STAT	T-STAT	CONTINUOUS
INTERLOCK WITH	MOTION SENSOR	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
FAN SPEED CONTROLLER	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	YES
WHEEL TYPE	BI	FC	BI	BI	BI	BI	BI	BI	BI	FC	BI
BACK DRAFT DAMPER	YES	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY	GRAVITY
ISOLATION	RUBBER	RUBBER	RUBBER	RUBBER	RUBBER	RUBBER	RUBBER	RUBBER	RUBBER	RUBBER	RUBBER
DESIGN WEIGHT (LBS)	25	25	25	23	23	25	25	23	23	25	25
MAX. SONES	0.3/0.6	3.0	4.5	1.7	1.7	4.5	4.5	1.7	1.7	1.5	4.5
MAX AMPS – ***	0.27	0.40	1.34	1.8	1.8	1.34	1.34	1.8	1.8	1.3	1.34
POWER (VOLTS/PHASE/HZ) – ***	120/1/60	120/60/1	120/60/1	120/60/1	120/60/1	120/60/1	120/60/1	120/60/1	120/60/1		120/60/1
BASIS OF DESIGN:	PANASONIC * FV-05-11VKSL2	BROAN A110	GREENHECK SP-A390	BROAN L200	BROAN L200	GREENHECK SP-A390	GREENHECK SP-A390	BROAN L200	BROAN L200	BROAN L100	GREENHECK SP-A390

* – FAN TO INCLUDE 10 WATT DIMMABLE LED CHIP PANEL –COORDINATE SWITCHING WITH ELECTRICAL CONTRACTOR.
** – FAN TO RUN AT LOW SPEED CONTINUOUSLY, AND INCREASE TO HIGH SPEED UPON ACTIVATION OF THE MOTION SENSOR.
***– ELECTRICAL DATA LISTED FOR REFERENCE ONLY, COORDINATE WITH ELECTRICAL DEIGN BUILD CONTRACTOR FOR VOLTAGE AND PHASE REQUIREMENTS

GARAGE EXHAUST FANS

MARK NUMBER	GEF 1	GEF 2	GCF 1	GCF 2	GCF 3	GCF 4
TYPE	ROOF DIRECT DRIVE	UTILITY SET DIRECT DRIVE	AXIAL DIRECT DRIVE			
SYSTEM	GARAGE EXHAUST #1A	GARAGE EXHAUST #1B	GARAGE CIRCULATION			
CFM *	13,000	13,000	5103			
TOTAL SP. (IN H20)	0.50	0.50	0.287			
RPM	830	696	3500			
TIP SPEED (FPM)	6627	6016	--			
MOTOR WATTS OR HP	5 HP	7.5	2 HP			
CONTROLLED BY	VFD	VFD	---			
INTERLOCK WITH	CO/NO2	CO/NO2	CO/NO2			
FAN SPEED CONTROLLER	YES	YES	YES			
WHEEL TYPE	BI	BI	BI			
BACK DRAFT DAMPER	NONE	NONE	NONE			
ISOLATION	RUBBER	RUBBER	RUBBER			
DESIGN WEIGHT (LBS)	400	952	60			
MAX. SONES OR dBA	27 SONES	25 SONES	83 dBA			
MAX AMPS – ***	--	--	--			
POWER (VOLTS/PHASE/HZ) – ***	230/60/3	230/60/3	230/60/3			
BASIS OF DESIGN:	GREENHECK CUE-300-C-VGD	GREENHECK USF-33	GREENHECK GJX-41-160			

* – FAN TO RUN AT LOW SPEED CONTINUOUSLY, AND INCREASE TO HIGH SPEED UPON ACTIVATION OF THE MOTION SENSOR. SEE GARAGE PLANS
***– ELECTRICAL DATA LISTED FOR REFERENCE ONLY, COORDINATE WITH ELECTRICAL DEIGN BUILD CONTRACTOR FOR VOLTAGE AND PHASE REQUIREMENTS

ROOFTOP HVAC UNITS

MARK NUMBER		RTU-1 10 TON *	RTU-2 10 TON *	RTU-3 5 TON
SYSTEM		SOUTH SECTION	NORTH SECTION	CLUB/GAME ROOM
TYPE		SZVAV **	SZVAV **	C.V.
DISCHARGE		VERTICAL	VERTICAL	VERTICAL
FAN SECTION	TOTAL CFM	4000	4000	2080
	ECONOMIZER	NONE-100% OSA***	NONE-100% OSA***	YES
	MIN. OSA	4000	4000	422
	MAX OSA (FULL OCCUPANCY)	NA	NA	NA
	CO2 CONTROL	NA	NA	NA
	EXTERNAL SP. ("H20)	1.0	1.0	0.75
	TOTAL SP. ("H20)	---	---	---
	RPM	993	993	2181
	WHEEL TYPE/ SIZE	F.C. --- (DIRECT)	F.C. --- (DIRECT)	F.C. --- (DIRECT)
	MOTOR HP.	2.66 BHP	2.66 BHP	1.10 BHP
	POWER EXH FAN/ACCESSORY	NONE	NONE	NONE
	MIN FILTER SIZE	2-20X20	2-16X25	2-16X25
	FILTER TYPE	MERV 8	MERV 8	MERV 8
HEATING	GAS INPUT/OUTPUT (MBH)	250 / 205	250 / 205	150 / 120
	EFF. (AFUE)	80.0%	80.0%	80.0%
	STAGES/TYPE	2-S.S. HIGH HEAT	2-S.S. HIGH HEAT	2-S.S. HIGH HEAT
COOLING	TOTAL CLG. (TONS)	10	10	5.0
	SENSIBLE CLG. (MBH)	137.28	137.29	63.74
	ENT. EVAP AIR TEMP (DB/WB.)	90/67	90/67	90/67
	LVG. EVAP AIR TEMP (DB/WB.)	55/54	55/54	55/54
	AMBIENT AIR (°F)	95	95	95
	EER/IERR	11.10/12.8	11.10/12.8	14.0 SEER
	REFRIGERANT	410A	410A	410A
	REFRIGERANT CHARGE	XX	XX	XX
	DESIGN WEIGHT (LBS.)	1050	1050	615
	SMOKE DETECTOR (SUPPLY DUCT)	YES	YES	YES
	SPRING ISOLATION ROOF CURB	YES	YES	YES
	CONVENIENCE OUTLET – ALWAYS POWERED	NO	NO	YES
	VOLTAGE/PHASE – ***	208/3	208/3	208/3
	MCA/MOCP – ***	50/60	50/60	31/45 AMPS
	BASIS OF DESIGN – CARRIER MODEL	48TCTD12A2A5	48TCTD12A2A5	48FCTA06A2A5

* – UNIT TO RUN CONTINUOSLY
** – PROVIDE VFD DISPLAY KIT, SET VFD TO 100%
*** – MOTORIZED DAMPERS TO BE FIELD INSTALLED.

SUPPLY FAN

MARK NUMBER	SF 1
LOCATION	BIKE ROOM
SIZE (KW)	1.44 KW
DUCT SIZE	8"ø
CFM– OSA	200
STEPS	2
MCA	12.6
POWER (VOLTS/PHASE) *	120/1
BASIS OF DESIGN: HOTPOD	HP8

* – ELECTRICAL DATA LISTED FOR REFERENCE ONLY, COORDINATE WITH ELECTRICAL DESIGN BUILD CONTRACTOR FOR VOLTAGE AND PHASE REQUIREMENTS

INDOOR UNITS – *

MARK NUMBER	FC-1 24 MBH **	FC-2 36 MBH ***	FC-3 36 MBH ***	FC-4 12 MBH	FC-5 12 MBH
SYSTEM	STAFF-MANAGER-CORR-MAIL	RECEPTION/LEASING	FITNESS	IT ROOM	ELEVATOR EQUIP. ROOM
TYPE	DUCTED	DUCTED	DUCTED	WALL MOUNTED	WALL MOUNTED
EFFICIENCY	SEE OUTDOOR UNIT	SEE OUTDOOR UNIT	SEE OUTDOOR UNIT	SEE OUTDOOR UNIT	SEE OUTDOOR UNIT
NOMINAL COOLING CAPACITY	23,600 BTUH	33,000 BTUH	33,000 BTUH	12,000 BTUH	12,000 BTUH
HEATING CAPACITY	~~24,000 BTUH/6 KW ELECT~~	~~33,000 BTUH/10 KW ELECT~~	~~33,000 BTUH/10 KW ELECT~~	12,000 BTUH	12,000 BTUH
FILTER TYPE	MERV 8	MERV 8	MERV 8	--	--
TOTAL SUPPLY CFM	850	1200	1200	380	380
OSA CFM	174	393	387	--	--
EXTERNAL SP. ("H20)	0.25	0.25	0.25	0.25	0.25
VOLTS/PHASE	208/1	208/1	208/1	208/1	208/1
MCA/MOP	29.4/35	45.5/60	45.5/60	SEE OUTDOOR UNIT	SEE OUTDOOR UNIT
WEIGHT	135	135	135	20	20
BASIS OF DESIGN	CARRIER FMC4Z3000AL	CARRIER FMC4Z3600AL	CARRIER FMC4Z3600AL	CARRIER 40MAQB12B--3	CARRIER 40MAQB12B--3
OUTDOOR UNIT	HP-1 2 TON	HP-2 3 TON	HP-3 3 TON	HP-4 1 TON	HP-5 1 TON

* – PROVIDE ALL UNITS THAT CANNOT BE DRAINED BY GRAVITY WITH CONDENSATE PUMP, ROUTE ALL CONDENSATE LINES HIDDEN WITHIN STRUCTURE TO AN APPROVED LOCATION PROVIDED BY THE PLUMBER.
** – PROVIDE ACCESS PANEL, MODEL # KFAGP0201COV. PROVIDE ELECTRIC HEAT KIT, MODEL # EHK3-06B.
*** – PROVIDE ACCESS PANEL, MODEL # KFAGP0201COV. PROVIDE ELECTRIC HEAT KIT, MODEL # EHK3-10B.

OUTDOOR UNITS – SPLIT SYSTEM HEAT PUMP

MARK NUMBER	HP-1 2 TON	HP-2 3 TON	HP-3 3 TON	HP-4 1 TON	HP-5 1 TON
SYSTEM	STAFF-MANAGER-CORR-MAIL	RECEPTION/LEASING	FITNESS	IT ROOM	ELEVATOR EQUIP. ROOM
TYPE	1-PORT HEAT PUMP	1-PORT HEAT PUMP	1-PORT HEAT PUMP	1-PORT HEAT PUMP	1-PORT HEAT PUMP
NORMAL COOLING CAPACITY	23,000 BTUH	33,000 BTUH	33,000 BTUH	12,000 BTUH	12,000 BTUH
NORMAL HEATING CAPACITY	24,400 BTUH	33,000 BTUH	33,000 BTUH	12,000 BTUH	12,000 BTUH
EFFICIENCY SEER/EER	14.0/11.5	14.0/11.0	14.0/11.0	22.5/13	22.5/13
EFFICIENCY HSPF/COP	8.2/4.02	8.2/4.14	8.2/4.14	12/3.56	12/3.56
REFRIGERANT	410 A	410 A	410 A	410 A	410 A
REFRIGERANT CHARGE	X LBS	X LBS	X LBS	X LBS	X LBS
MAX OPERATING TEMPS	115/5	115/5	115/5	115/5	115/5
MAX PIPING LENGTH	98 FT	200 FT	200 FT	82 FT	82 FT
MAX PIPING HEIGHT	65 FT	80 FT	80 FT	32 FT	32 FT
VOLTS-PHASE – **	208/230-1 PHASE	208/230-3 PHASE	208/230-3 PHASE	208/230-1 PHASE	208/230-1 PHASE
MCA/MOP – **	16.5/25.0 AMPS	12.8/20.0 AMPS	12.8/20.0 AMPS	9/15 AMPS	9/15 AMPS
COMPRESSOR	CONSTANT SPEED	CONSTANT SPEED	CONSTANT SPEED	VARIABLE SPEED	VARIABLE SPEED
WEIGHT	165 LBS	227 LBS	227 LBS	100 LBS	100 LBS
BASIS OF DESIGN	CARRIER 25HHA424A003	CARRIER 25HHA436A005	CARRIER 25HHA436A005	CARRIER 38MAQB12R--3	CARRIER 38MAQB12R--3

** – ELECTRICAL DATA LISTED FOR REFERENCE ONLY, COORDINATE WITH ELECTRICAL DEIGN BUILD CONTRACTOR FOR VOLTAGE AND PHASE REQUIREMENTS. ELECTRICAL CONTRACTOR RESPONSIBLE FOR SIZING ALL CONDUCTORS & OVERCURRENT PROTECTION. VERIFY WITH EQUIPMENT SUBMITTALS FOR EQUIPMENT ELECTRICAL REQUIREMENTS

PACKAGED TERMINAL HEAT PUMP

MARK NUMBER	PTHP-1 9 MBH	PTHP-2 12 MBH	PTHP-3 15 MBH
TYPE	THRU-THE-WALL HEAT PUMP	THRU-THE-WALL HEAT PUMP	THRU-THE-WALL HEAT PUMP
SYSTEM	STUDIO	1-BEDROOM	2&4-BEDROOM
NOMINAL COOLING CAPACITY (BTUH)	9,000	11,500	14,000
HEATING CAPACITY (BTUH) @ 47°F OUTDOOR AIR TEMP	8,300	11,500	13,800
ELECTRIC HEATING CAPACITY (KW)	3.5	3.5	5.0
CFM (HI/LOW) (WET COIL)	290/264	290/264	340/314
MIN OSA (CFM)	65 CFM	65 CFM	65 CFM
LVG. AIR TEMP (°F)	55°F	55°F	55°F
REMOTE THERMOSTAT	YES	YES	YES
EFFICIENCY (EER)	11.1	10.2	9.6
EFFICIENCY (COP)	3.3	3.1	2.9
ARCHITECTURAL GRILLE 42x16	YES	YES	YES
DESIGN WT. (LBS)	115	120	130
ELECT (VOLTS/PHASE/HTZ) – ***	230/1/60	230/1/60	230/1/60
TOTAL AMPS – ***	11.2	15.5	15.5
MCA/MOP – ***	14.1/15	19.5/20	19.5/20
REFRIGERANT	410a	410a	410a
REFRIGERANT CHARGE	1.325 LBS	1.34 LBS	1.95 LBS
CONDENSATE DRAIN KIT *	YES – *	YES – *	YES – *
BASIS OF DESIGN: GE	GE	GE	GE

* – CONDENSATE DRAIN KIT PROVIDED BY MECHANICAL CONTRACTOR, ALL CONDENSATE PIPING TO BE PROVIDED AND INSTALLED BY PLUMBING CONTRACTOR FROM PTHP TO HUB DRAINS PROVIDED BY PLUMBING CONTRACTOR.
***– ELECTRICAL DATA LISTED FOR REFERENCE ONLY, COORDINATE WITH ELECTRICAL DEIGN BUILD CONTRACTOR FOR VOLTAGE AND PHASE REQUIREMENTS

2-12-20

REGISTERED PROFESSIONAL ENGINEER — OREGON — JULY 11, 2005 — MARK B. DENTER — EXPIRES: 31DEC21

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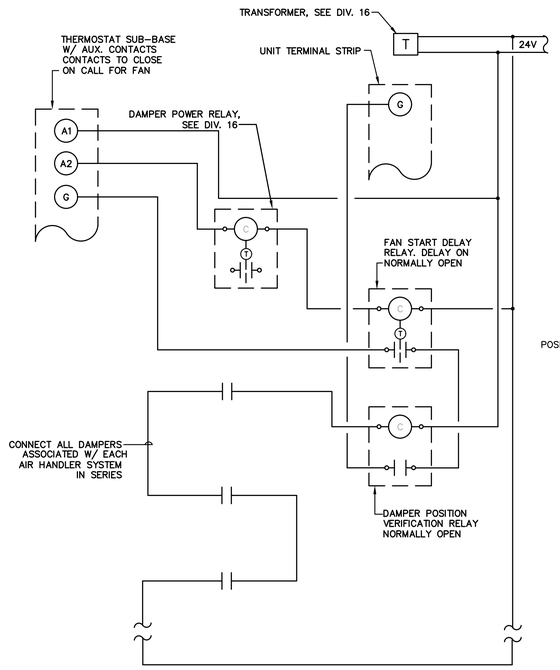
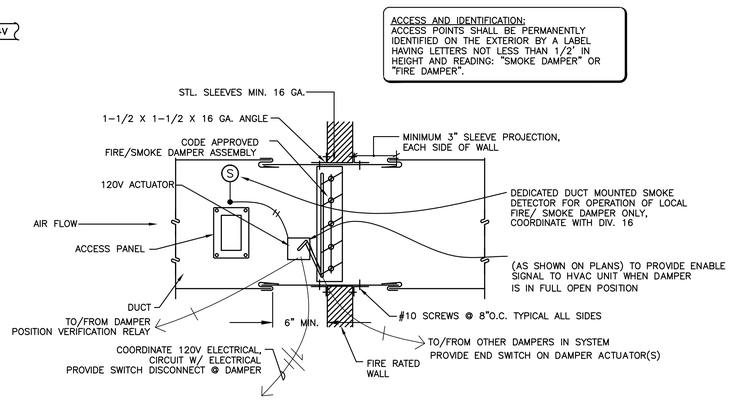
Drawing Title:
MECH SCHEDULES

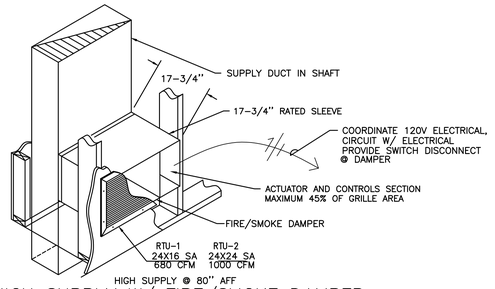
Revision:	Date:	Drawn by:	Project No.:
4.29.20 - ADD #2, Permit Checksheet Response #2	12.20.19	MPM/Jacobs	A18.20
ASI 07 & 17.20 - Plan Check / GMP			
ASI 10 - 9.16.22 Construction Set Revisions			

M06.00





1 M06.01 FIRE/SMOKE DAMPER W/SMOKE DETECTOR
NOT TO SCALE



2 M06.01 HIGH SUPPLY W/ FIRE/SMOKE DAMPER
SCALE: DETAIL

NOTE:

PROVIDE ALL REQUIRED CONTROL WIRING TO ACCOMPLISH:

FIRE/SMOKE DAMPER – FIRE/SMOKE DAMPER TO CLOSE UPON ACTIVATION OF LOCAL SMOKE DETECTOR

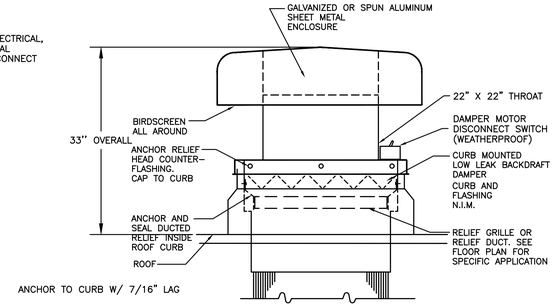
EXHAUST DUCTS/FANS – FIRE/SMOKE DAMPER TO CLOSE UPON SHUTDOWN OF ASSOCIATED EXHAUST FAN.

SUPPLY OR RETURN DUCTS/FANS – FIRE/SMOKE DAMPER TO CLOSE UPON SHUTDOWN OF ASSOCIATED AIR HANDLING UNIT.

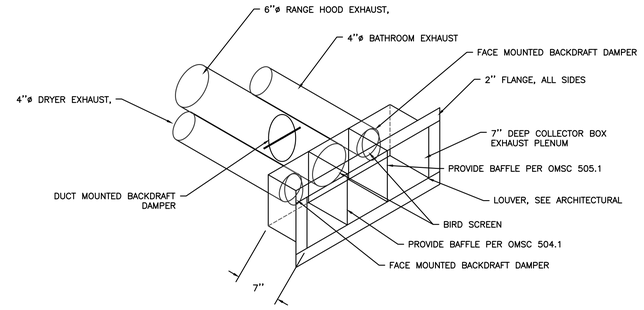
GENERAL NOTES:

PROVIDE ACCESS IN CEILING OR WALL FOR DAMPER AND SMOKE DETECTOR

SEE ELECTRICAL DRAWINGS FOR WIRING INSTALLATION



3 M06.01 ELEVATOR SHAFT RELIEF VENT
SCALE: DETAIL

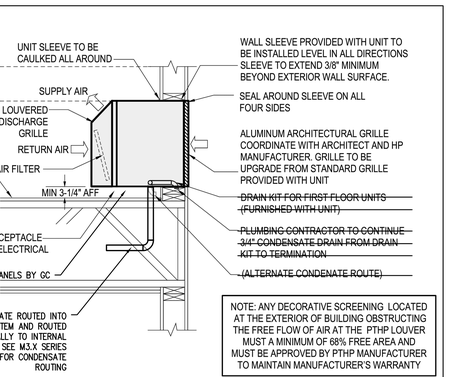


5 M06.01 SIDE WALL DWELLING UNIT VENTING
NOT TO SCALE

SEE SHEET A841:

- FOR DUCT CONFIGURATIONS
- SIZES OF PLENUM BOXES
- SHROUD DETAILS

4 M6.01 ROOF TOP UNIT W/ VIBRATION ISOLATION CURB
SCALE: DETAIL

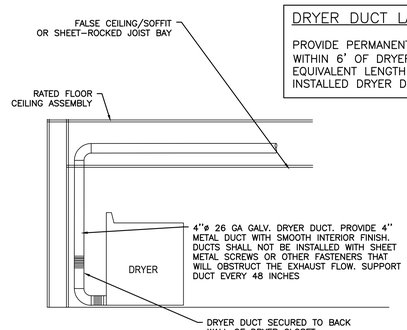


7 M06.01 PTHP AT EXTERIOR WALL
NOT TO SCALE

6 M06.01 BATHROOM EXHAUST FAN
SCALE: DETAIL

DRYER DUCT LABEL

PROVIDE PERMANENT LABEL WITHIN 6' OF DRYER STATING THE EQUIVALENT LENGTH OF THE INSTALLED DRYER DUCT



8 M06.01 TYPICAL DRYER INSTALLATION
NOT TO SCALE

2-12-20
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Project Title:
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2200 NW 2ND AVENUE SUITE 900
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Drawing Title:
MECH DETAILS

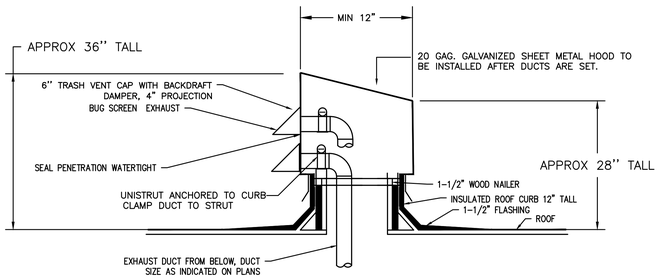
Date: 12.20.19

Drawn by: MFIA/Jacobs

Project No.: A18-20

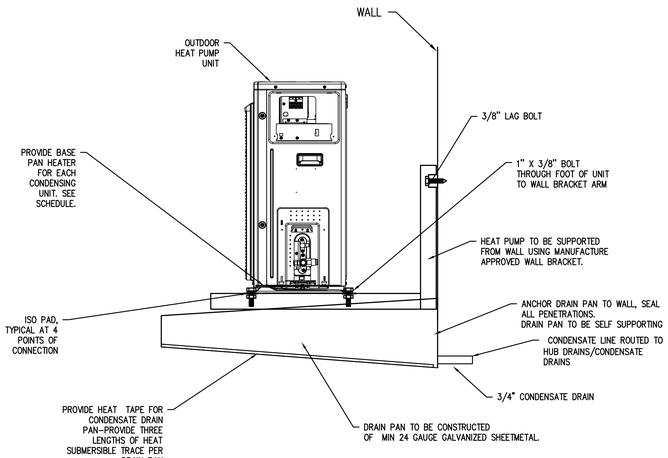
Revision:
4.29.20 - ADD #2, Permit Checksheet Response #2
ASI 07.8.17.20 - Plan Check / GMP
ASI 10 - 9.16.22 Construction Set Revisions

M06.01

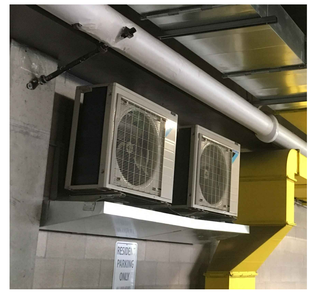


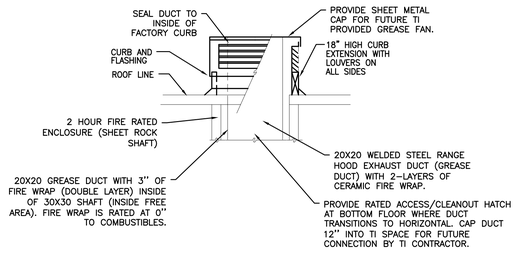
SECTION VIEW

1 M06.02 TRASH EXHAUST ROOFTOP OUTLET HOOD
SCALE: DETAIL

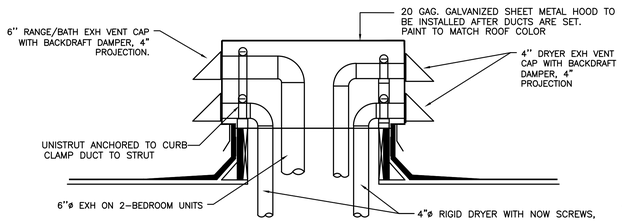


2 M06.02 HEAT PUMP WALL BRACKET
SCALE: DETAIL

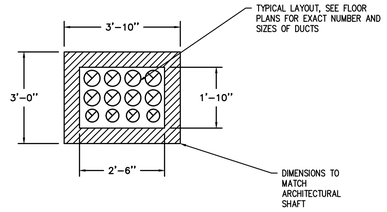




3 M06.02 GREASE DUCT/CURB TERMINATION
NOT TO SCALE



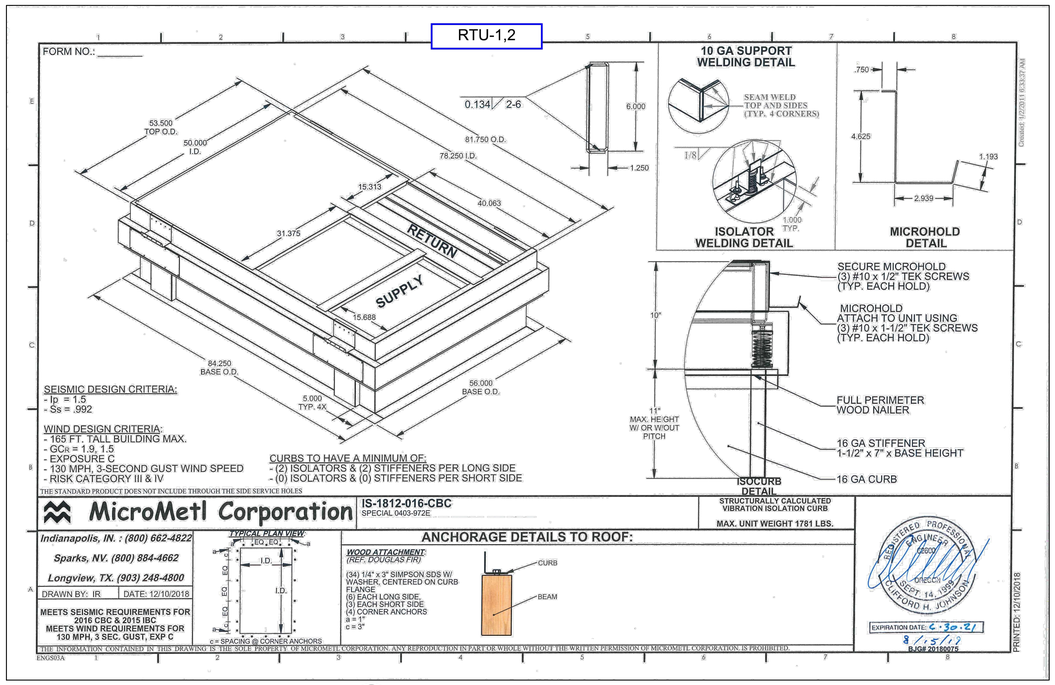
SECTION VIEW



TYPICAL PLAN VIEW (12 DUCTS)

4 M06.02 UNIT ROOFTOP OUTLET HOOD
NOT TO SCALE

RTU-1,2



5 M06.02 RTU-1,2 ROOF CURB DETAIL
NOT TO SCALE

VENTILATION AIR SCHEDULE - FC-1

ROOM NUMBER AND NAME	AREA (SQ. FT.)	OCCUPANT LOAD (#/1000 SQ. FT.)	NUMBER OF OCCUPANTS	OUTSIDE AIR REQUIREMENT (CFM/P)	OUTSIDE AIR REQUIREMENT (CFM/SQ FT.)	OUTSIDE AIR REQUIRED (CFM)		ZONE OSA (CFM)	SUPPLY AIR (CFM)	PRIMARY OSA FRACTION	RETURN AIR (CFM)	EXHAUST AIR (CFM)	Zone Ventilation Efficiency	Corrected OSA CFM	AIR SYSTEMS
	Az		**Pz**	**Rp**	**Ra**	**Vbz**	**Ez**	**Voz**	**Vpz**	**Zp**			**Evz**		
CORRIDOR 154	481	0	0	0	0.06	29	0.8	36	250	0.14	0	0	1.05	40.52	FC-1
PARCEL ROOM 159	83	0	0	0	0.12	10	0.8	12	50	0.25	0	0	0.94	13.98	FC-1
MAIL 160	184	0	0	0	0.12	22	0.8	28	100	0.28	0	0	0.92	31.00	FC-1
MANAGER 153	158	5	1	5	0.06	14	0.8	18	200	0.09	0	0	1.10	20.33	FC-1
STAFF 152	142	50	8	5	0.06	49	0.8	61	200	0.30	0	0	0.89	68.12	FC-1
TOTAL	**1048**		**9**			**124**		**155**	**800**		**0**	**0**	**0.89**	**174**	
								Vou	**Vps**				**Ev**		
CORRECTED TOTAL OUTDOOR AIR FLOW RATE										**174**	**CFM**	**Corrected OSA Fractio**		**Zs =**	**0.22**

VENTILATION AIR SCHEDULE - FC-2

ROOM NUMBER AND NAME	AREA (SQ. FT.)	OCCUPANT LOAD (#/1000 SQ. FT.)	NUMBER OF OCCUPANTS	OUTSIDE AIR REQUIREMENT (CFM/P)	OUTSIDE AIR REQUIREMENT (CFM/SQ FT.)	OUTSIDE AIR REQUIRED (CFM)		ZONE OSA (CFM)	SUPPLY AIR (CFM)	PRIMARY OSA FRACTION	RETURN AIR (CFM)	EXHAUST AIR (CFM)	Zone Ventilation Efficiency	Corrected OSA CFM	AIR SYSTEMS
	Az		**Pz**	**Rp**	**Ra**	**Vbz**	**Ez**	**Voz**	**Vpz**	**Zp**			**Evz**		
LEASING 151	790	5	4	5	0.06	67	0.8	84	600	0.14	807	0	1.14	98.07	FC-2
RECEPTION 150	961	30	29	5	0.06	203	0.8	253	600	0.42	0	0	0.86	294.87	FC-2
TOTAL	**1751**		**33**			**270**		**338**	**1200**		**807**	**0**	**0.86**	**393**	
								Vou	**Vps**				**Ev**		
CORRECTED TOTAL OUTDOOR AIR FLOW RATE										**393**	**CFM**	**Corrected OSA Fractio**		**Zs =**	**0.33**

VENTILATION AIR SCHEDULE - FC-3

ROOM NUMBER AND NAME	AREA (SQ. FT.)	OCCUPANT LOAD (#/1000 SQ. FT.)	NUMBER OF OCCUPANTS	OUTSIDE AIR REQUIREMENT (CFM/P)	OUTSIDE AIR REQUIREMENT (CFM/SQ FT.)	OUTSIDE AIR REQUIRED (CFM)		ZONE OSA (CFM)	SUPPLY AIR (CFM)	PRIMARY OSA FRACTION	RETURN AIR (CFM)	EXHAUST AIR (CFM)	Zone Ventilation Efficiency	Corrected OSA CFM	AIR SYSTEMS
	Az		**Pz**	**Rp**	**Ra**	**Vbz**	**Ez**	**Voz**	**Vpz**	**Zp**			**Evz**		
HEALTH CLUB/WEIGHT ROOM	1162	10	12	20	0.06	310	0.8	387	1200	0.32	813	0	1.00	387.15	FC-3
TOTAL	**1162**		**12**			**310**		**387**	**1200**		**813**	**0**	**1.00**	**387**	
								Vou	**Vps**				**Ev**		
CORRECTED TOTAL OUTDOOR AIR FLOW RATE										**387**	**CFM**	**Corrected OSA Fractio**		**Zs =**	**0.32**

VENTILATION AIR SCHEDULE - RTU-3

ROOM NUMBER AND NAME	AREA (SQ. FT.)	OCCUPANT LOAD (#/1000 SQ. FT.)	NUMBER OF OCCUPANTS	OUTSIDE AIR REQUIREMENT (CFM/P)	OUTSIDE AIR REQUIREMENT (CFM/SQ FT.)	OUTSIDE AIR REQUIRED (CFM)		ZONE OSA (CFM)	SUPPLY AIR (CFM)	PRIMARY OSA FRACTION	RETURN AIR (CFM)	EXHAUST AIR (CFM)	Zone Ventilation Efficiency	Corrected OSA CFM	AIR SYSTEMS
	Az		**Pz**	**Rp**	**Ra**	**Vbz**	**Ez**	**Voz**	**Vpz**	**Zp**			**Evz**		
CLUBROOM 520A	676	30	21	7.5	0.06	198	0.8	248	1200	0.21	946	0	1.01	246.06	RTU-3
GAMEROOM 520B	490	30	15	7.5	0.06	142	0.8	177	800	0.22	632	0	0.99	176.29	RTU-3
TOTAL	**1166**		**36**			**340**		**425**	**2000**		**1578**	**0**	**1.01**	**422**	
								Vou	**Vps**				**Ev**		
CORRECTED TOTAL OUTDOOR AIR FLOW RATE										**422**	**CFM**	**Corrected OSA Fractio**		**Zs =**	**0.21**

2-12-20

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Revision:
4.29.20 - A/D/ #2 Permit Checksheet Response #2
07.9.17.20 - Plan Check / GMP
10 - 9.16.22 Construction Set Revisions

Drawing Title:
MECH DETAILS - SCHEDULES

Date: 12.20.19
Drawn by: MFA/Jacobs
Project No.: A18-20

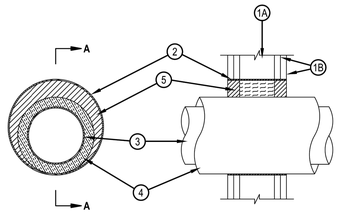
M06.02

System No. W-L-7018

WL 7018

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 1/2 Hr	FT Rating — 1-1/2 Hr
	FH Rating — 2 Hr
	FTH Rating — 1-1/2 Hr



SECTION A-A

1. Wall Assembly — The 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.
   B. Gypsum Board* — Two layers of nom 5/8 in. (16 mm) thick gypsum wallboard as specified in the individual Wall and Partition Design No. Max diam of opening is 9 in. (229 mm).
2. Metallic Sleeve — Cylindrical sleeve fabricated from min 0.016 in. (0.40 mm) thick (No. 28 gauge) galv steel sheet steel and having a min 2 in. (51 mm) lap along the longitudinal seam. Length of sleeve to be 1/8 in. (3 mm) less than thickness of wall. Sleeve to be installed by coiling the sheet metal to a diam smaller than the through opening, inserting the coil through the openings and releasing the coil to let it uncoil against the circular cutouts in the gypsum wallboard layers.

HILTI Hilti Firestop Systems

System No. W-L-7018

WL 7018

3. Steel Duct — Nom 6 in. (152 mm) diam (or smaller) No. 28 gauge (or heavier) galv steel duct to be installed concentrically within the firestop system. Duct to be rigidly supported on both sides of the wall assembly.
4. Pipe Covering* — Nom 1 in. (25 mm) thick hollow cylindrical heavy density (3.5 pcf or 56 kg/m3) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Tranverse joints secured with metal fasteners or with butt tape supplied with the product. The annular space between the insulated pipe and the steel sleeve shall be min 0 in. (point contact) to max 1 in. (25 mm).
   See Pipe Equipment Covering — Materials — (BRGU) Category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
5. Fill, Void or Cavity Material* — Sealant — Min 1-1/4 in. (32 mm) depth of sealant applied within the annulus, flush with each surface of the wall assembly. At the point contact location between insulated pipe and wall, a min 1/2 in. (13 mm) diam bead of sealant shall be applied on both surfaces of wall, lapping 1/4 in. (6 mm) beyond the periphery of the opening.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

HILTI Hilti Firestop Systems

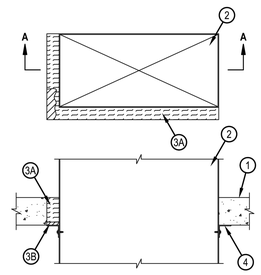
1 M06.03 6"ø UL FIRE PENETRATION DETAIL
NOT TO SCALE

System No. C-AJ-7104

CAJ 7104

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 1/4 Hr	FT Rating — 1/4 Hr
	FH Rating — 2 Hr
	FTH Rating — 1/4 Hr



SECTION A-A

1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max area of opening is 364 in2. (2348 cm2) with a max dimension of 26 in. (660 mm).
   See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Steel Duct — Max 24 in. by 12 in. (610 by 305 mm) by No. 24 gauge (or heavier) galv steel duct. One steel duct to be positioned within the firestop system. The annular space shall be min 0 in. (point of contact max two adjacent sides) to max 2 in. (51 mm). Duct to be rigidly supported on both sides of floor or wall assembly.

HILTI Hilti Firestop Systems

System No. C-AJ-7104

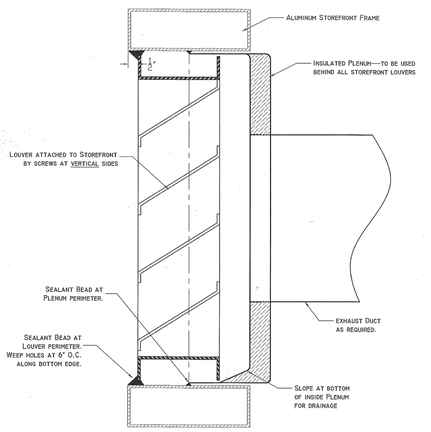
CAJ 7104

3. Firestop System — The firestop system shall consist of the following:
   A. Packing Materials — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m3) mineral wool batt insulation firmly packed into opening as a permanent form between the bare steel duct and the periphery of the opening. Packing material to be recessed from top surface of floor or both surfaces of wall as required to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Material* — Sealant — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with bottom surface of floor or with both surfaces of wall. Min 1/2 in. (13 mm) diam bead of sealant along point of contact.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant.
4. Steel Retaining Angles — Nom 2 by 2 in. (51 by 51 mm) by No. 18 gauge (or heavier) steel angles attached to steel duct on all four sides on the bottom surface of floor or both surfaces of wall. The angles shall be attached to the duct with No. 8 (or larger) steel sheet metal screws spaced max of 6 in. (152 mm).

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

HILTI Hilti Firestop Systems

2 M06.03 24X12 UL FIRE PENETRATION DETAIL – F/C
NOT TO SCALE



3 M06.03 STOREFRONT LOUVER
NOT TO SCALE

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M06.03