

GENERAL NOTES:

- (A) SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING - TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF, SEE CHART.
- (B) 12X12 RATED AND LOCKABLE ACCESS HATCH INTO DRYER SUB-DUCT SHAFT.
- (C) 14X10 TRANSFER GRILLE (FRONT SIDE ONLY) TO DRYER CLOSET FOR DRYER MAKE UP AIR. (GRILLE TO BE 75% FREE AREA)-UNLESS LOUVERED DOORS ARE PROVIDED.
- (D) 4" DRYER EXHAUST ROUTED TO SUB DUCT SYSTEM, SEE (2) (4) (M6.01) (M6.02)
- (E) DWELLING UNIT EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR, MECHANICAL TO PROVIDE VENTING FROM FAN TO SUB DUCT SHAFT, SEE (2) (2) (EF) (M6.01) (M6.02) (7)
- (F) SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE (6) FOR GRILLE INSTALLATION, AND SEE (1) (M6.02) F/S INSTALLATION, AND CONTROLS (M6.01)
- (G) REFRIGERANT LINES ROUTED TO ROOF, SEE (1) FOR ROOF TOP PENETRATION. (M6.01)
- (H) 96X18 INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS -COORDINATE WITH SOFFIT/STORE FRONT.
- (I) TYPICAL REFRIGERANT ROOF PENETRATIONS, SEE (1) (M6.01)
- (J) X" OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2-POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES.
- (K) 12X12 2-HOUR RATED CONCEALED FLANGE ACCESS PANEL.

SHAFT DUCT SIZES

FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 22	2400	NA	NA	RTU-1
8TH	24 X 22	2400	NA	NA	RTU-1
7TH	24 X 20	2057	NA	NA	RTU-1
6TH	24 X 20	1714	NA	NA	RTU-1
5TH	24 X 18	1371	NA	NA	RTU-1
4TH	24 X 18	1028	NA	NA	RTU-1
3RD	24 X 14	685	NA	NA	RTU-1
2ND	24 X 14	342	NA	NA	RTU-1

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

- SYSTEM COMMISSIONING:** IECC SECTION C408
- CONTRACTOR RESPONSIBILITIES**
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL THE REQUIREMENTS OF IECC SECTION 408.
 - THE CONTRACTOR SHALL HIRE AND UTILIZE AN APPROVED CX AGENT
 - THE CX AGENT SHALL:
 1. PREPARE A CX PLAN
 2. OVERSEE THE TAB MEASUREMENTS
 3. CONDUCT THE PR-FUNCTIONAL & FUNCTIONAL TESTS
 4. PREPARE THE PRELIMINARY CX REPORT
 5. REVIEW THE TAB REPORT
 6. REVIEW THE O&M'S
 7. PREPARE THE SYSTEMS MANUALS
 - SYSTEMS REQUIRED TO BE COMMISSIONED
 1. SERVICE WATER HEATERS
 2. MIXING VALVES & RECIRC SYSTEMS
 3. ROOFTOP UNIT - HALLWAY VENTILATION
 4. SPLIT SYSTEM FAN COILS
 5. PTHP'S (SAMPLE SELECTION).
 6. DWELLING UNIT EXHAUST FANS (SAMPLE SELECTION).
 7. LIGHTING CONTROL SYSTEMS
 8. OCCUPANCY SENSORS
 9. EMERGENCY POWER SYSTEMS (GENERATOR)
 10. THERMOSTAT OPERATIONS AND SET POINTS
 11. FIRE PIT 7 BBO TIMERS AND AUTO-SHUT OFF
 12. FIRE PUMP AND DOMESTIC WATER BOOSTER PUMP.

HOLST

123 NE 3RD AVE.
 SUITE 310
 PORTLAND, OR 97232
 HOLSTARCH.COM

600 W FRONT STREET

BOISE, IDAHO

JOB NO. 18-044.00

Consulting Engineers
 2007 S.E. Ash St.
 Portland, OR 97214
 PHN: (503) 234-0548
 FAX: (503) 234-0677
 INC. WWW.MPIA-ENG.COM
 CONTACT: Mark Denyer

6-18-2019

PROFESSIONAL ENGINEER
 Mark Denyer
 18025
 STATE OF IDAHO
 MARK R. DENYER
 Expires May 31, 2021

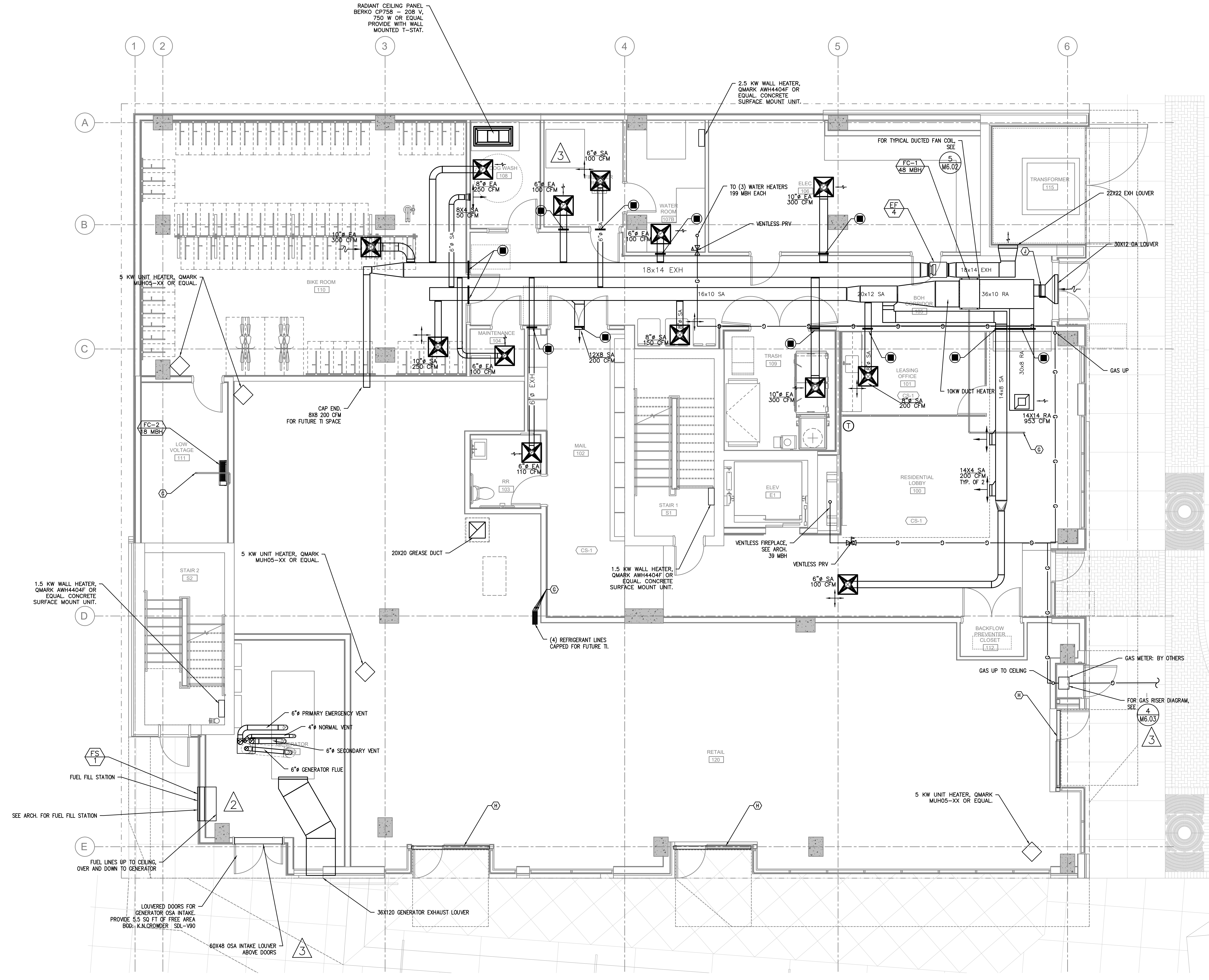
CONSTRUCTION SET

02.11.2020

Issue:	date:
50% SD	01.25.2019
100% SD	03.04.2019
100% DD	04.26.2019
20% CD	05.14.2019
PERMIT SET	08.08.2019
GNP SET	10.04.2019
PERMIT REV 1	10.18.2019
ADD 01	10.18.2019
PERMIT REV 2	11.22.2019
ADD 02	11.22.2019
PERMIT REV 3	02.04.2020
ADD 03	02.04.2020
PERMIT REV 4	02.11.2020
CONSTRUCTION SET	02.11.2020

revision:	date:
1 REV 01	10.04.2019
2 REV 02	10.18.2019
3 REV 03	11.22.2019

sheet:
M1.01



1 LEVEL 1 MECH PLAN
 M1.01 SCALE: 1/4" = 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) 12X12 RATED AND LOCKABLE ACCESS HATCH INTO DRYER SUB-DUCT SHAFT.
- (C) 14X10 TRANSFER GRILLE (FRONT SIDE ONLY) TO DRYER CLOSET FOR DRYER MAKE UP AIR. (GRILLE TO BE 75% FREE AREA)-UNLESS LOUVERED DOORS ARE PROVIDED.
- (D) 4" DRYER EXHAUST ROUTED TO SUB DUCT SYSTEM, SEE (2) (4) (M6.01) (M6.02)
- (E) DWELLING UNIT EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR, MECHANICAL TO PROVIDE VENTING FROM FAN TO SUB DUCT SHAFT., SEE (2) (2) (EF) (M6.01) (M6.02) (1)
- (F) SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE (6) (M6.02) FOR GRILLE INSTALLATION, AND SEE (1) (M6.01) FOR TYPICAL F/S INSTALLATION, AND CONTROLS.
- (G) REFRIGERANT LINES ROUTED TO ROOF, SEE (1) (M6.01) FOR ROOF TOP PENETRATION.
- (H) 96X18 INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS -COORDINATE WITH SOFFIT/STORE FRONT.
- (I) TYPICAL REFRIGERANT ROOF PENETRATIONS, SEE (1) (M6.01)
- (J) X"Ø OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2-POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES.
- (K) 12X12 2-HOUR RATED CONCEALED FLANGE ACCESS PANEL.

SHAFT DUCT SIZES

FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 22	2400	NA	NA	RTU-1
8TH	24 X 22	2400	NA	NA	RTU-1
7TH	24 X 20	2057	NA	NA	RTU-1
6TH	24 X 20	1714	NA	NA	RTU-1
5TH	24 X 18	1371	NA	NA	RTU-1
4TH	24 X 18	1028	NA	NA	RTU-1
3RD	24 X 14	685	NA	NA	RTU-1
2ND	24 X 14	342	NA	NA	RTU-1

VENTILATION CALCULATIONS:

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

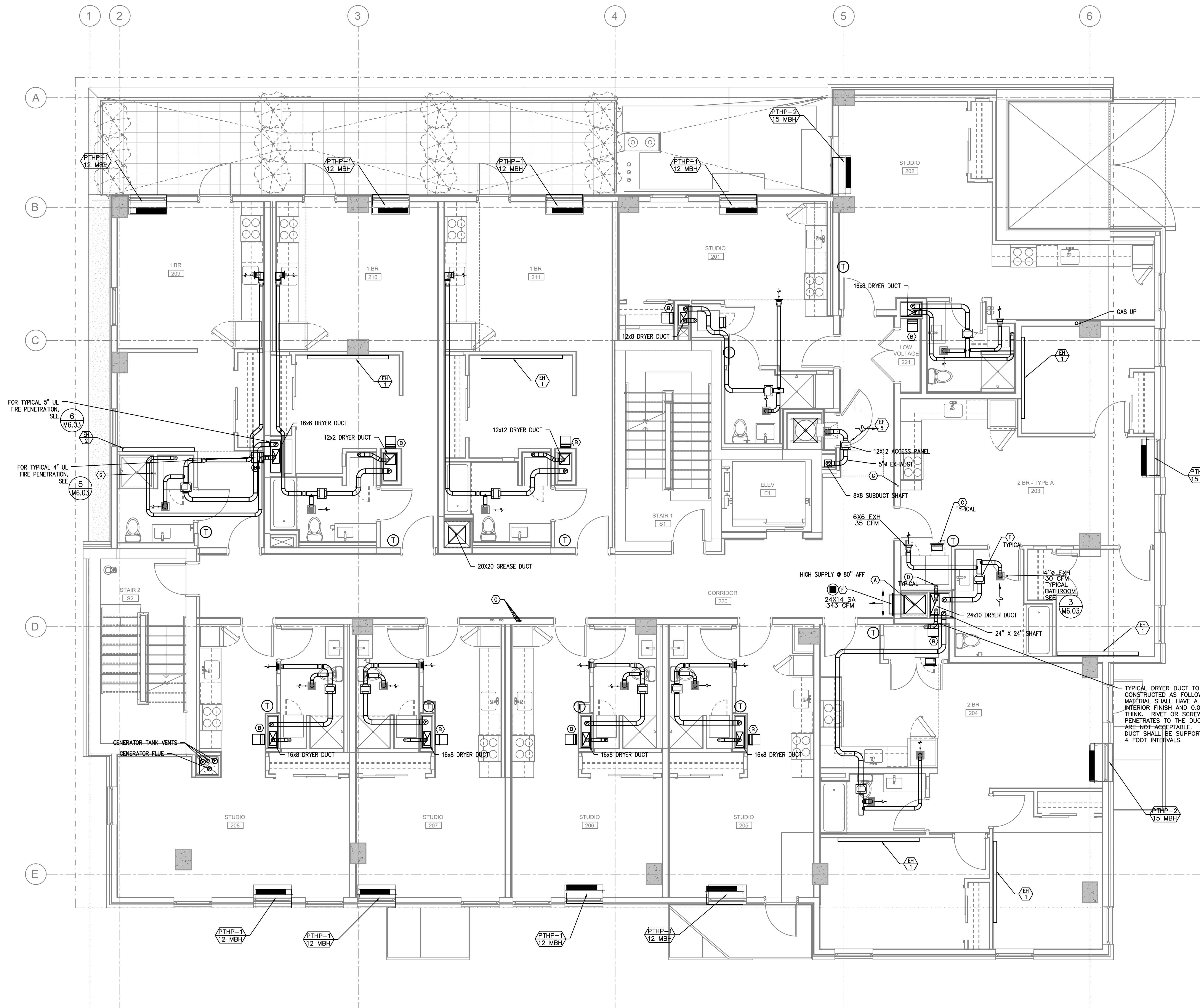
COMMON SPACES AND HALLWAYS ARE VENTILATED BY PACKAGED ROOF TOP UNITS SIZED TO EXCEED THE MINIMUM 0.06 CFM/SQ FT REQUIREMENT
SEE VENTILATION SCHEDULES FOR OTHER UNITS

SYSTEM COMMISSIONING: IECC SECTION C408

- CONTRACTOR RESPONSIBILITIES
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL THE REQUIREMENTS OF IECC SECTION 408.
 - THE CONTRACTOR SHALL HIRE AND UTILIZE AN APPROVED CX AGENT
 - THE CX AGENT SHALL
 1. PREPARE A CX PLAN
 2. OVERSEE THE TAB MEASUREMENTS
 3. CONDUCT THE PR-FUNCTIONAL & FUNCTIONAL TESTS
 4. PREPARE THE PRELIMINARY CX REPORT
 5. REVIEW THE TAB REPORT
 6. REVIEW THE O&M'S
 7. PREPARE THE SYSTEMS MANUALS
 - SYSTEMS REQUIRED TO BE COMMISSIONED
 1. SERVICE WATER HEATERS
 2. MIXING VALVES & RECIRC SYSTEMS
 3. ROOFTOP UNIT - HALLWAY VENTILATION
 4. SPLIT SYSTEM FAN COILS
 5. PTHP'S (SAMPLE SELECTION).
 6. DWELLING UNIT EXHAUST FANS (SAMPLE SELECTION).
 7. LIGHTING CONTROL SYSTEMS
 8. OCCUPANCY SENSORS
 9. EMERGENCY POWER SYSTEMS (GENERATOR)
 10. THERMOSTAT OPERATIONS AND SET POINTS
 11. FIRE PIT 7 BBQ TIMERS AND AUTO-SHUT OFF
 12. FIRE PUMP AND DOMESTIC WATER BOOSTER PUMP.

CONSTRUCTION SET

revision:	date:
1 REV 01	10.04.2019
2 REV 02	11.18.2019
3 REV 03	10.22.2019



1 LEVEL 2 MECH PLAN
M1.02 SCALE: 1/4" = 1'-0"

LEVEL 02 MECH PLAN

sheet: M1.02

GENERAL NOTES:

- (A) SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING - TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF, SEE CHART.
- (B) 12X12 RATED AND LOCKABLE ACCESS HATCH INTO DRYER SUB-DUCT SHAFT.
- (C) 14X10 TRANSFER GRILLE (FRONT SIDE ONLY) TO DRYER CLOSET FOR DRYER MAKE UP AIR. (GRILLE TO BE 75% FREE AREA)-UNLESS LOUVERED DOORS ARE PROVIDED.
- (D) 4" DRYER EXHAUST ROUTED TO SUB DUCT SYSTEM, SEE (2) (M6.01) (4) (M6.02)
- (E) DWELLING UNIT EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR, MECHANICAL TO PROVIDE VENTING FROM FAN TO SUB DUCT SHAFT., SEE (2) (M6.01) (2) (M6.02) (EF) (1)
- (F) SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE (6) (M6.02) FOR GRILLE INSTALLATION, AND SEE (1) (M6.02) FOR TYPICAL F/S INSTALLATION, AND CONTROLS.
- (G) REFRIGERANT LINES ROUTED TO ROOF, SEE (1) (M6.01) FOR ROOF TOP PENETRATION.
- (H) 96X18 INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS -COORDINATE WITH SOFFIT/STORE FRONT.
- (I) TYPICAL REFRIGERANT ROOF PENETRATIONS, SEE (1) (M6.01)
- (J) X"Ø OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2-POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES.
- (K) 12X12 2-HOUR RATED CONCEALED FLANGE ACCESS PANEL.

SHAFT DUCT SIZES

FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 22	2400	NA	NA	RTU-1
8TH	24 X 22	2400	NA	NA	RTU-1
7TH	24 X 20	2057	NA	NA	RTU-1
6TH	24 X 20	1714	NA	NA	RTU-1
5TH	24 X 18	1371	NA	NA	RTU-1
4TH	24 X 18	1028	NA	NA	RTU-1
3RD	24 X 14	685	NA	NA	RTU-1
2ND	24 X 14	342	NA	NA	RTU-1

VENTILATION CALCULATIONS:

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

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

SYSTEM COMMISSIONING: IECC SECTION C408

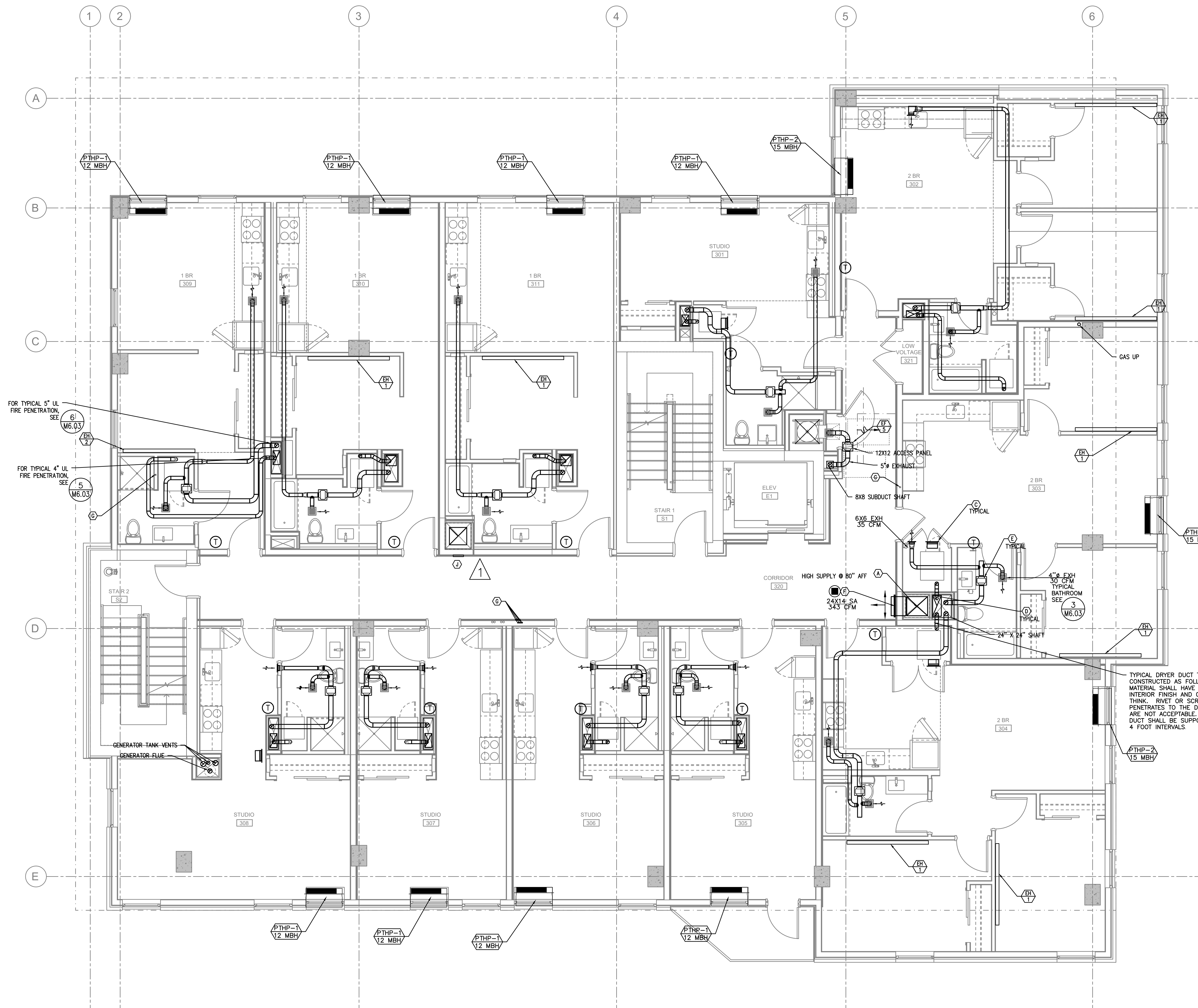
CONTRACTOR RESPONSIBILITIES
• THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL THE REQUIREMENTS OF IECC SECTION 408.
• THE CONTRACTOR SHALL HIRE AND UTILIZE AN APPROVED CX AGENT
• THE CX AGENT SHALL

1. PREPARE A CX PLAN
 2. OVERSEE THE TAB MEASUREMENTS
 3. CONDUCT THE PR-FUNCTIONAL & FUNCTIONAL TESTS
 4. PREPARE THE PRELIMINARY CX REPORT
 5. REVIEW THE TAB REPORT
 6. REVIEW THE O&M'S
 7. PREPARE THE SYSTEMS MANUALS
- SYSTEMS REQUIRED TO BE COMMISSIONED
1. SERVICE WATER HEATERS
 2. MIXING VALVES & RECIRC SYSTEMS
 3. ROOFTOP UNIT - HALLWAY VENTILATION
 4. SPLIT SYSTEM FAN COILS
 5. PTHP'S (SAMPLE SELECTION).
 6. DWELLING UNIT EXHAUST FANS (SAMPLE SELECTION).
 7. LIGHTING CONTROL SYSTEMS
 8. OCCUPANCY SENSORS
 9. EMERGENCY POWER SYSTEMS (GENERATOR)
 10. THERMOSTAT OPERATIONS AND SET POINTS
 11. FIRE PIT 7 BBQ TIMERS AND AUTO-SHUT OFF
 12. FIRE PUMP AND DOMESTIC WATER BOOSTER PUMP.

CONSTRUCTION SET

02.11.2020

revision:	date:
1 REV 01	10.04.2019
2 REV 02	10.18.2019
3 REV 03	11.22.2019



1 LEVEL 3 MECH PLAN
M1.03 SCALE: 1/4"=1'-0"

LEVEL 03 MECH PLAN

sheet: M1.03

GENERAL NOTES:

- (A) SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING - TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF, SEE CHART.
- (B) 12X12 RATED AND LOCKABLE ACCESS HATCH INTO DRYER SUB-DUCT SHAFT.
- (C) 14X10 TRANSFER GRILLE (FRONT SIDE ONLY) TO DRYER CLOSET FOR DRYER MAKE UP AIR. (GRILLE TO BE 75% FREE AREA)-UNLESS LOUVERED DOORS ARE PROVIDED.
- (D) 4" DRYER EXHAUST ROUTED TO SUB DUCT SYSTEM, SEE (2) (4) (M6.01) (M6.02)
- (E) DWELLING UNIT EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR, MECHANICAL TO PROVIDE VENTING FROM FAN TO SUB DUCT SHAFT., SEE (2) (2) (EF 1) (M6.01) (M6.02)
- (F) SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE (6) (M6.02) FOR GRILLE INSTALLATION, AND SEE (1) (M6.07) FOR TYPICAL F/S INSTALLATION, AND CONTROLS.
- (G) REFRIGERANT LINES ROUTED TO ROOF, SEE (1) (M6.01) FOR ROOF TOP PENETRATION.
- (H) 96X18 INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE COFFED AT INTERIOR FOR FUTURE CONNECTIONS -COORDINATE WITH SOFFIT/STORE FRONT.
- (I) TYPICAL REFRIGERANT ROOF PENETRATIONS, SEE (1) (M6.01)
- (J) X"Ø OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2-POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES.
- (K) 12X12 2-HOUR RATED CONCEALED FLANGE ACCESS PANEL.

SHAFT DUCT SIZES

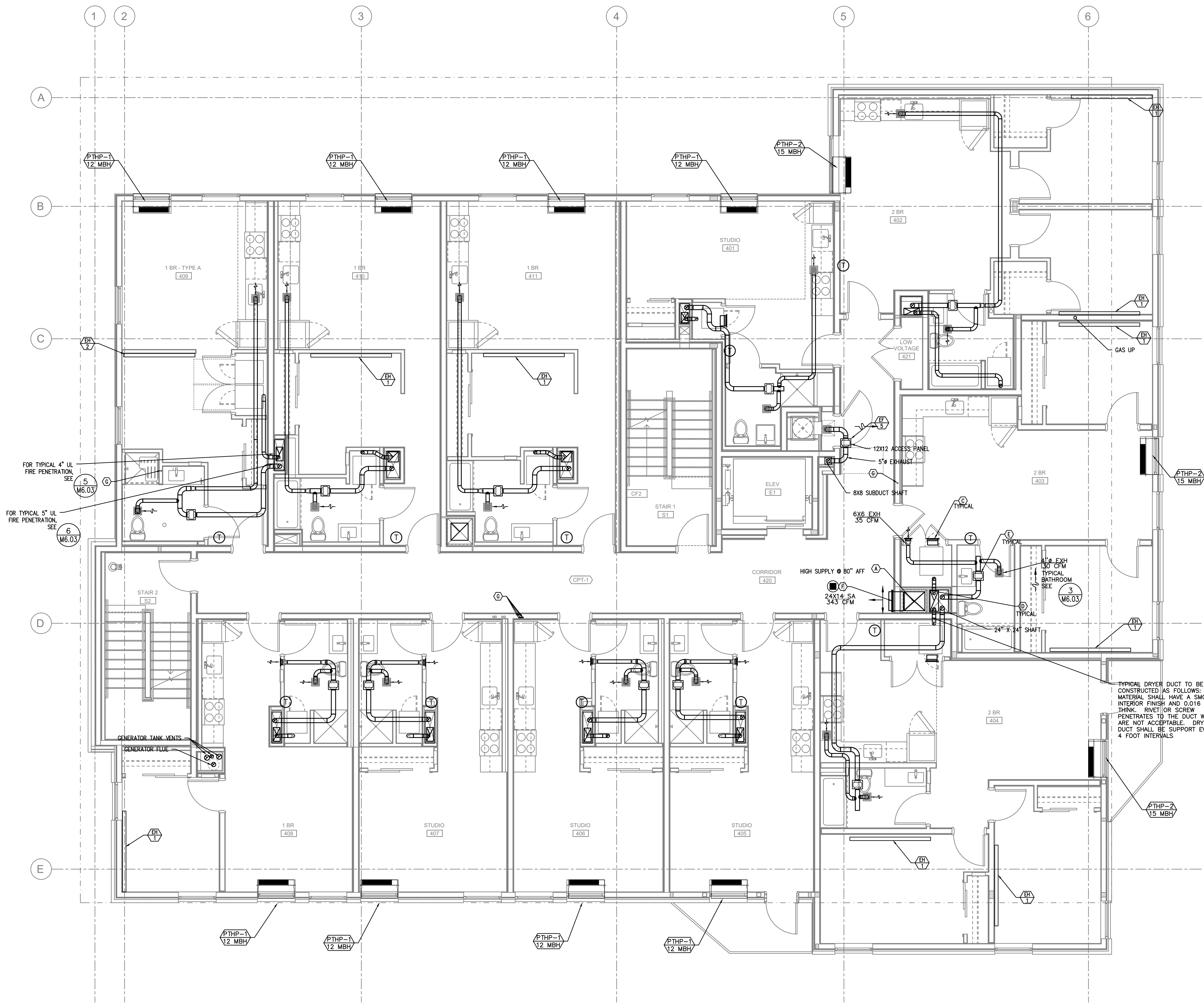
FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 22	2400	NA	NA	RTU-1
8TH	24 X 22	2400	NA	NA	RTU-1
7TH	24 X 20	2057	NA	NA	RTU-1
6TH	24 X 20	1714	NA	NA	RTU-1
5TH	24 X 18	1371	NA	NA	RTU-1
4TH	24 X 18	1028	NA	NA	RTU-1
3RD	24 X 14	685	NA	NA	RTU-1
2ND	24 X 14	342	NA	NA	RTU-1

VENTILATION CALCULATIONS:

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

SYSTEM COMMISSIONING: IECC SECTION C408

- CONTRACTOR RESPONSIBILITIES
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL THE REQUIREMENTS OF IECC SECTION 408.
 - THE CONTRACTOR SHALL HIRE AND UTILIZE AN APPROVED CX AGENT
 - THE CX AGENT SHALL
 1. PREPARE A CX PLAN
 2. OVERSEE THE TAB MEASUREMENTS
 3. CONDUCT THE PR-FUNCTIONAL & FUNCTIONAL TESTS
 4. PREPARE THE PRELIMINARY CX REPORT
 5. REVIEW THE TAB REPORT
 6. REVIEW THE O&M'S
 7. PREPARE THE SYSTEMS MANUALS
- SYSTEMS REQUIRED TO BE COMMISSIONED
1. SERVICE WATER HEATERS
 2. MIXING VALVES & RECIRC SYSTEMS
 3. ROOFTOP UNIT - HALLWAY VENTILATION
 4. SPLIT SYSTEM FAN COILS
 5. PTHP'S (SAMPLE SELECTION).
 6. DWELLING UNIT EXHAUST FANS (SAMPLE SELECTION).
 7. LIGHTING CONTROL SYSTEMS
 8. OCCUPANCY SENSORS
 9. EMERGENCY POWER SYSTEMS (GENERATOR)
 10. THERMOSTAT OPERATIONS AND SET POINTS
 11. FIRE PIT 7 BBQ TIMERS AND AUTO-SHUT OFF.
 12. FIRE PUMP AND DOMESTIC WATER BOOSTER PUMP.



1 LEVEL 04 MECH PLAN
M1.04 SCALE: 1/4"=1'-0"

title:
LEVEL 04 MECH PLAN

sheet:
M1.04

GENERAL NOTES:

- (A) SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING - TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF. SEE CHART.
- (B) 12X12 RATED AND LOCKABLE ACCESS HATCH INTO DRYER SUB-DUCT SHAFT.
- (C) 14X10 TRANSFER GRILLE (FRONT SIDE ONLY) TO DRYER CLOSET FOR DRYER MAKE UP AIR. (GRILLE TO BE 75% FREE AREA)-UNLESS LOUVERED DOORS ARE PROVIDED.
- (D) 4" DRYER EXHAUST ROUTED TO SUB DUCT SYSTEM. SEE (M6.01) (M6.02)
- (E) DWELLING UNIT EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR, MECHANICAL TO PROVIDE VENTING FROM FAN TO SUB DUCT SHAFT. SEE (M6.01) (M6.02) (EF 1)
- (F) SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS. SEE (M6.02) FOR GRILLE INSTALLATION, AND SEE (M6.07) FOR TYPICAL. (M6.02) (M6.07)
- (G) REFRIGERANT LINES ROUTED TO ROOF. SEE (M6.01) FOR ROOF TOP PENETRATION. (M6.01)
- (H) 96X18 INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS -COORDINATE WITH SOFFIT/STORE FRONT. (M6.01)
- (I) TYPICAL REFRIGERANT ROOF PENETRATIONS. SEE (M6.01)
- (J) X"9 OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2-POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES.
- (K) 12X12 2-HOUR RATED CONCEALED FLANGE ACCESS PANEL.

SHAFT DUCT SIZES

FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 22	2400	NA	NA	RTU-1
8TH	24 X 22	2400	NA	NA	RTU-1
7TH	24 X 20	2057	NA	NA	RTU-1
6TH	24 X 20	1714	NA	NA	RTU-1
5TH	24 X 18	1371	NA	NA	RTU-1
4TH	24 X 18	1028	NA	NA	RTU-1
3RD	24 X 14	685	NA	NA	RTU-1
2ND	24 X 14	342	NA	NA	RTU-1

VENTILATION CALCULATIONS:

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

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

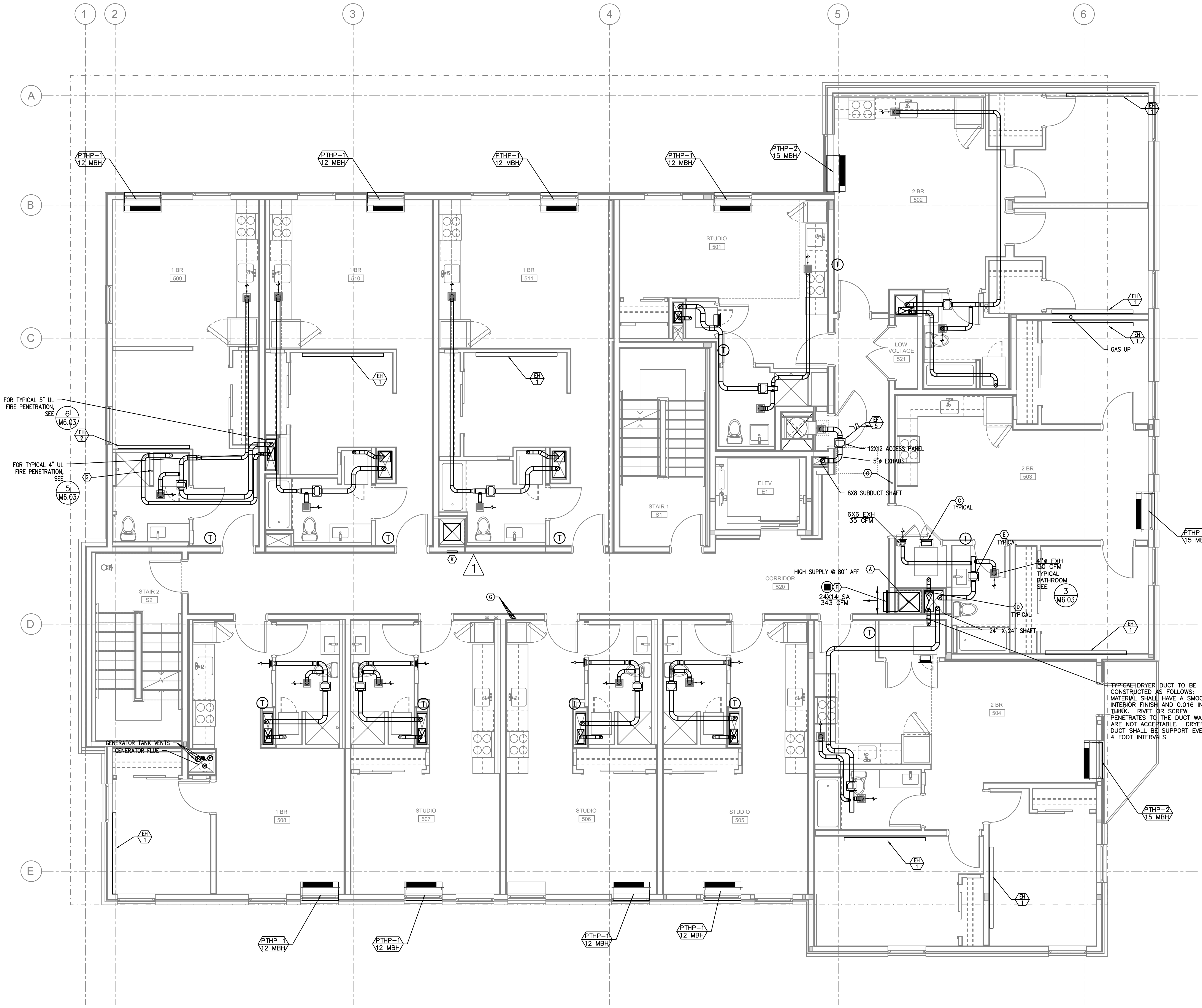
SYSTEM COMMISSIONING: IECC SECTION C408

CONTRACTOR RESPONSIBILITIES
 • THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL THE REQUIREMENTS OF IECC SECTION 408.
 • THE CONTRACTOR SHALL HIRE AND UTILIZE AN APPROVED CX AGENT
 • THE CX AGENT SHALL

1. PREPARE A CX PLAN
 2. OVERSEE THE TAB MEASUREMENTS
 3. CONDUCT THE PRE-FUNCTIONAL & FUNCTIONAL TESTS
 4. PREPARE THE PRELIMINARY CX REPORT
 5. REVIEW THE TAB REPORT
 6. REVIEW THE O&M'S
 7. PREPARE THE SYSTEMS MANUALS
- SYSTEMS REQUIRED TO BE COMMISSIONED
1. SERVICE WATER HEATERS
 2. MIXING VALVES & RECIRC SYSTEMS
 3. ROOFTOP UNIT - HALLWAY VENTILATION
 4. SPLIT SYSTEM FAN COILS
 5. PTHP'S (SAMPLE SELECTION).
 6. DWELLING UNIT EXHAUST FANS (SAMPLE SELECTION).
 7. LIGHTING CONTROL SYSTEMS
 8. OCCUPANCY SENSORS
 9. EMERGENCY POWER SYSTEMS (GENERATOR)
 10. THERMOSTAT OPERATIONS AND SET POINTS
 11. FIRE PIT 7 E80 TIMERS AND AUTO-SHUT OFF
 12. FIRE PUMP AND DOMESTIC WATER BOOSTER PUMP.

CONSTRUCTION SET

revision:	date:
1 REV 01	10.04.2019
2 REV 02	10.18.2019
3 REV 03	11.22.2019



1 LEVEL 5 MECH PLAN
 M1.05 SCALE: 1/4"=1'-0"

title:
LEVEL 05 MECH PLAN

sheet:
M1.05

GENERAL NOTES:

- (A) SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING - TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF. SEE CHART.
- (B) 12X12 RATED AND LOCKABLE ACCESS HATCH INTO DRYER SUB-DUCT SHAFT.
- (C) 14X10 TRANSFER GRILLE (FRONT SIDE ONLY) TO DRYER CLOSET FOR DRYER MAKE UP AIR. (GRILLE TO BE 75% FREE AREA)-UNLESS LOUVERED DOORS ARE PROVIDED.
- (D) 4" DRYER EXHAUST ROUTED TO SUB DUCT SYSTEM. SEE (2) M6.01 (4) M6.02
- (E) DWELLING UNIT EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR, MECHANICAL TO PROVIDE VENTING FROM FAN TO SUB DUCT SHAFT.. SEE (2) M6.01 (2) M6.02 (EF) 1
- (F) SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS. SEE (6) M6.02 FOR GRILLE INSTALLATION, AND SEE (1) M6.02 F/S INSTALLATION, AND CONTROLS.
- (G) REFRIGERANT LINES ROUTED TO ROOF. SEE (1) M6.01 FOR ROOF TOP PENETRATION.
- (H) 96X18 INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS -COORDINATE WITH SOFFIT/STORE FRONT.
- (I) TYPICAL REFRIGERANT ROOF PENETRATIONS. SEE (1) M6.01
- (J) X"® OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2-POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES.
- (K) 12X12 2-HOUR RATED CONCEALED FLANGE ACCESS PANEL.

SHAFT DUCT SIZES

FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 22	2400	NA	NA	RTU-1
8TH	24 X 22	2400	NA	NA	RTU-1
7TH	24 X 20	2057	NA	NA	RTU-1
6TH	24 X 20	1714	NA	NA	RTU-1
5TH	24 X 18	1371	NA	NA	RTU-1
4TH	24 X 18	1028	NA	NA	RTU-1
3RD	24 X 14	685	NA	NA	RTU-1
2ND	24 X 14	342	NA	NA </td <td>RTU-1</td>	RTU-1

VENTILATION CALCULATIONS:

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

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

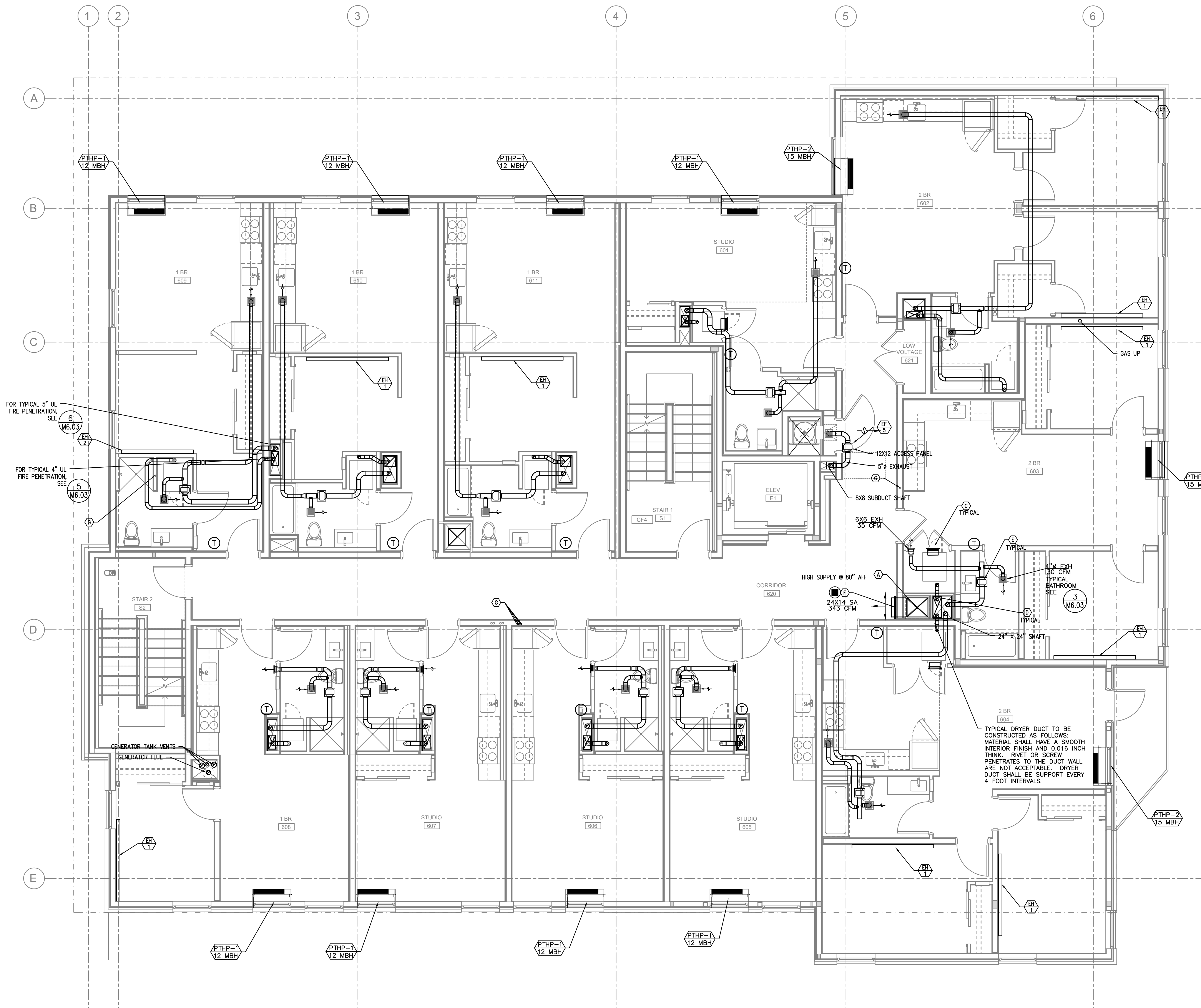
SYSTEM COMMISSIONING: IECC SECTION C408

- CONTRACTOR RESPONSIBILITIES
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL THE REQUIREMENTS OF IECC SECTION 408.
 - THE CONTRACTOR SHALL HIRE AND UTILIZE AN APPROVED CX AGENT
 - THE CX AGENT SHALL:
 1. PREPARE A CX PLAN
 2. OVERSEE THE TAB MEASUREMENTS
 3. CONDUCT THE PR-FUNCTIONAL & FUNCTIONAL TESTS
 4. PREPARE THE PRELIMINARY CX REPORT
 5. REVIEW THE TAB REPORT
 6. REVIEW THE O&M'S
 7. PREPARE THE SYSTEMS MANUALS

- SYSTEMS REQUIRED TO BE COMMISSIONED
1. SERVICE WATER HEATERS
 2. MIXING VALVES & RECIRC SYSTEMS
 3. ROOFTOP UNIT - HALLWAY VENTILATION
 4. SPLIT SYSTEM FAN COILS
 5. PTHP'S (SAMPLE SELECTION).
 6. DWELLING UNIT EXHAUST FANS (SAMPLE SELECTION).
 7. LIGHTING CONTROL SYSTEMS
 8. OCCUPANCY SENSORS
 9. EMERGENCY POWER SYSTEMS (GENERATOR)
 10. THERMOSTAT OPERATIONS AND SET POINTS
 11. FIRE PIT 7 BBO TIMERS AND AUTO-SHUT OFF
 12. FIRE PUMP AND DOMESTIC WATER BOOSTER PUMP.

CONSTRUCTION SET

revision:	date:
1 REV 01	10.04.2019
2 REV 02	10.18.2019
3 REV 03	11.22.2019



1 LEVEL 06 MECH PLAN
M1.06 SCALE: 1/4"=1'-0"

LEVEL 06 MECH PLAN

sheet: M1.06

GENERAL NOTES:

- (A) SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING - TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF, SEE CHART.
- (B) 12X12 RATED AND LOCKABLE ACCESS HATCH INTO DRYER SUB-DUCT SHAFT.
- (C) 14X10 TRANSFER GRILLE (FRONT SIDE ONLY) TO DRYER CLOSET FOR DRYER MAKE UP AIR. (GRILLE TO BE 75% FREE AREA)-UNLESS LOUVERED DOORS ARE PROVIDED.
- (D) 4" DRYER EXHAUST ROUTED TO SUB DUCT SYSTEM. SEE (2) (M6.01) (4) (M6.02)
- (E) DWELLING UNIT EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR, MECHANICAL TO PROVIDE VENTING FROM FAN TO SUB DUCT SHAFT., SEE (2) (M6.01) (2) (M6.02) (EF) (1)
- (F) SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE (6) (M6.02) FOR GRILLE INSTALLATION, AND SEE (1) (M6.02) FOR TYPICAL F/S INSTALLATION, AND CONTROLS.
- (G) REFRIGERANT LINES ROUTED TO ROOF, SEE (1) (M6.01) FOR ROOF TOP PENETRATION.
- (H) 96X18 INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS -COORDINATE WITH SOFFIT/STORE FRONT.
- (I) TYPICAL REFRIGERANT ROOF PENETRATIONS, SEE (1) (M6.01)
- (J) X" OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2-POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES.
- (K) 12X12 2-HOUR RATED CONCEALED FLANGE ACCESS PANEL.

SHAFT DUCT SIZES

FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 22	2400	NA	NA	RTU-1
8TH	24 X 22	2400	NA	NA	RTU-1
7TH	24 X 20	2057	NA	NA	RTU-1
6TH	24 X 20	1714	NA	NA	RTU-1
5TH	24 X 18	1371	NA	NA	RTU-1
4TH	24 X 18	1028	NA	NA	RTU-1
3RD	24 X 14	685	NA	NA	RTU-1
2ND	24 X 14	342	NA	NA	RTU-1

VENTILATION CALCULATIONS:

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

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

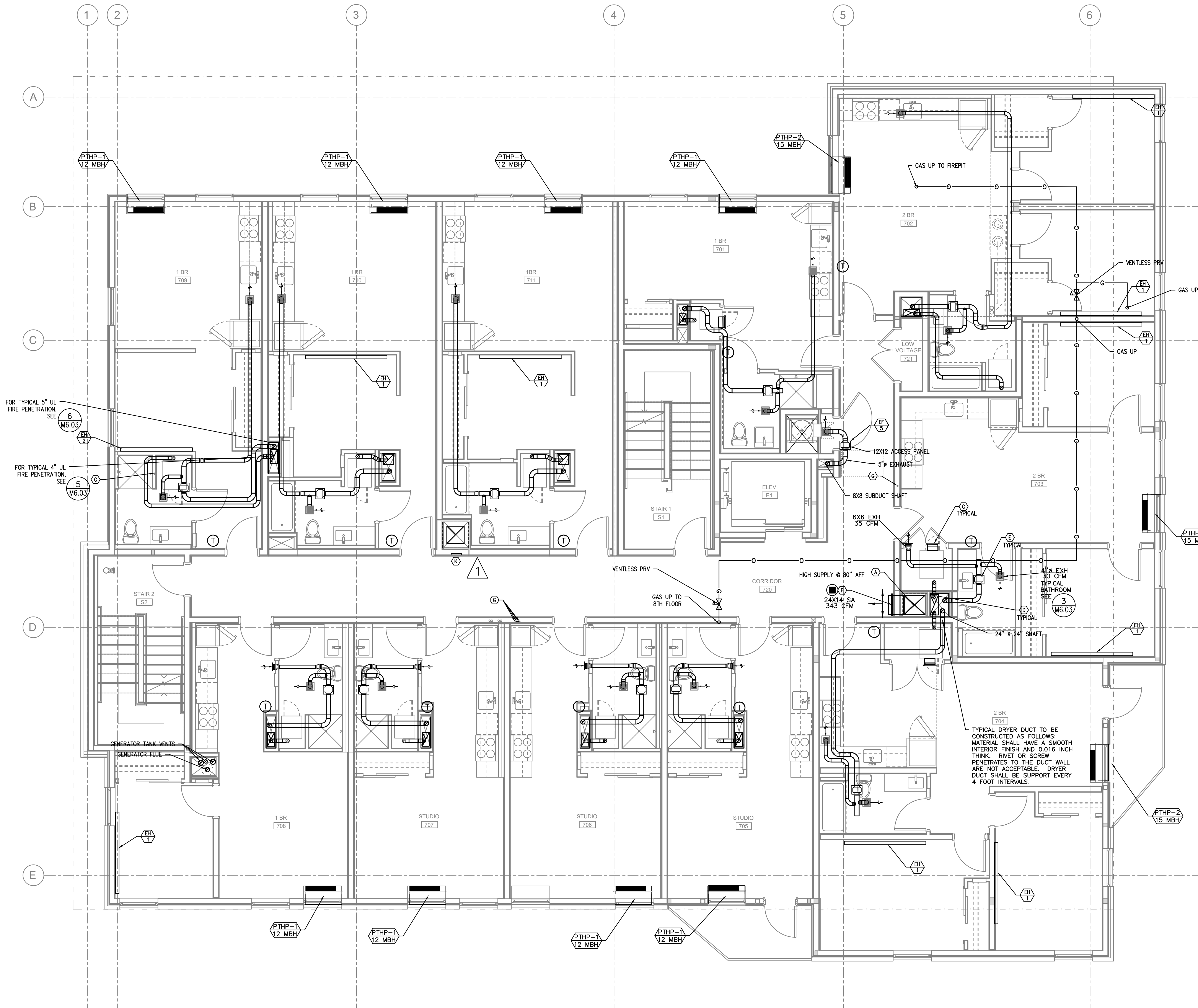
SYSTEM COMMISSIONING: IECC SECTION C408

- CONTRACTOR RESPONSIBILITIES
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL THE REQUIREMENTS OF IECC SECTION 408.
- THE CONTRACTOR SHALL HIRE AND UTILIZE AN APPROVED CX AGENT
- THE CX AGENT SHALL
 1. PREPARE A CX PLAN
 2. OVERSEE THE TAB MEASUREMENTS
 3. CONDUCT THE PR-FUNCTIONAL & FUNCTIONAL TESTS
 4. PREPARE THE PRELIMINARY CX REPORT
 5. REVIEW THE TAB REPORT
 6. REVIEW THE O&M'S
 7. PREPARE THE SYSTEMS MANUALS
- SYSTEMS REQUIRED TO BE COMMISSIONED
 1. SERVICE WATER HEATERS
 2. MIXING VALVES & RECIRC SYSTEMS
 3. ROOFTOP UNIT - HALLWAY VENTILATION
 4. SPLIT SYSTEM FAN COILS
 5. PTHP'S (SAMPLE SELECTION).
 6. DWELLING UNIT EXHAUST FANS (SAMPLE SELECTION).
 7. LIGHTING CONTROL SYSTEMS
 8. OCCUPANCY SENSORS
 9. EMERGENCY POWER SYSTEMS (GENERATOR)
 10. THERMOSTAT OPERATIONS AND SET POINTS
 11. FIRE PIT 7 BBQ TIMERS AND AUTO-SHUT OFF
 12. FIRE PUMP AND DOMESTIC WATER BOOSTER PUMP.

CONSTRUCTION SET

02.11.2020

revision:	date:
1 REV 01	10.04.2019
2 REV 02	10.18.2019
3 REV 03	11.22.2019



1 LEVEL 7 MECH PLAN
SCALE: 1/4"=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) 12X12 RATED AND LOCKABLE ACCESS HATCH INTO DRYER SUB-DUCT SHAFT.
- (C) 14X10 TRANSFER GRILLE (FRONT SIDE ONLY) TO DRYER CLOSET FOR DRYER MAKE UP AIR. (GRILLE TO BE 75% FREE AREA)-UNLESS LOUVERED DOORS ARE PROVIDED.
- (D) 4" DRYER EXHAUST ROUTED TO SUB DUCT SYSTEM, SEE (2) M6.01 (4) M6.02
- (E) DWELLING UNIT EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR, MECHANICAL TO PROVIDE VENTING FROM FAN TO SUB DUCT SHAFT., SEE (2) M6.01 (2) M6.02 (EF 1)
- (F) SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE (6) M6.07 (1) M6.02 FOR TYPICAL (6) M6.07 FOR GRILLE INSTALLATION, AND SEE (1) M6.02 FOR F/S INSTALLATION, AND CONTROLS.
- (G) REFRIGERANT LINES ROUTED TO ROOF, SEE (1) M6.01 FOR ROOF TOP PENETRATION.
- (H) 96X18 INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS -COORDINATE WITH SOFFIT/STORE FRONT.
- (I) TYPICAL REFRIGERANT ROOF PENETRATIONS, SEE (1) M6.01
- (J) X"Ø OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2-POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES.
- (K) 12X12 2-HOUR RATED CONCEALED FLANGE ACCESS PANEL.

SHAFT DUCT SIZES

FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 22	2400	NA	NA	RTU-1
8TH	24 X 22	2400	NA	NA	RTU-1
7TH	24 X 20	2057	NA	NA	RTU-1
6TH	24 X 20	1714	NA	NA	RTU-1
5TH	24 X 18	1371	NA	NA	RTU-1
4TH	24 X 18	1028	NA	NA	RTU-1
3RD	24 X 14	685	NA	NA	RTU-1
2ND	24 X 14	342	NA	NA	RTU-1

VENTILATION CALCULATIONS:

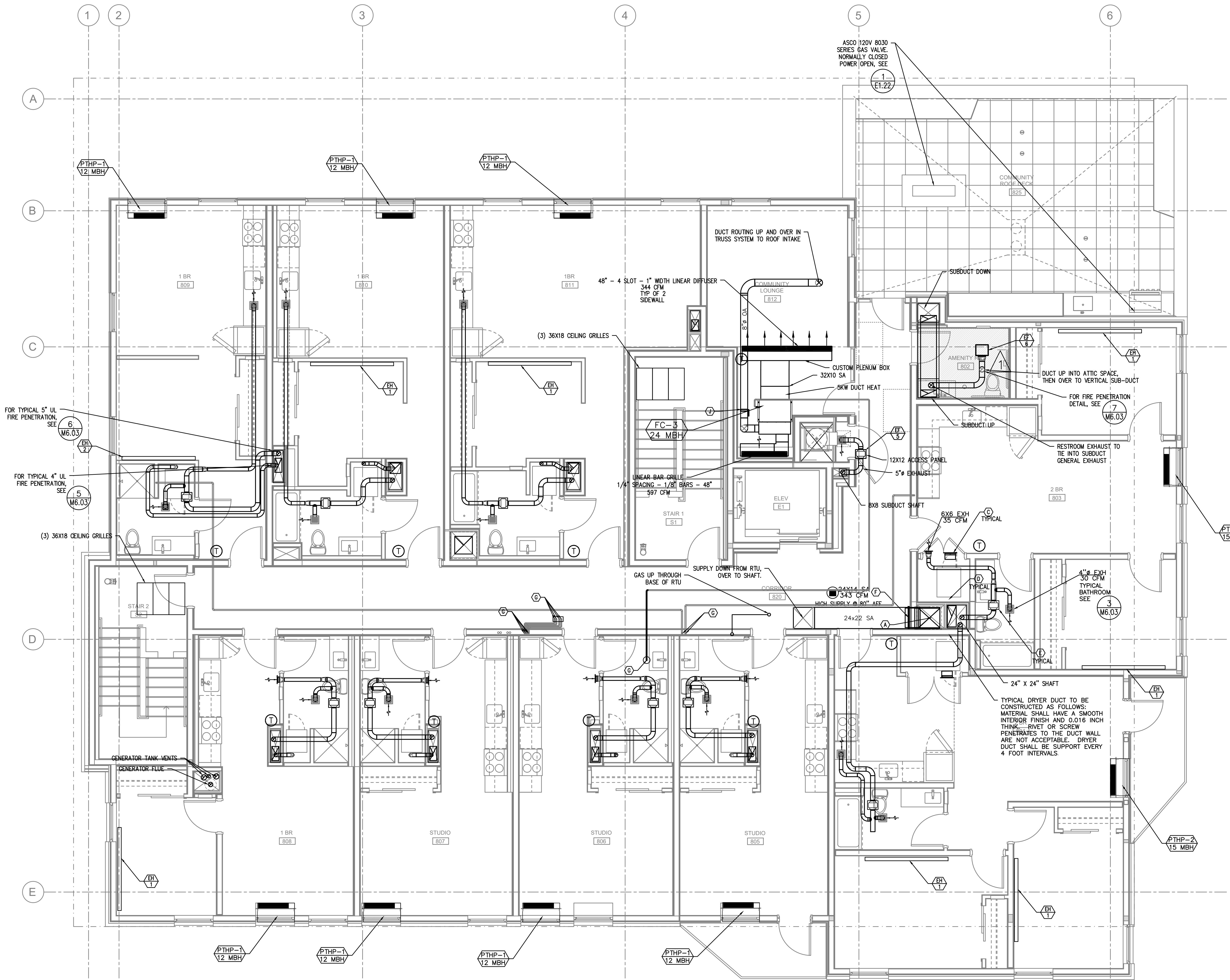
ALL DWELLING UNITS ARE VENTILATED BY MECHANICAL VENTILATION, BATHROOM EXHAUST FANS RUN CONTINUOUSLY (SIZED PER ASHRAE 62.2) AND MAKE UP AIR/VENTILATION IS PROVIDED BY PTHP'S SEE DRAWINGS.
COMMON SPACES AND HALLWAYS ARE VENTILATED BY PACKAGED ROOF TOP UNITS SIZED TO EXCEED THE MINIMUM 0.06 CFM/SQ FT REQUIREMENT
SEE VENTILATION SCHEDULES FOR OTHER UNITS

SYSTEM COMMISSIONING: IECC SECTION C408

- CONTRACTOR RESPONSIBILITIES
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL THE REQUIREMENTS OF IECC SECTION 408.
 - THE CONTRACTOR SHALL HIRE AND UTILIZE AN APPROVED CX AGENT
 - THE CX AGENT SHALL:
 1. PREPARE A CX PLAN
 2. OVERSEE THE TAB MEASUREMENTS
 3. CONDUCT THE PR-FUNCTIONAL & FUNCTIONAL TESTS
 4. PREPARE THE PRELIMINARY CX REPORT
 5. REVIEW THE TAB REPORT
 6. REVIEW THE OAM'S MANUALS
 7. PREPARE THE SYSTEMS MANUALS
 - SYSTEMS REQUIRED TO BE COMMISSIONED
 1. SERVICE WATER HEATERS
 2. MIXING VALVES & RECIRC SYSTEMS
 3. ROOFTOP UNIT - HALLWAY VENTILATION
 4. SPLIT SYSTEM FAN COILS
 5. PTHP'S (SAMPLE SELECTION).
 6. DWELLING UNIT EXHAUST FANS (SAMPLE SELECTION).
 7. LIGHTING CONTROL SYSTEMS
 8. OCCUPANCY SENSORS
 9. EMERGENCY POWER SYSTEMS (GENERATOR)
 10. THERMOSTAT OPERATIONS AND SET POINTS
 11. FIRE PIT 7 BBQ TIMERS AND AUTO-SHUT OFF
 12. FIRE PUMP AND DOMESTIC WATER BOOSTER PUMP.

CONSTRUCTION SET

revision:	date:
1 REV 01	10.04.2019
2 REV 02	10.18.2019
3 REV 03	11.22.2019



1 LEVEL 8 MECH PLAN
M1.08 SCALE: 1/4"=1'-0"

LEVEL 08 MECH PLAN

sheet: M1.08

GENERAL NOTES:

- (A) SUPPLY DUCT FROM ROOF TO 2ND FLOOR CEILING - TRANSITION TO SMALLER DUCT SIZES AFTER SUPPLY BRANCH TAKE OFF, SEE CHART.
- (B) 12X12 RATED AND LOCKABLE ACCESS HATCH INTO DRYER SUB-DUCT SHAFT.
- (C) 14X10 TRANSFER GRILLE (FRONT SIDE ONLY) TO DRYER CLOSET FOR DRYER MAKE UP AIR. (GRILLE TO BE 75% FREE AREA)-UNLESS LOUVERED DOORS ARE PROVIDED.
- (D) 4" DRYER EXHAUST ROUTED TO SUB DUCT SYSTEM, SEE (2) M6.01 (4) M6.02
- (E) DWELLING UNIT EXHAUST FAN TO BE SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR, MECHANICAL TO PROVIDE VENTING FROM FAN TO SUB DUCT SHAFT., SEE (2) M6.01 (2) M6.02 (EF 1)
- (F) SUPPLY AIR OR RETURN GRILLE, SIZED FOR BOTH FREE AREA AND FOR ACTUATOR ACCESS, SEE (6) M6.07 FOR GRILLE INSTALLATION, AND SEE FOR TYPICAL (1) M6.02 F/S INSTALLATION, AND CONTROLS.
- (G) REFRIGERANT LINES ROUTED TO ROOF, SEE (1) M6.01 FOR ROOF TOP PENETRATION.
- (H) 96X18 INTAKE AND EXHAUST GRILLES FOR FUTURE TI SPACES, LOUVERS TO BE CAPPED AT INTERIOR FOR FUTURE CONNECTIONS -COORDINATE WITH SOFFIT/STORE FRONT.
- (I) TYPICAL REFRIGERANT ROOF PENETRATIONS, SEE (1) M6.01
- (J) X" OUTSIDE AIR TO FAN COIL, PROVIDE WITH 2-POSITION DAMPER TO OPEN WHENEVER FAN COIL OPERATES.
- (K) 12X12 2-HOUR RATED CONCEALED FLANGE ACCESS PANEL.

SHAFT DUCT SIZES

FLOOR	SUPPLY AIR	CFM	RETURN AIR	CFM	UNIT
ATTIC	24 X 22	2400	NA	NA	RTU-1
8TH	24 X 22	2400	NA	NA	RTU-1
7TH	24 X 20	2057	NA	NA	RTU-1
6TH	24 X 20	1714	NA	NA	RTU-1
5TH	24 X 18	1371	NA	NA	RTU-1
4TH	24 X 18	1028	NA	NA	RTU-1
3RD	24 X 14	685	NA	NA	RTU-1
2ND	24 X 14	342	NA	NA	RTU-1

VENTILATION CALCULATIONS:

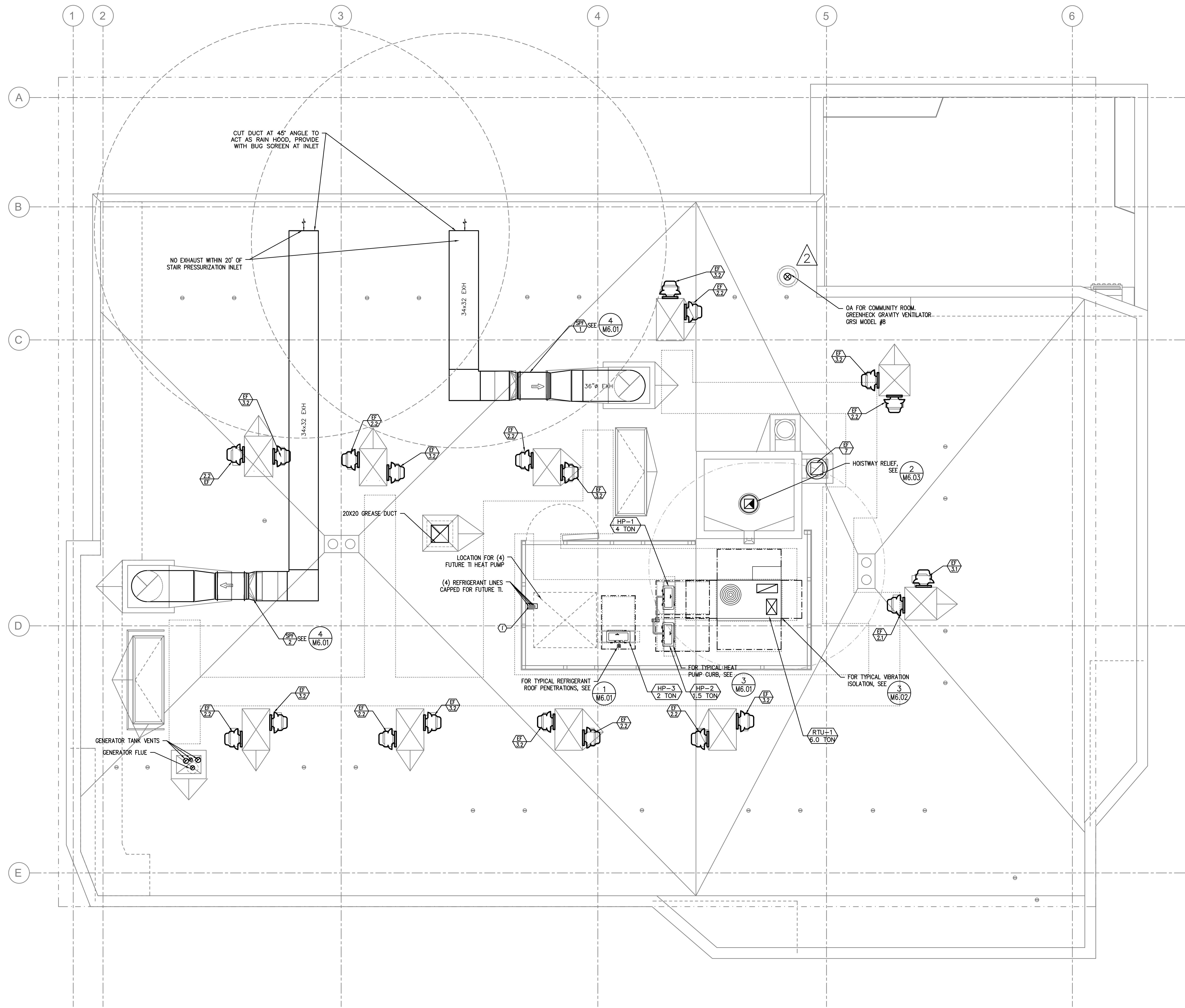
ALL DWELLING UNITS ARE VENTILATED BY MECHANICAL VENTILATION, BATHROOM EXHAUST FANS RUN CONTINUOUSLY (SIZED PER ASHRAE 62.2) AND MAKE UP AIR/VENTILATION IS PROVIDED BY PTHP'S SEE DRAWINGS.
COMMON SPACES AND HALLWAYS ARE VENTILATED BY PACKAGED ROOF TOP UNITS SIZED TO EXCEED THE MINIMUM 0.06 CFM/SQ FT REQUIREMENT
SEE VENTILATION SCHEDULES FOR OTHER UNITS

SYSTEM COMMISSIONING: IECC SECTION C408

- CONTRACTOR RESPONSIBILITIES
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING ALL THE REQUIREMENTS OF IECC SECTION 408.
 - THE CONTRACTOR SHALL HIRE AND UTILIZE AN APPROVED CX AGENT
 - THE CX AGENT SHALL
 1. PREPARE A CX PLAN
 2. OVERSEE THE TAB MEASUREMENTS
 3. CONDUCT THE PR-FUNCTIONAL & FUNCTIONAL TESTS
 4. PREPARE THE PRELIMINARY CX REPORT
 5. REVIEW THE TAB REPORT
 6. REVIEW THE D&M'S
 7. PREPARE THE SYSTEMS MANUALS
 - SYSTEMS REQUIRED TO BE COMMISSIONED
 1. SERVICE WATER HEATERS
 2. MIXING VALVES & RECIRC SYSTEMS
 3. ROOFTOP UNIT - HALLWAY VENTILATION
 4. SPLIT SYSTEM FAN COILS
 5. PTHP'S (SAMPLE SELECTION).
 6. DWELLING UNIT EXHAUST FANS (SAMPLE SELECTION).
 7. LIGHTING CONTROL SYSTEMS
 8. OCCUPANCY SENSORS
 9. EMERGENCY POWER SYSTEMS (GENERATOR)
 10. THERMOSTAT OPERATIONS AND SET POINTS
 11. FIRE PIT 7 BBO TIMERS AND AUTO-SHUT OFF
 12. FIRE PUMP AND DOMESTIC WATER BOOSTER PUMP.

CONSTRUCTION SET

revision:	date:
1 REV 01	10.04.2019
2 REV 02	10.18.2019
3 REV 03	11.22.2019



1 ROOF MECH PLAN
M1.09 SCALE: 1/4"=1'-0"

ROOF MECH PLAN

M1.09



CONSTRUCTION SET

Table with columns: Issue, Date, Description. Includes dates from 02.11.2020 to 02.11.2020 and descriptions like 'Issue', '50% SD', '100% SD', etc.

Table with columns: Revision, Date. Includes revisions 1, 2, 3 with dates from 1 REV 01 to 3 REV 03.

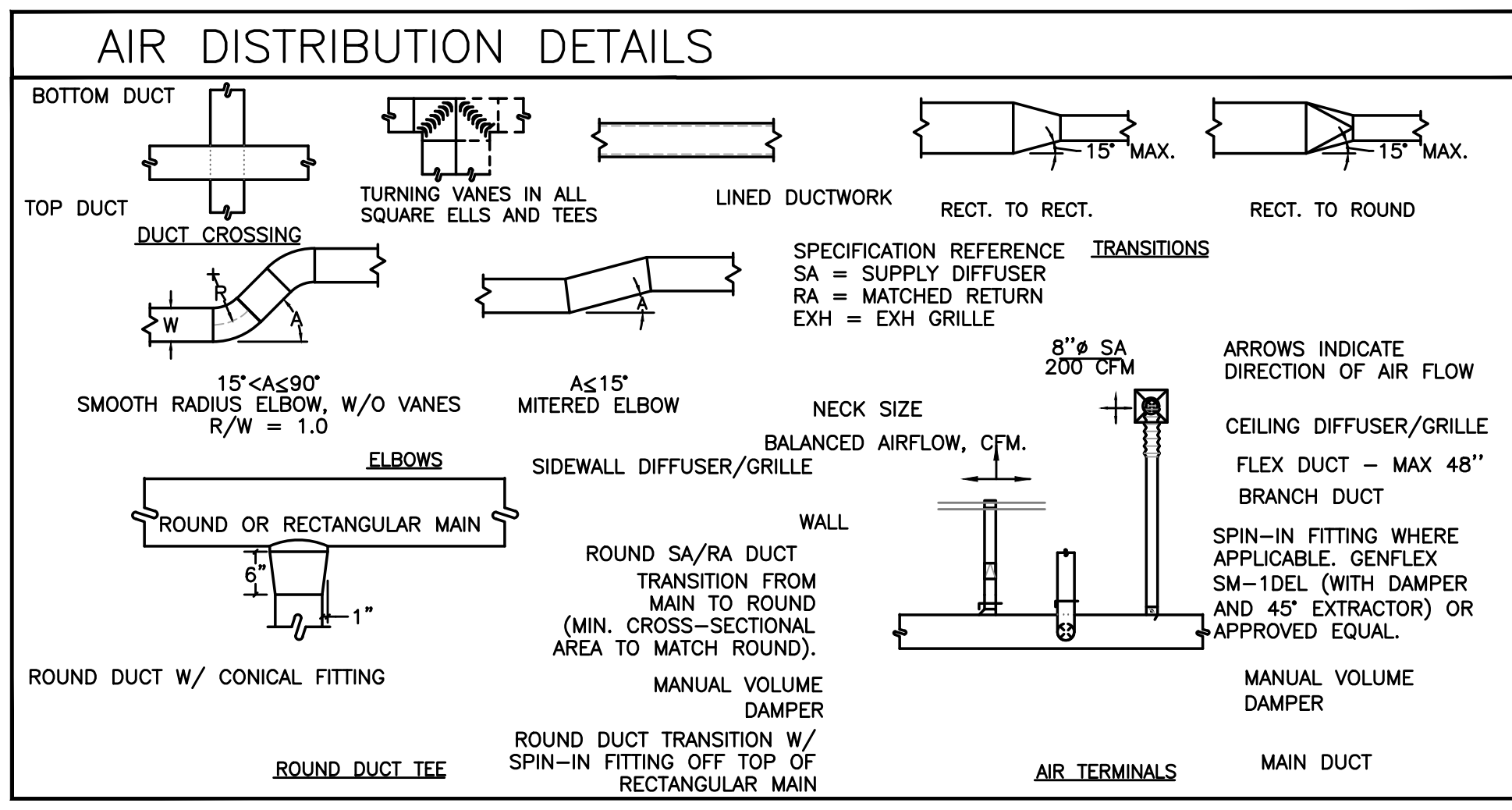
title:

MECHANICAL SCHEDULES

sheet:

M6.00

MECHANICAL LEGEND. Table listing various mechanical symbols and their corresponding descriptions, including supply air diffusers, return air grilles, valves, dampers, and piping.



ROOFTOP HVAC UNITS

Table for Rooftop HVAC Units with columns for Mark Number, System, Type, Discharge, Fan Section, Heating, Cooling, Design Weight, Smoke Detector, Spring Isolation Roof Curb, Convenience Outlet, Voltage/Phase, MCA/MOCP, and Basis of Design.

ELEC HEATERS

Table for Electric Heaters with columns for Mark Number, Location, Style, KW, Power (Volts/Phase), and Basis of Design.

INDOOR UNITS - *

Table for Indoor Units with columns for Mark Number, System, Type, Efficiency, Nominal Cooling Capacity, Heating Capacity, Total Supply CFM, OSA CFM, External SP, Volts/Phase, MCA/MOP, Weight, Basis of Design, and Outdoor Unit.

* - 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.

OUTDOOR UNITS - SPLIT SYSTEM HP

Table for Outdoor Units - Split System HP with columns for Mark Number, System, Type, Normal Cooling Capacity, Normal Heating Capacity, Efficiency SEER/EER, Refrigerant, Refrigerant Charge, Max Operating Temps, Max Piping Length, Max Piping Height, Wheel-Phase, MCA/MOP, Compressor, Weight, and Basis of Design.

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

PACKAGED TERMINAL HEAT PUMP

Table for Packaged Terminal Heat Pump with columns for Mark Number, System, Type, Nominal Cooling Capacity, Heating Capacity, Electric Heating Capacity, CFM (Hi/Low), Min OSA, LVG Air Temp, Remote Thermostat, Efficiency (EER), Efficiency (COP), Architectural Grille, Design Wt., Elect (Volts/Phase/HTZ), Total Amps, MCA/MOP, Refrigerant, Refrigerant Charge, Condensate Drain Kit, and Basis of Design.

1 - 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.

EXHAUST FANS

Table for Exhaust Fans with columns for Mark Number, Type, System, CFM, Total SP, RPM, Tip Speed, Motor Watts, Controlled By, Interlock With, Fan Speed Controller, Wheel Type, Back Draft Damper, Isolation, Design Weight, Max. Sones, Max Amps, Power, and Basis of Design.

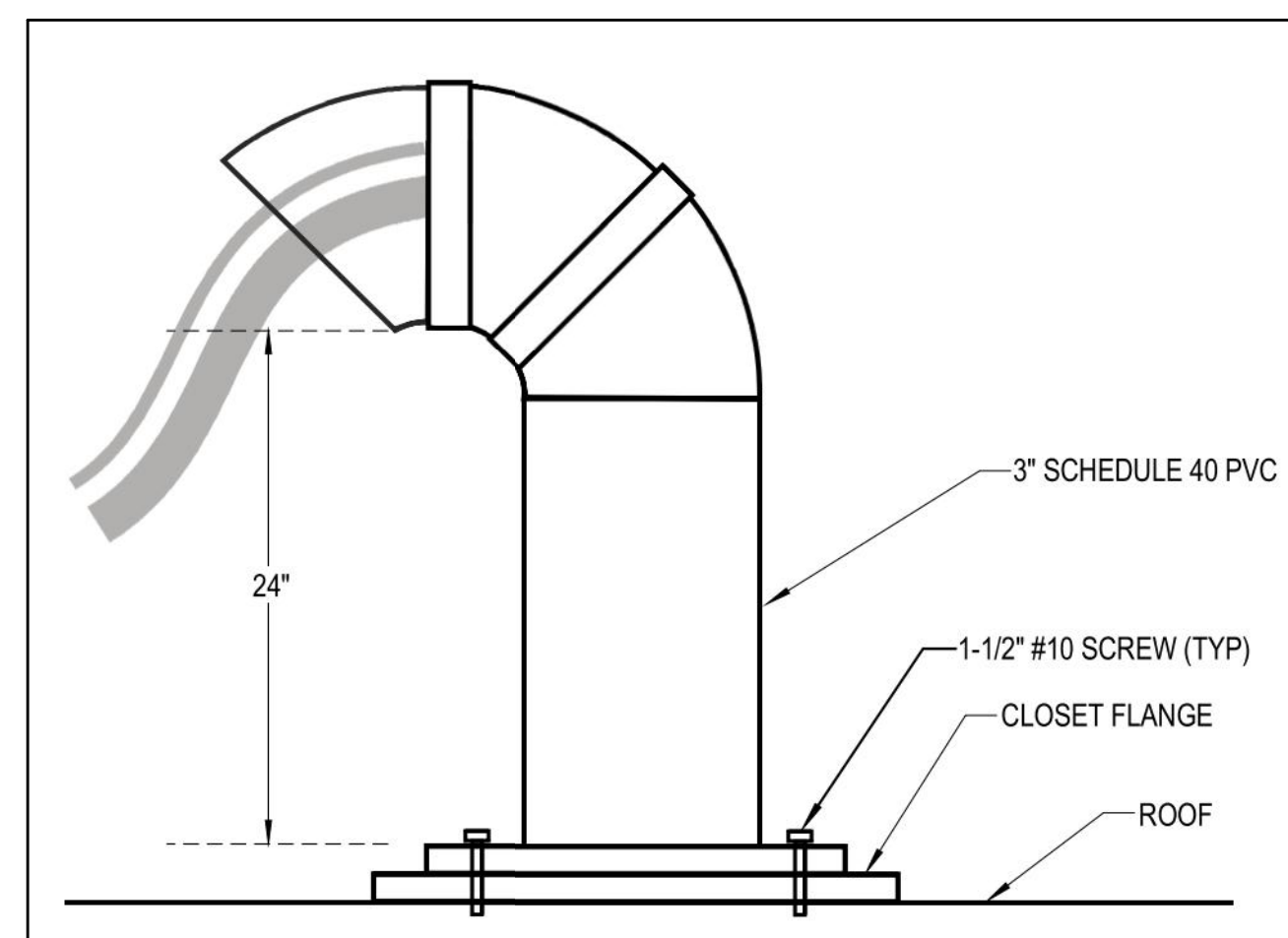
* - FAN TO RUN AT LOW SPEED CONTINUOUSLY, AND INCREASE TO HIGH SPEED UPON ACTIVATION OF THE MOTION SENSOR. ** - FANS TO INCLUDE LIGHTS, MOTION SENSOR AND MULTI SPEED CONTROL WITH TIME DELAY.

VENTILATION AIR SCHEDULE - FC-1

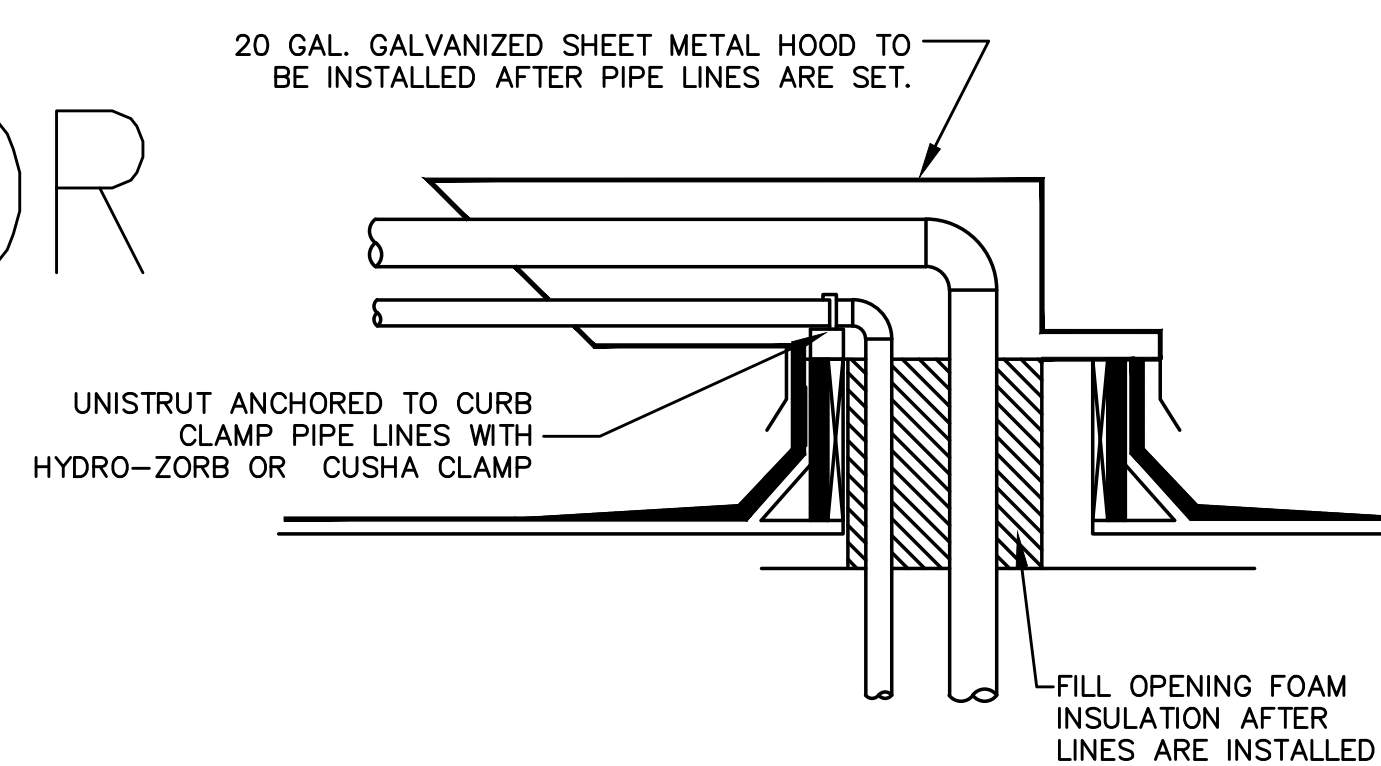
Table for Ventilation Air Schedule - FC-1 showing room details, occupant load, outside air requirements, and corrected total outdoor air flow rate.

VENTILATION AIR SCHEDULE - FC-3

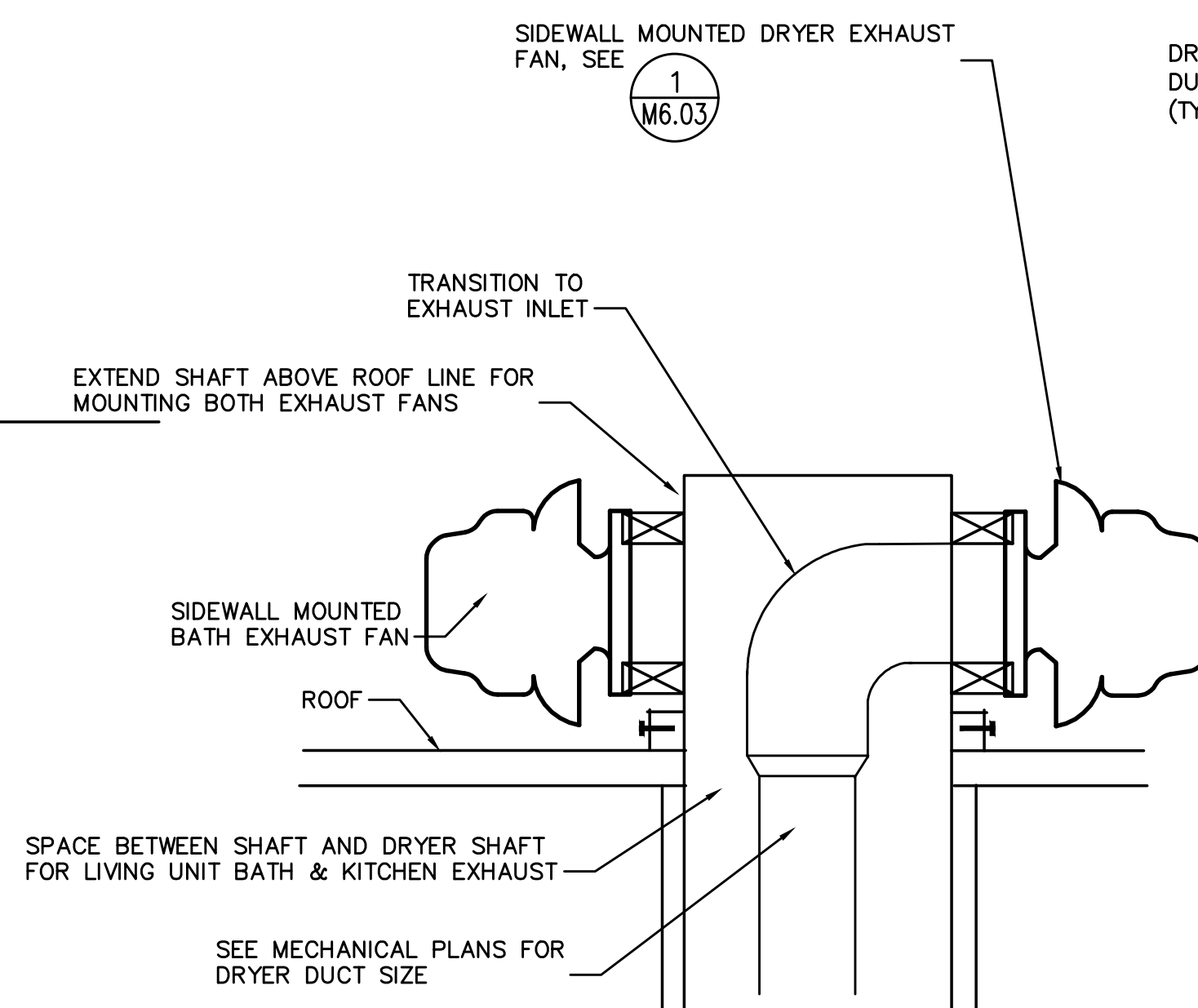
Table for Ventilation Air Schedule - FC-3 showing room details, occupant load, outside air requirements, and corrected total outdoor air flow rate.



1 REFRIGERANT ROOF PENETRATIONS
M6.01 SCALE: DETAIL



2 BATHROOM & DRYER SUBDUCT SHAFT DETAIL
M6.01 SCALE: DETAIL

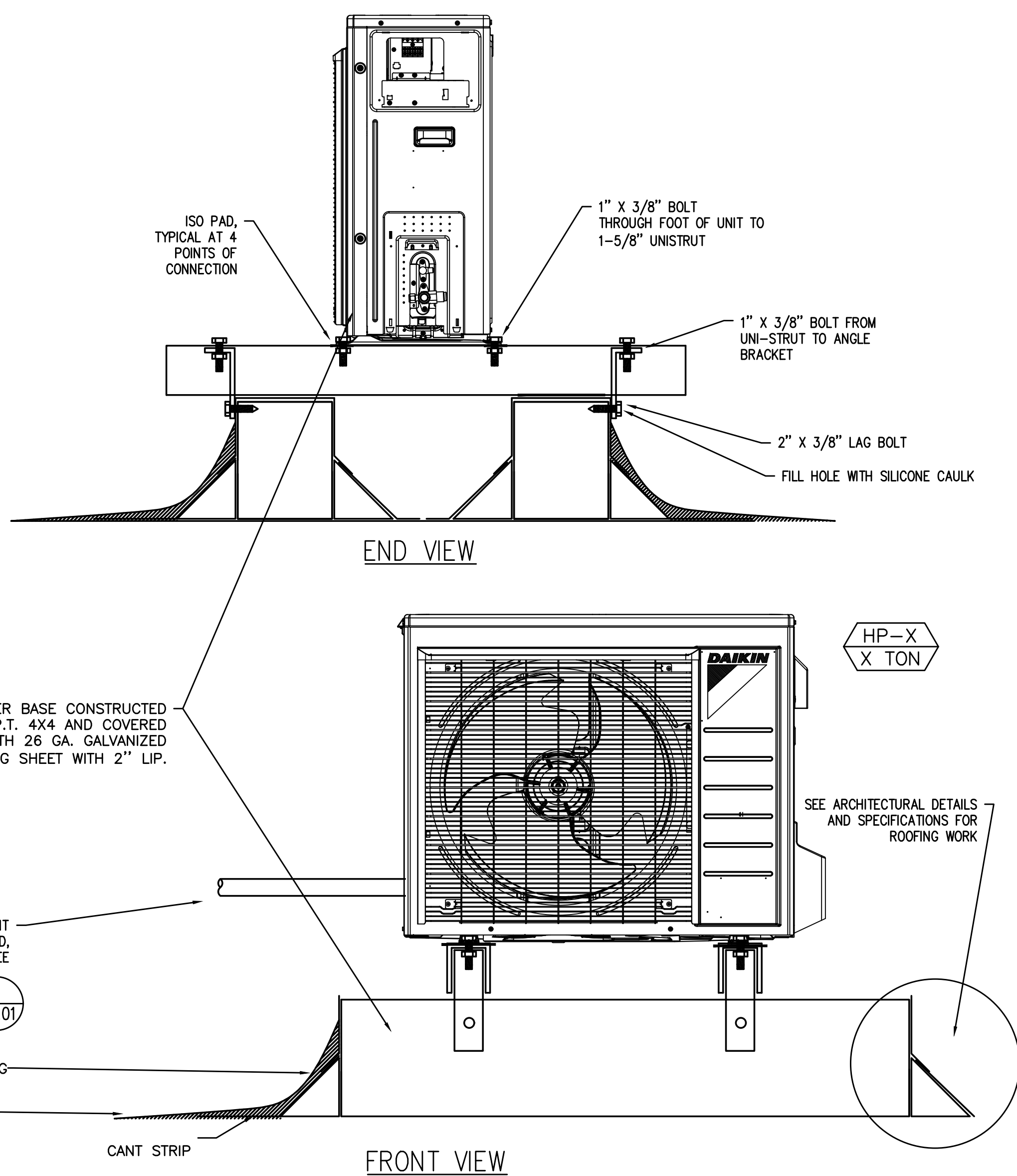


4 STAIRWAY PRESSURIZATION FAN
M6.01 SCALE: DETAIL

STAIRWAY PRESSURIZATION

MARK NUMBER	SPF 1	SPF 2
TYPE	MIXED FLOW FAN SET DIRECT DRIVE-****	
SYSTEM	STAIRS	
CFM	10,200	
TOTAL SP. (IN H2O)	2,414 - *	
RPM	1514	
TIP SPEED (FPM)	10,704	
MOTOR POWER -**	8.46/10 HP	
CONTROLLED BY	FIRE ALARM	
INTERLOCK WITH		
FAN SPEED CONTROLLER	VFD	
WHEEL TYPE	BI	
BACK DRAFT DAMPER - ***	2-POSITION	
ISOLATION	SPRING ISOLATOR	
DESIGN WEIGHT (LBS)	650	
MAX. SONES	27	
HOOD SIZE	---	
DAMPER SIZE	TO FIT FAN	
VOLTS/PHASE **	208/3	
AMPS (FLA) **	24.2	
BASIS OF DESIGN GREENHECK	QEID-22-100-A100	

* - TOTAL STATIC PRESSURE INCLUDES .414 FOR DAMPER AND SYSTEM EFFECTS.
** - FAN AND DAMPER TO BE SUPPLIED WITH STAND-BY POWER SOURCE. ELECTRICAL DATA LISTED FOR REFERENCE ONLY. SEE ELECTRICAL DRAWINGS FOR REQUIREMENTS.
*** - DAMPER TO BE 208 V POWER AND BE CONTROLLED BY STARTED PROVIDED BY MECHANICAL CONTRACTOR.
**** - FAN RATED FOR SMOKE CONTROL, PROVIDE FAN WITH FLEX DUCT CONNECTION, INLET SCREEN SEISMIC SPRING ISOLATORS, INVERTER DUTY MOTORS.



3 HEAT PUMP CURB
M6.01 SCALE: DETAIL

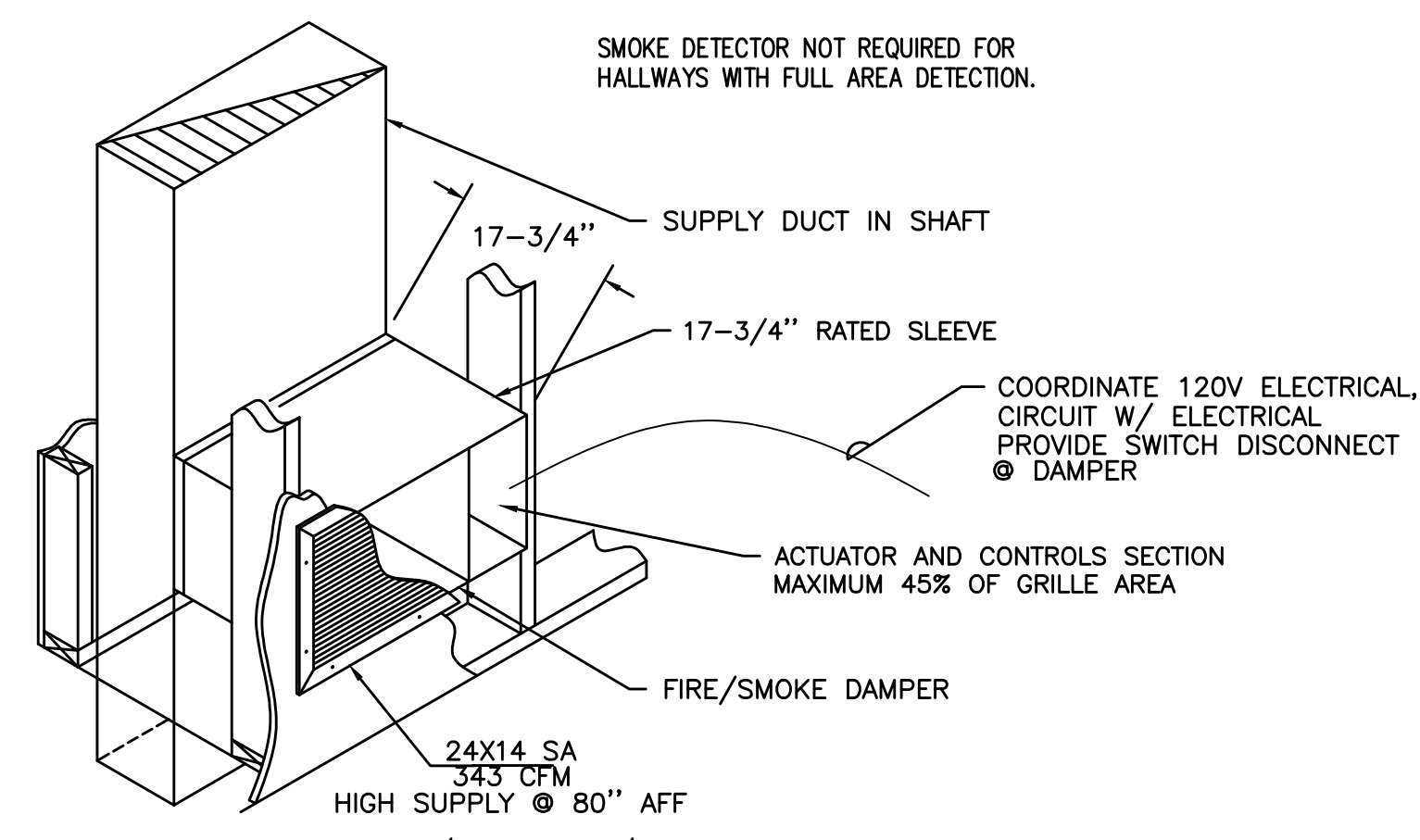


CONSTRUCTION SET

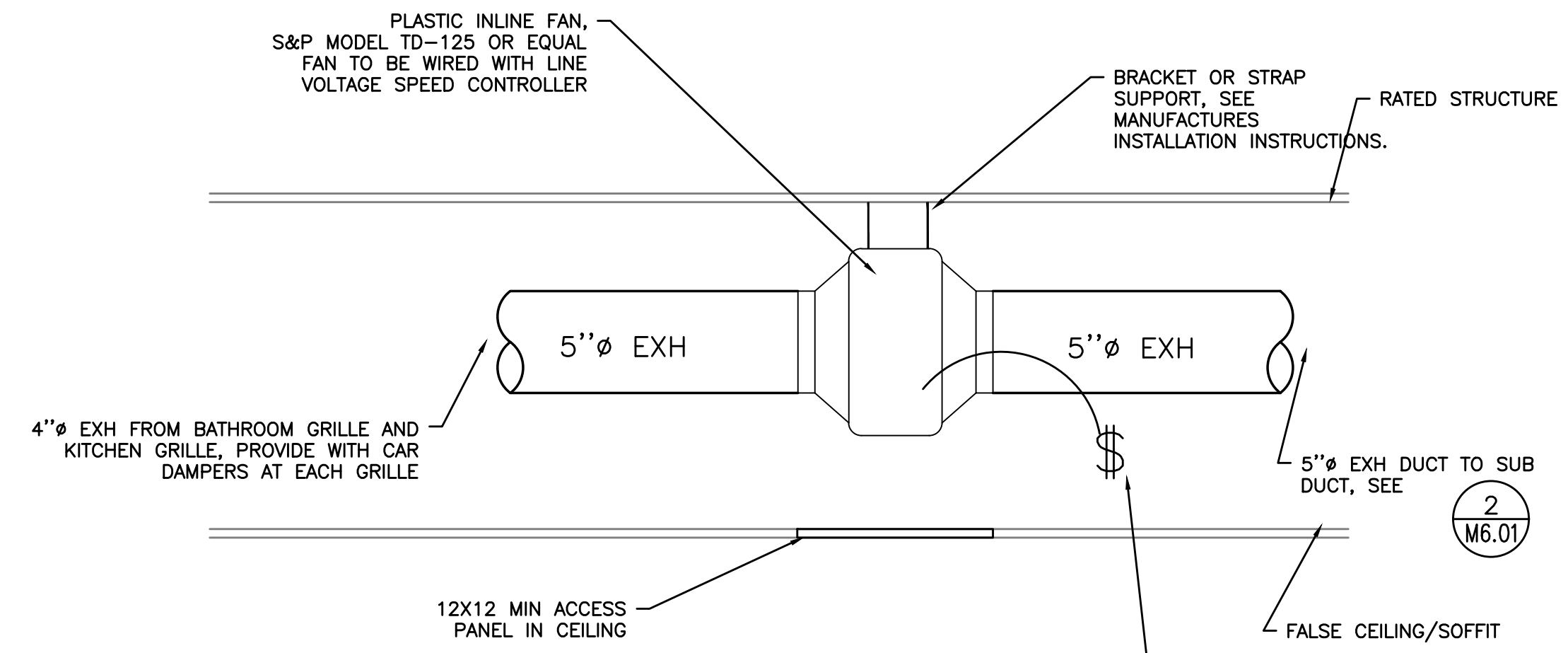
02.11.2020

Issue	Date
50% SD	01.25.2019
100% SD	03.04.2019
100% DD	04.26.2019
20% CD	05.14.2019
PERMIT SET	08.08.2019
CMF SET	10.04.2019
PERMIT REV 1	10.18.2019
ADD 01	11.22.2019
PERMIT REV 2	11.22.2019
ADD 02	11.22.2019
PERMIT REV 3	11.22.2019
ADD 03	02.04.2020
PERMIT REV 4	02.11.2020
CONSTRUCTION SET	02.11.2020

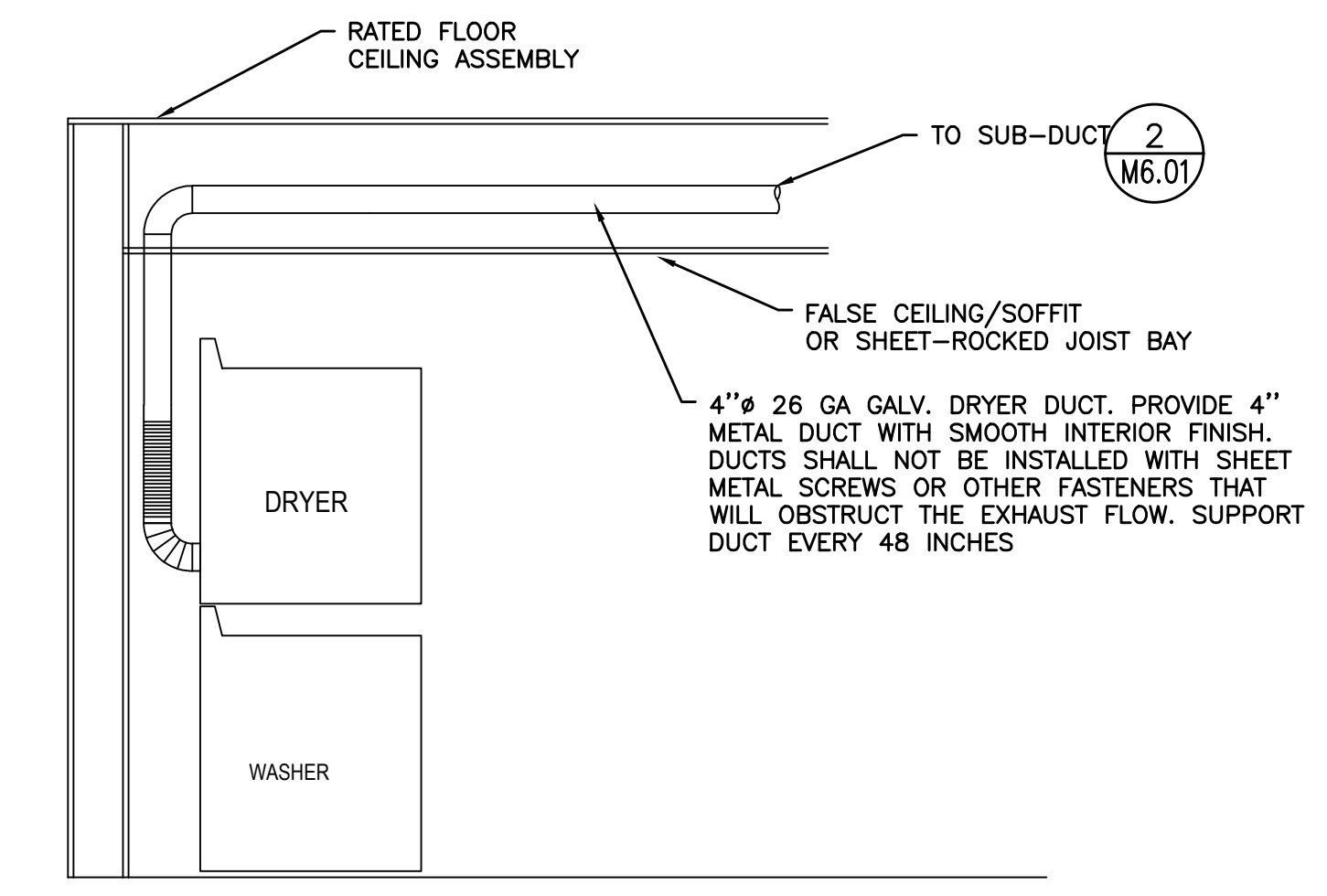
Revision	Date
1 REV 01	10.04.2019
2 REV 02	10.18.2019
3 REV 03	11.22.2019



1 HIGH SUPPLY W/ FIRE/SMOKE DAMPER
SCALE: DETAIL

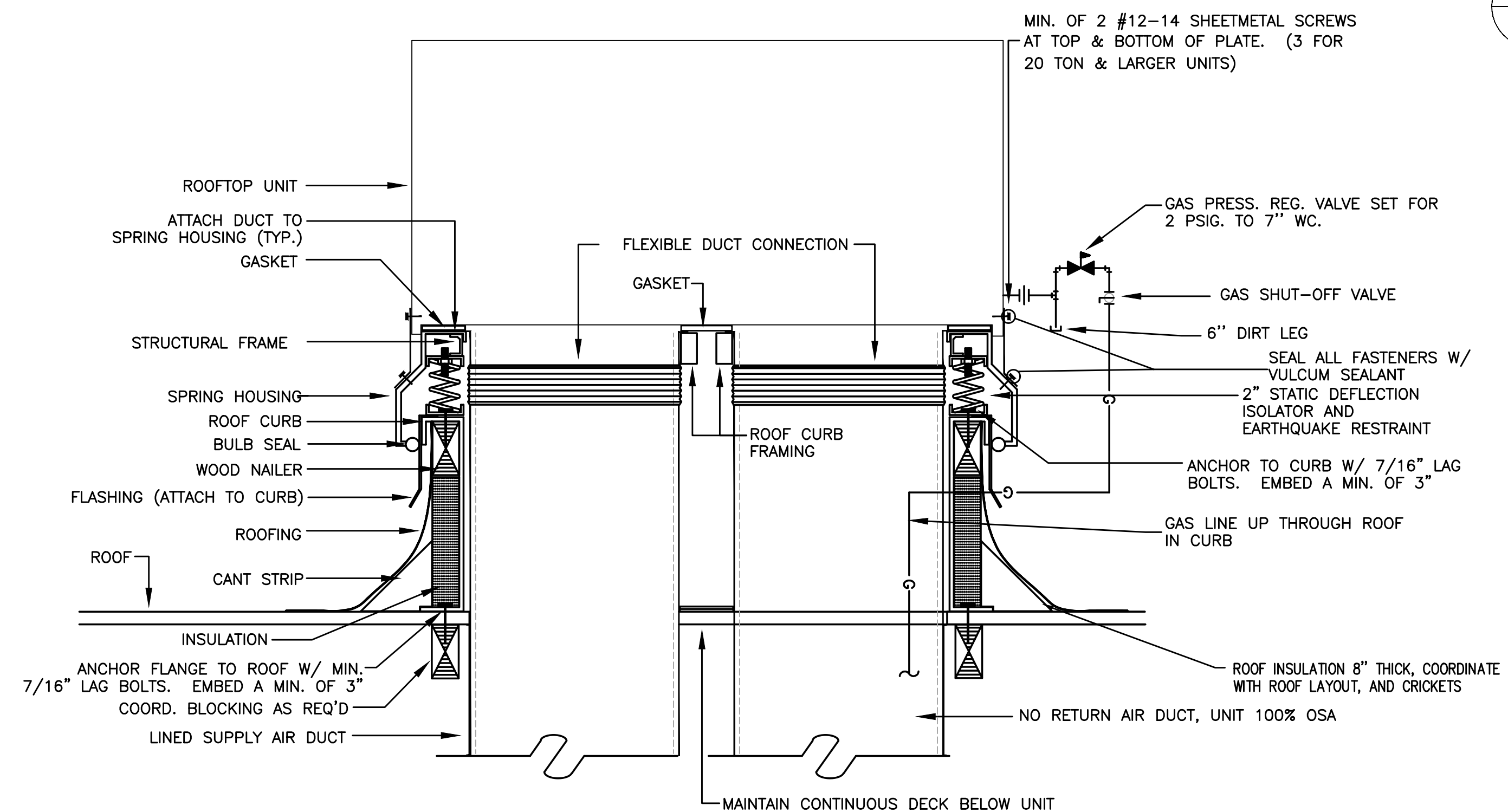


2 IN-LINE EXHAUST FAN
SCALE: DETAIL

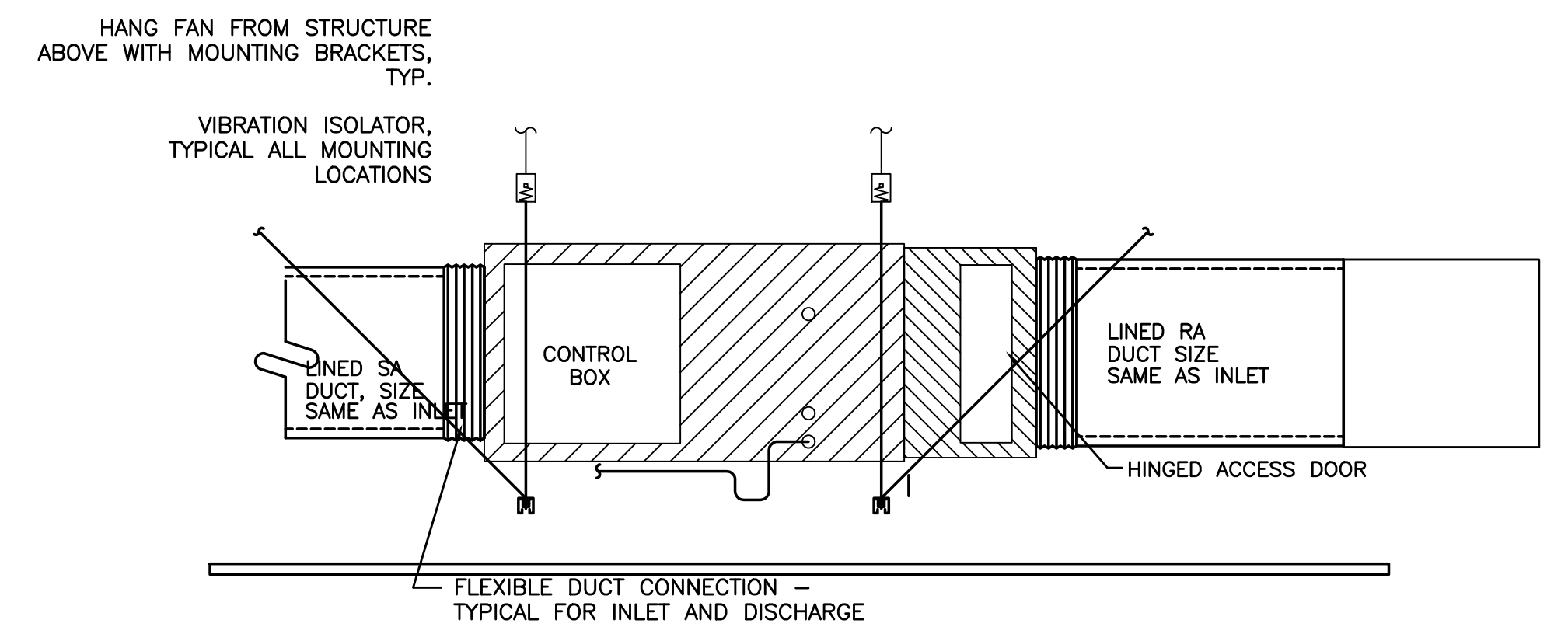


DRYER DUCT LABEL
PROVIDE PERMANENT LABEL WITHIN 6' OF DRYER STATING THE EQUIVALENT LENGTH OF THE INSTALLED DRYER DUCT

4 TYPICAL DRYER INSTALLATION
SCALE: DETAIL

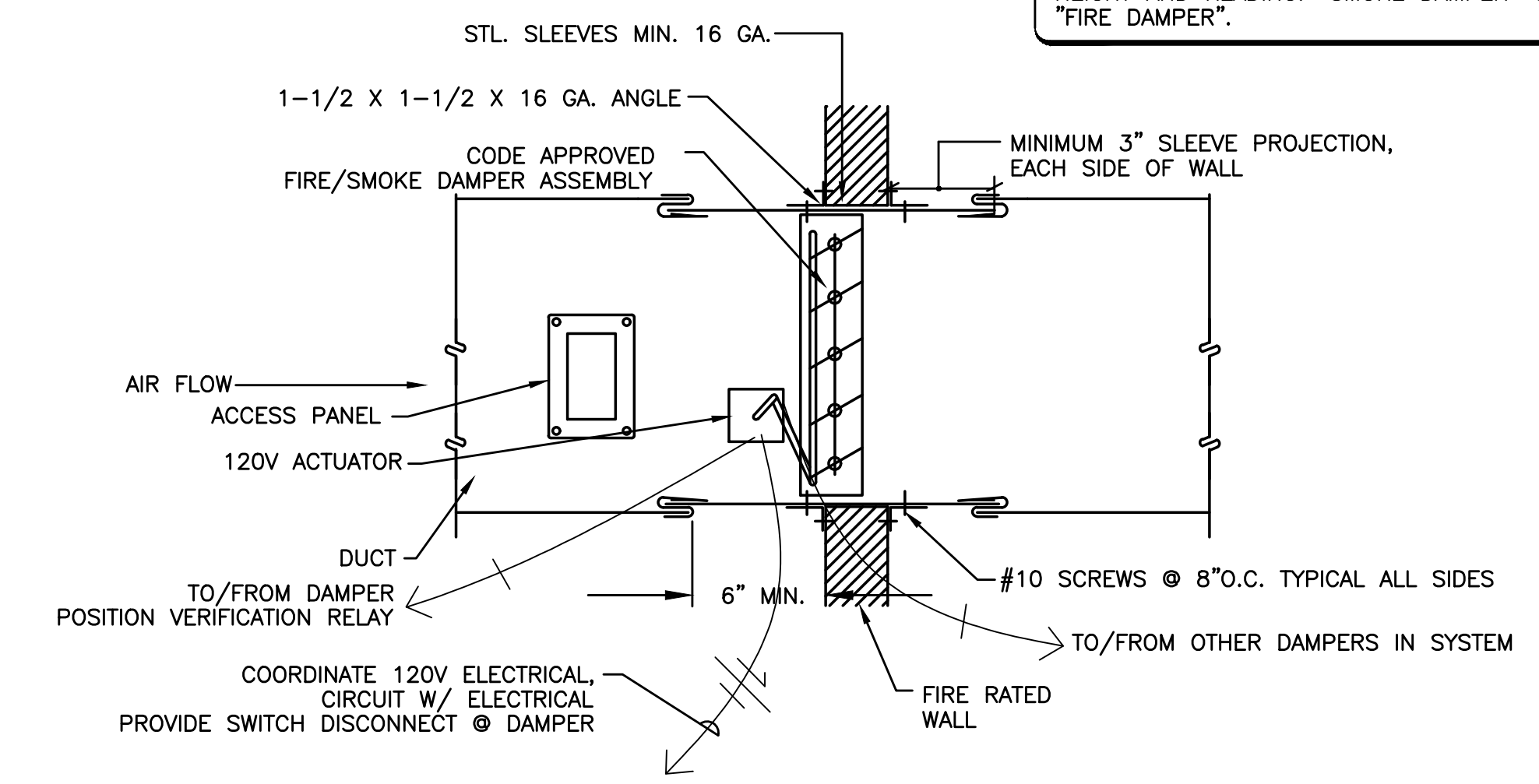
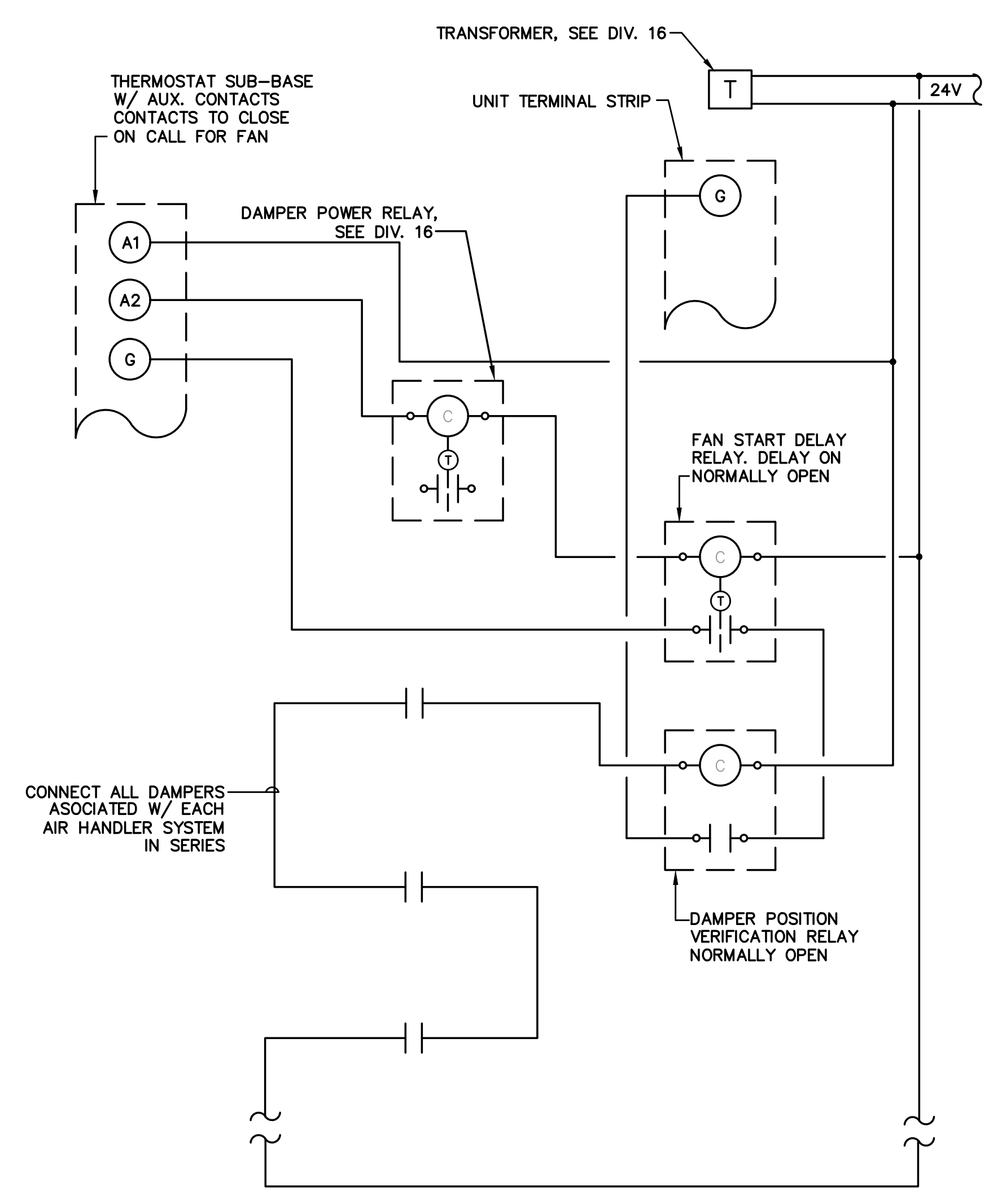


3 ROOF TOP UNIT W/ VIBRATION ISOLATION CURB
SCALE: DETAIL



NOTE: LOCATE SUPPORT & SEISMIC TO MAINTAIN UNHINDERED ACCESS FOR MAINTENANCE OF UNIT.

5 TYPICAL DUCTED FAN COIL
SCALE: DETAIL



6 FIRE/SMOKE DAMPER (NO SMOKE DETECTOR)
SCALE: DETAIL

NOTE:
PROVIDE ALL REQUIRED CONTROL WIRING TO ACCOMPLISH:
FIRE/SMOKE DAMPER - FIRE/SMOKE DAMPER TO CLOSE UPON ACTIVATION OF FIRE ALARM CONDITION IN ASSOCIATED ZONE (VIA FIRE ALARM)
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.

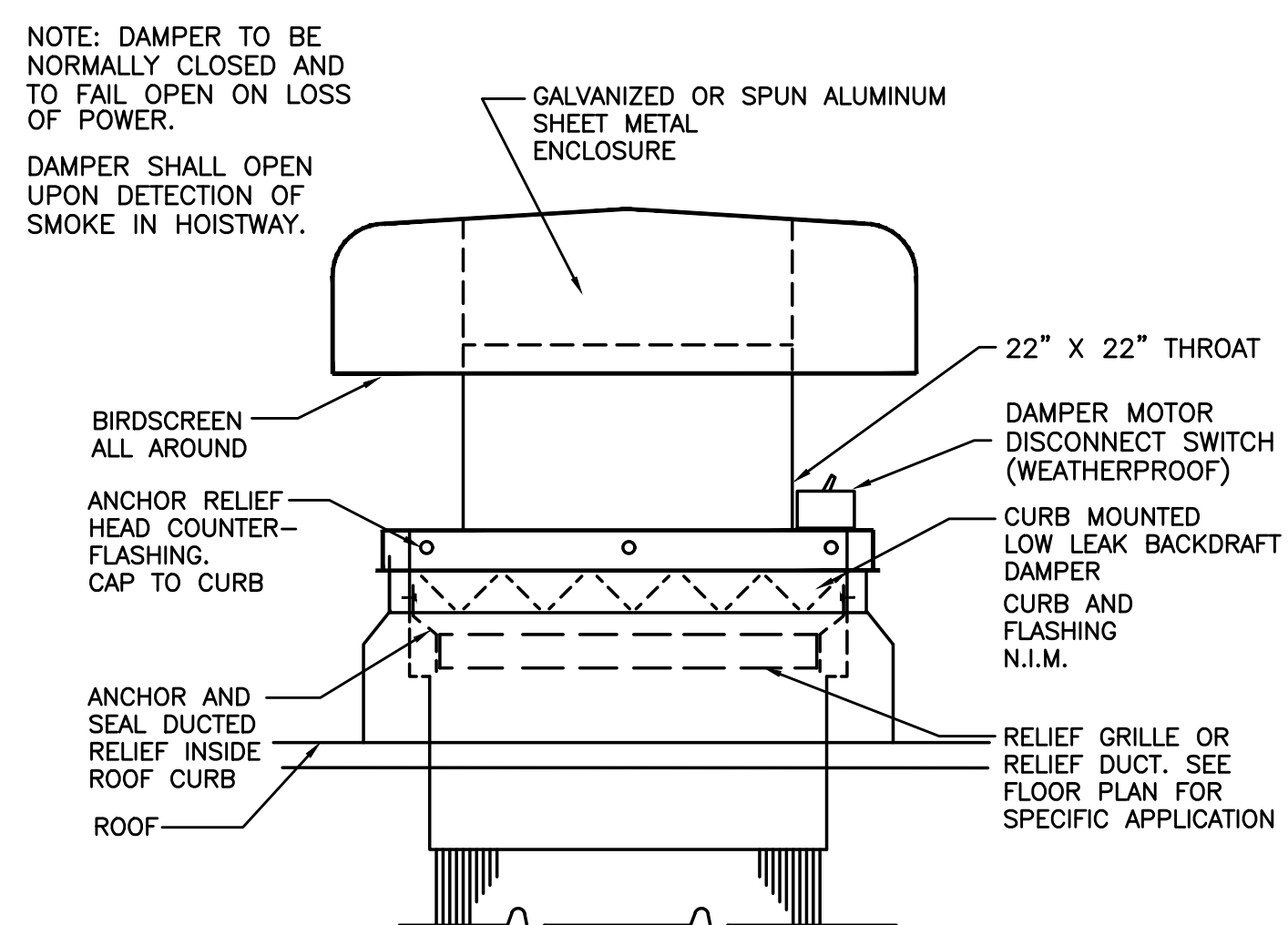
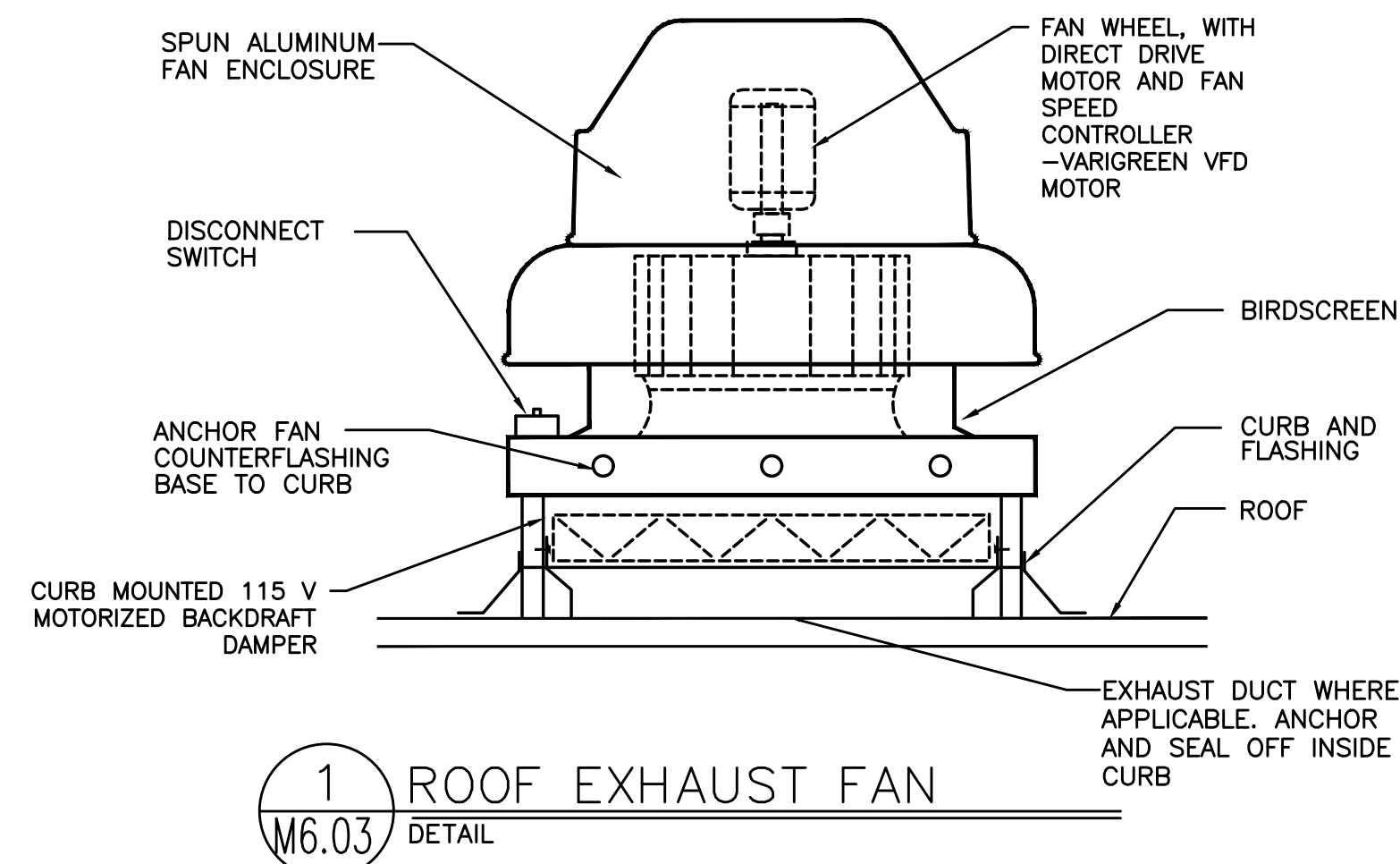
GENERAL NOTES:
PROVIDE ACCESS IN CEILING OR WALL FOR DAMPER AND SMOKE DETECTOR
SEE ELECTRICAL DRAWINGS FOR WIRING INSTALLATION

CONSTRUCTION SET

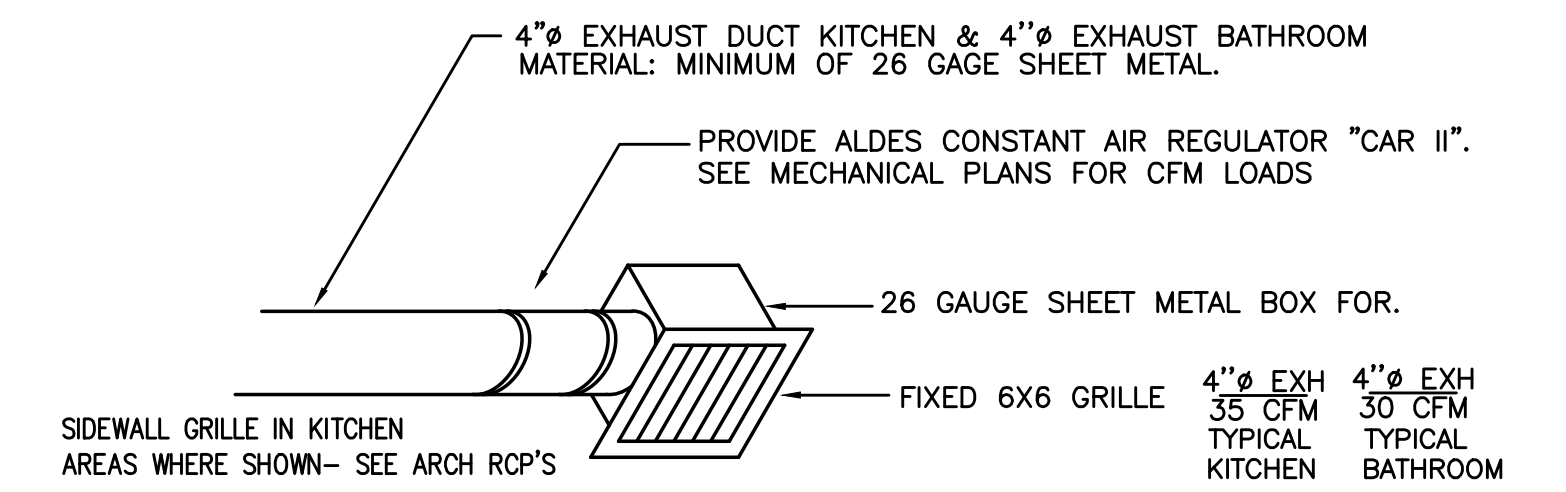
02.11.2020

Issue:	date:
50% SD	01.25.2019
100% SD	03.04.2019
100% DD	04.26.2019
20% CD	05.14.2019
PERMIT SET	08.08.2019
GNP SET	10.04.2019
PERMIT REV 1	10.18.2019
ADD 01	PERMIT REV 2
ADD 02	11.22.2019
ADD 03	PERMIT REV 3
ADD 04	02.04.2020
PERMIT REV 4	02.11.2020
CONSTRUCTION SET	02.11.2020

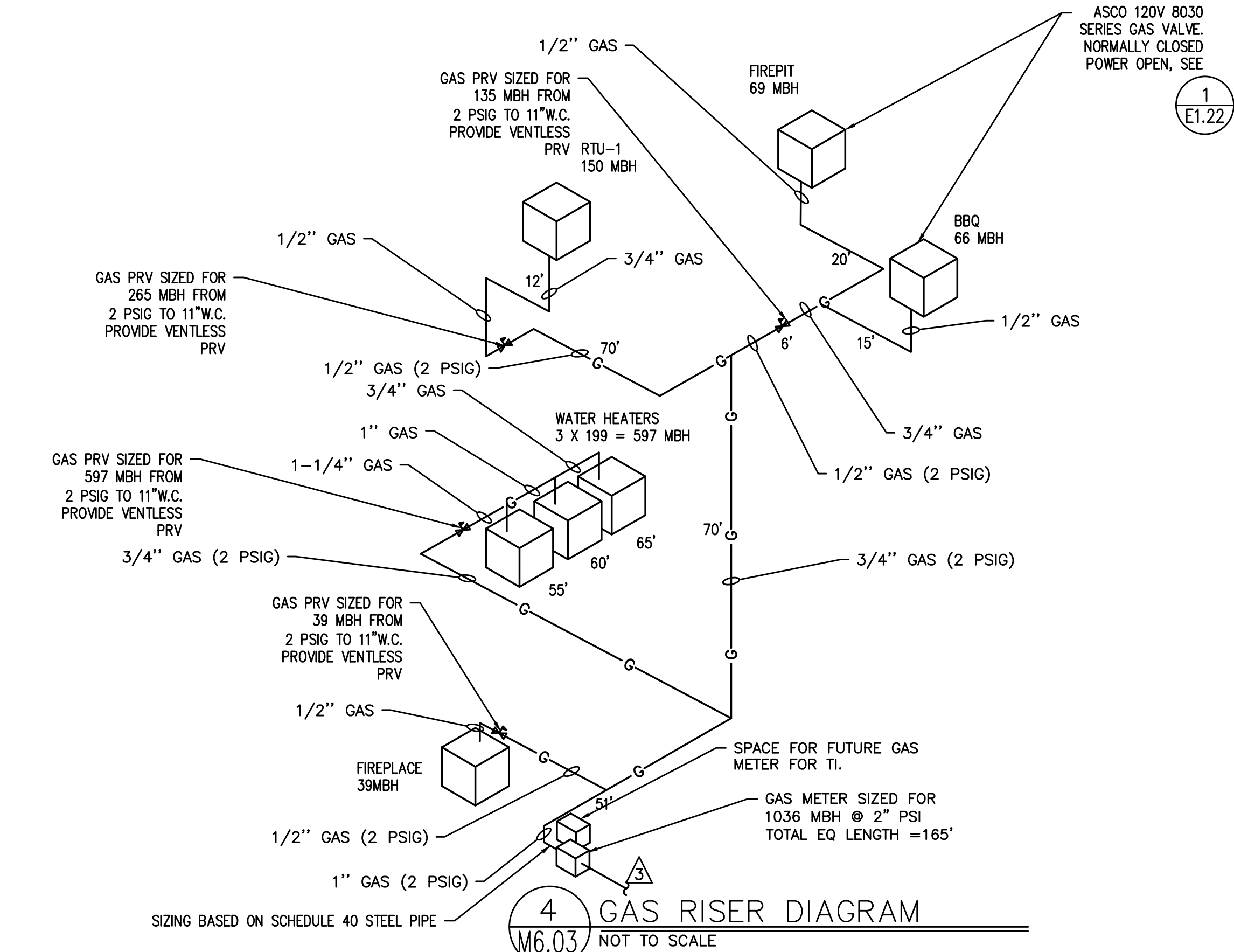
revision:	date:
1 REV 01	10.04.2019
2 REV 02	10.18.2019
3 REV 03	11.22.2019



2 ELEVATOR SHAFT RELIEF VENT
M6.03 NOT TO SCALE



3 CONSTANT AIR REGULATOR (CAR) - CEILING
M6.03 NOT TO SCALE



4 GAS RISER DIAGRAM
M6.03 NOT TO SCALE

System No. W-L-7198

ANSI/UL1479 (ASTM E814)	CANULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 2 Hr	FT Rating — 2 Hr
L Rating at Ambient — Less Than 1 CFM/sq ft	FH Rating — 2 Hr
L Rating at 400 F — Less Than 1 CFM/sq ft	FTH Rating — 2 Hr
L Rating at Ambient — Less Than 1 CFM/sq ft	L Rating at Ambient — Less Than 1 CFM/sq ft
L Rating at 400 F — Less Than 1 CFM/sq ft	L Rating at 400 F — Less Than 1 CFM/sq ft

1. Wall Assembly — The 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400, V400 or W400 Series Wall and Partition Design 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 shall consist of nom 2 by 6 in. (51 by 152 mm) wide wood studs spaced max 24 in. (610 mm) OC. Steel studs to be min 6 in. (152 mm) wide and spaced max 24 in. (610 mm) OC.
 B. Gypsum Board — Min two layers of 5/8 in. (16 mm) thick gypsum board. Thickness, type and orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 5-1/2 in. (140 mm).
 2. Steel Duct — Max 4 in. (102 mm) diam No. 30 gauge (or heavier) galv steel duct to be installed either concentrically or eccentrically within the freestop system. The space between the steel duct and periphery of opening shall be min 0 in. (point contact) to max 1-1/2 in. (38 mm). Steel duct to be rigidly supported within the wall assembly.
 3. Fill, Void or Cavity Material — Sealant — Min 1-1/4 in. (32 mm) thickness of fill material applied within the annulus, flush with surface of wall. Min 1/2 in. (13 mm) diam bead of fill material shall be applied at the point contact location between the steel duct and the gypsum board.
 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 Firestop Systems
Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. January 26, 2015

5 FIRE PENETRATION DETAIL - 4" DUCTS
M6.03 NOT TO SCALE

System No. W-L-7018

ANSI/UL1479 (ASTM E814)	CANULC 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

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 — Min two layers of nom 5/8 in. (16 mm) thick gypsum wallboard as specified in the individual Wall and Partition Design. 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 and having a min 2 in. (51 mm) lap along the longitudinal seam. Length of sleeve to be 18 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 it uncoil against the circular cutouts in the gypsum wallboard layers.

Hilti Firestop Systems
Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. January 27, 2015

6 FIRE PENETRATION DETAIL - 6" DUCTS
M6.03 NOT TO SCALE

System No. F-C-7057

ANSI/UL1479 (ASTM E814)	CANULC S115
F Rating — 1 Hr	F Rating — 1 Hr
T Rating — 1 Hr	FT Rating — 1 Hr
	FH Rating — 1 Hr
	FTH Rating — 1 Hr

1. Floor-Ceiling Assembly — The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:
 A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture as specified in the individual Floor-Ceiling Design. Max area of floor opening is 150 in.2 (0.088 m2) with a max 1.5 in. (38 mm) annular space between duct and framing members.
 B. Wood Joists — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members with bridging as required and with ends freestopped. Additional framing members installed to form a square enclosure around the perimeter of the opening in the floor and ceiling.
 C. Furring Channels — (Where Required, Not Shown) Resilient galv steel furring installed perpendicular to wood joists between gypsum board and wood joists as specified in the individual Floor-Ceiling Design. Furring channels spaced max 24 in. (610 mm) OC. If furring channels are used within the assembly, additional furring channels to be installed along the periphery of the opening.
 D. Gypsum Board — Nom 4 ft (1.2 m) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Gypsum board secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Max area of ceiling opening is 150 in.2 (0.088 m2) with a max 1.5 in. (38 mm) annular space between duct and framing members.
 2. Steel Air Duct — Max 7 in. (178 mm) diam by min 0.0157 in. (No. 30 gauge or 0.40 mm) thick galv steel air duct to be centered within the opening. Max one steel air duct to be installed within opening. Steel duct to be rigidly supported on top side of floor-ceiling assembly.
 3. Firestop System — The firestop system shall consist of the following:
 A. Packing Material — Min 9-7/8 in. (251 mm) thickness of unfaced duct wrap material compressed min 25 percent into opening as a permanent form between the insulated steel duct and the periphery of the opening. Packing material to be installed flush with bottom surface of ceiling and recessed from top surface of floor to accommodate the required thickness of fill material.
 B. Fill, Void or Cavity Material — Sealant — Min 3/4 in. (19 mm) thickness of fill material applied within annulus on top surface of floor.
 SPECIFIED TECHNOLOGIES INC — SpecSeal Series SBS Sealant or SpecSeal LCI Sealant
 EGS NELSON FIRESTOP — ES1399 Sealant
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE-MAX Intumescent Sealant
 FIREMOX INC — Fyre-Sil Sealant
 DAP PRODUCTS INC — DAP Fire Stop Fire-Rated Silicone Sealant
 3M COMPANY 3M FIRE PROTECTION PRODUCTS — FB-1000 NS Sealant
 NUOCO INC — Self Seal GG-200
 C. Duct Wrap Materials — Nom 1/2 in. (13 mm) thick, 8 pcf (128 kg/m3) or nom 1-1/2 in. (38 mm) thick, 6 pcf (96 kg/m3) with foil-scrim facers. The steel duct shall be wrapped with one layer of duct wrap installed in accordance with Ventilation Assembly No. V-32. The duct wrap is secured with min No. 18 Gauge (0.040 in. or 1 mm) galvanized steel wire formed into a loop on one end, with the other end passed through the loop, pulled hand tight and bent over. The wires spaced a max 12 in. (305 mm) OC See Ventilation Duct Assemblies in Vol. 2 of the Fire Resistance Directory. The annular space between the insulated steel duct and the periphery of the opening shall be a nom 1-1/2 in. (38 mm). A min 12 in. high collar consisting of an additional layer of 1/2 in. (13 mm) thick, 8 pcf (128 kg/m3) or nom 1-1/2 in. (38 mm) thick, 6 pcf (96 kg/m3) duct wrap, installed over the duct wrap flush with the top surface of the floor and extending upward. All seams and edges shall be sealed with min 3 in. (76 mm) wide pressure sensitive aluminum foil tape.
 UNIFRAX LLC — FyreWrap® DP5 or FyreWrap® Elite 1.5
 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Hilti Firestop Systems
Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. March 27, 2017

7 FIRE PENETRATION DETAIL - 6" DUCTS
M6.03 NOT TO SCALE



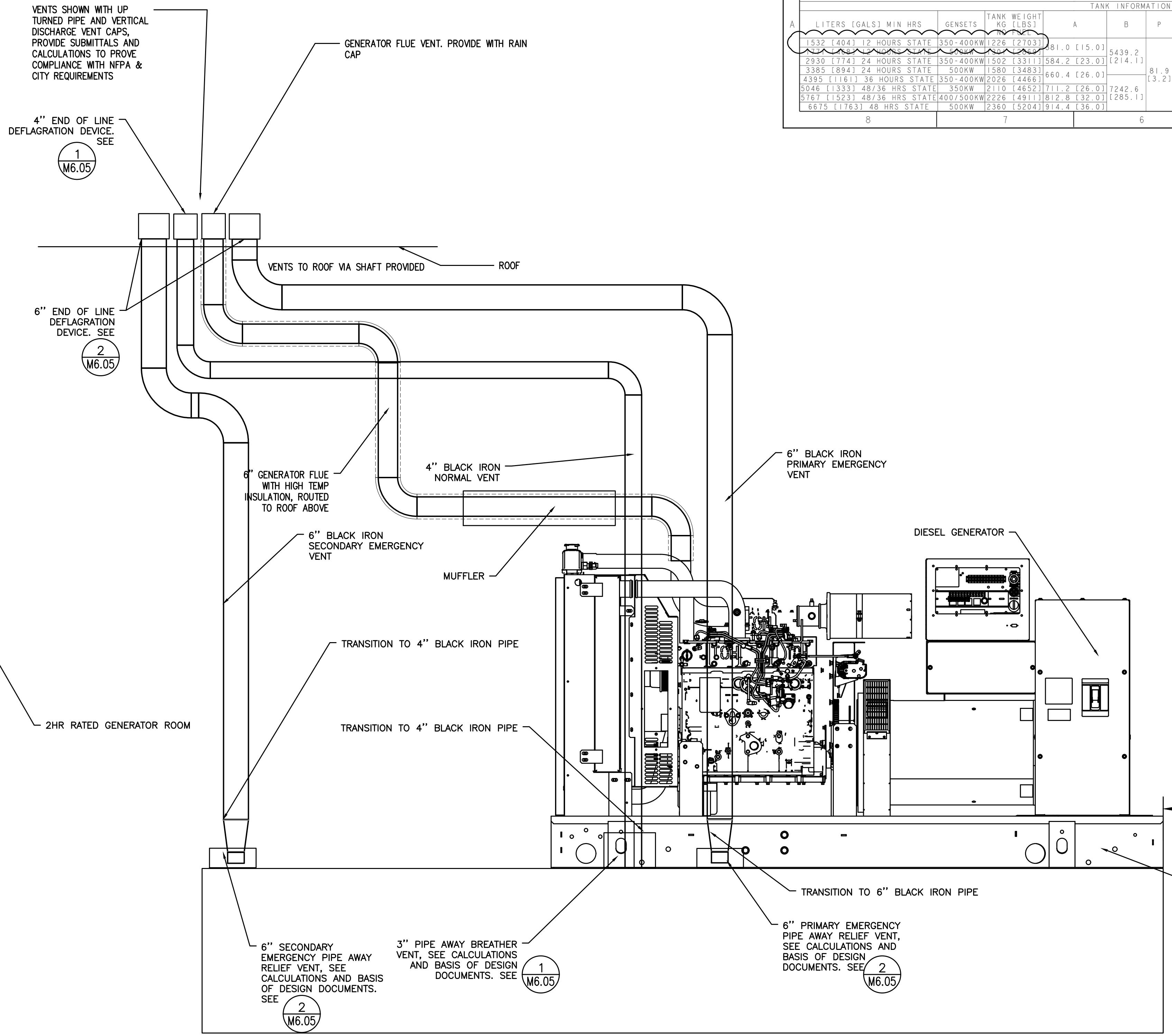
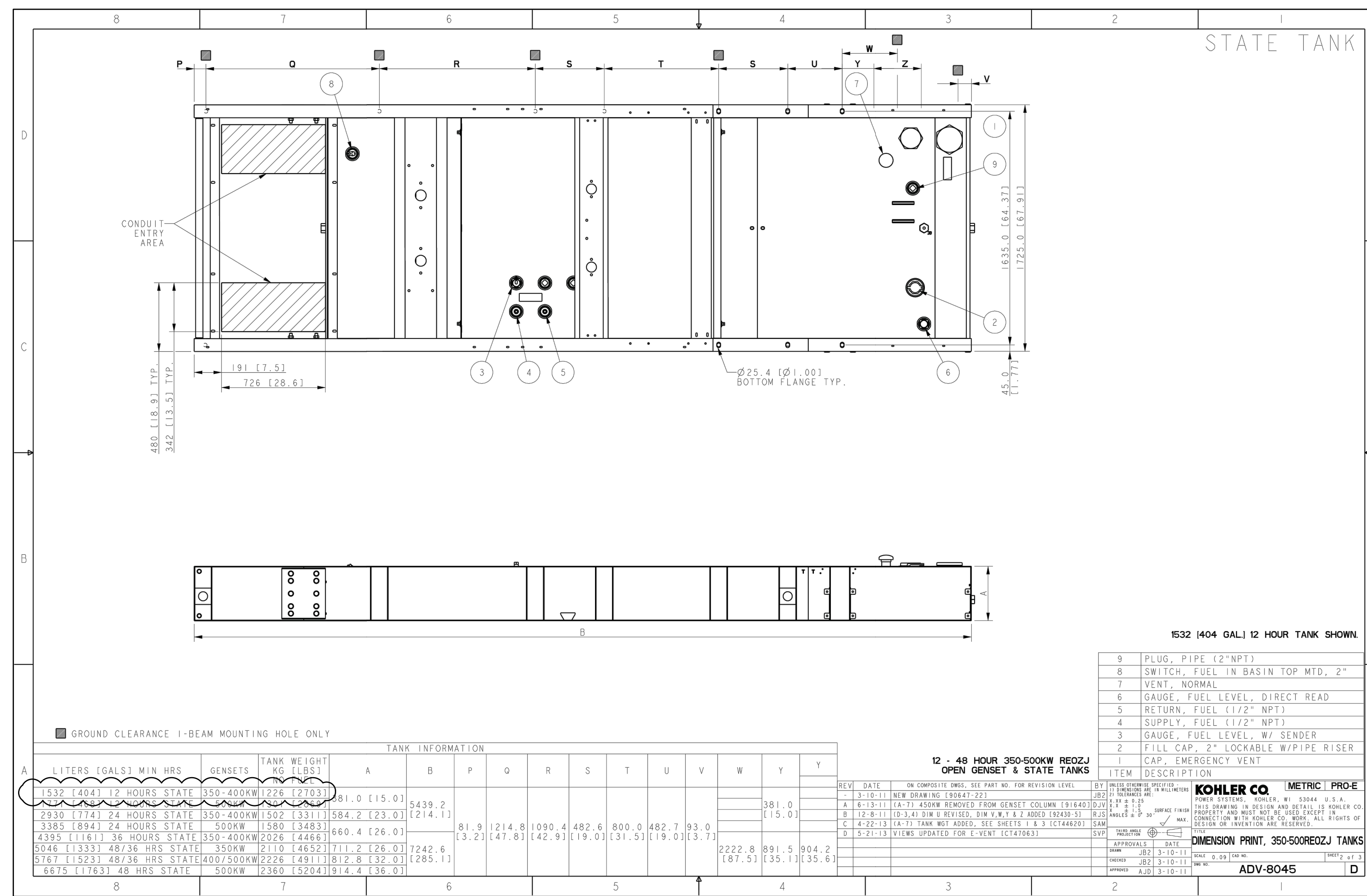
DESIGN CRITERIA-GENERATOR FUEL TANK	
Tank Volume	404 gal
Tank Size	214.1"x67.9"x15"
Wetted Area	159.7 sq ft
Vapor Flow Rate	168,000 CFH
Normal Vent	2"
Primary E vent	4"
Secondary E Vent	4"
Fill Rate	40 GPM (MAX 65)
Empty Rate	26.5 GPH
MAWP (Tank Pressure)	5.0 psig
E-vent Pressure	2.5 psig
Normal Vent Pres	1.0 psig
Vacuum pressure	0.5 psig
EQ Vent Pipe Length	115 ft

Conservation Breather Vent	
System	Normal Vent
Type	Pipe Away Breather Vent
Size	3"
Material	Ductile Iron
Pressure Set Point	1.0 psig
Vacuum Set Point	0.5 psig
Exh Flow Rate	35,000 CFH
Intake Flow Rate	17,500 CFH
Basis of Design	Protectoseal
Model	C18543D3
Quantity	1
Valve Pressure Drop	0.105 PSI
Vac Pressure Drop	0.107 PSI
End of Line Deflagration	
Size	4"
Material	316 SS
Exh Flow Rate	35,000 CFH
Intake Flow Rate	17,500 CFH
Basis of Design	Protectoseal
Model	F674B
Pressure drop	0.201 PSI
Quantity	1

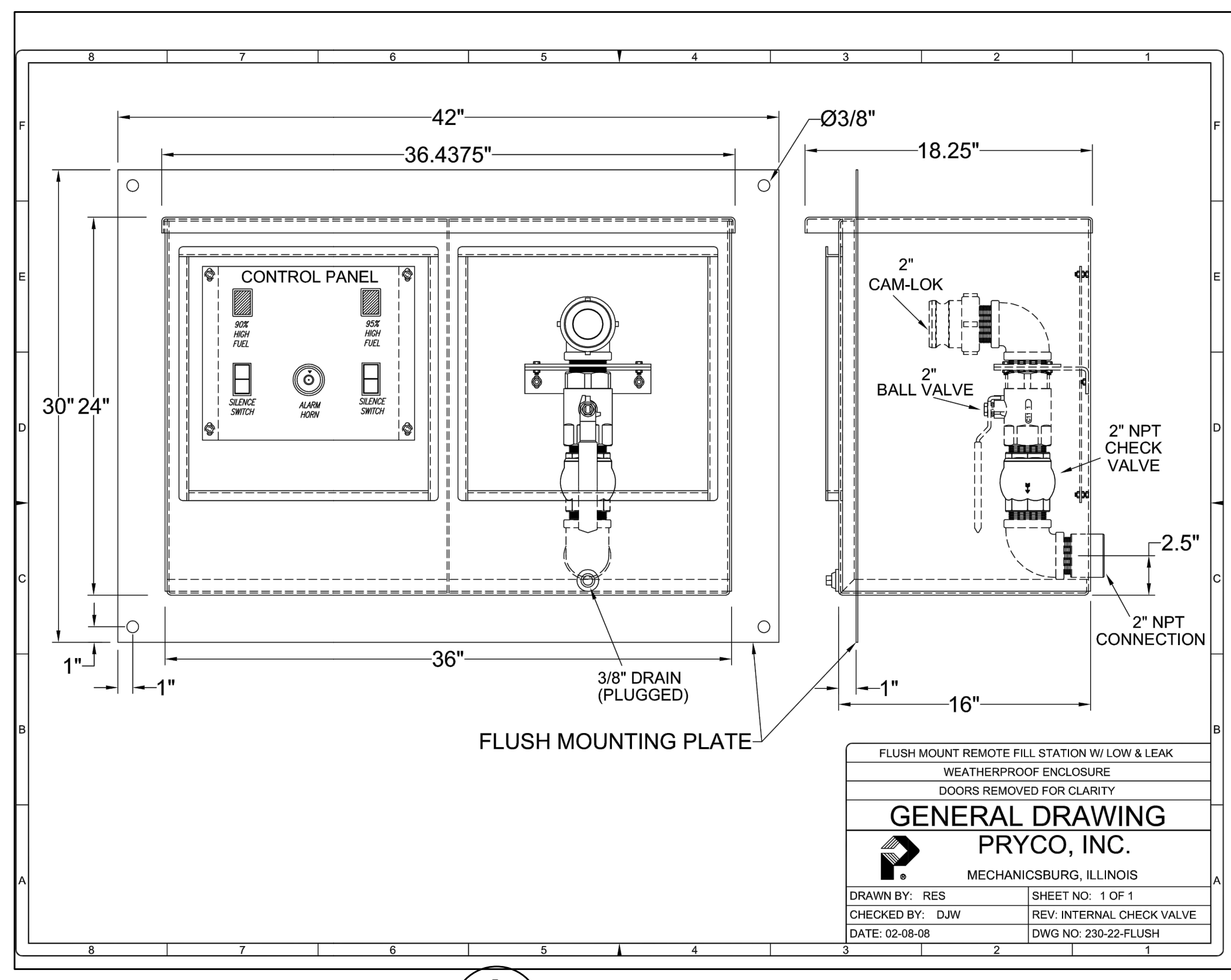
Pressure Relief Vent (E-vent)	
System	Emergency Vent
Type	Pipe Away Relief Vent
Size	6"
Material	Ductile Iron
Pressure Set Point	2.5 psig
Exh Flow Rate	133,000 CFH
Basis of Design	Protectoseal
Model	C17806H6
Quantity	2
Valve Pressure drop	0.086 psi
End of Line Deflagration	
Size	6"
Material	316 SS
Exh Flow Rate	133,000 CFH
Intake Flow Rate	NA
Basis of Design	Protectoseal
Model	F676E
Pressure Drop	0.769
Quantity	2

Vent Pipe Pressure Drops	
System	Normal Vent
Size	4"
Vapor Flow Rate	35,000 CFH
EQ Pipe Length	40 ft
Pressure Drop	0.827 psig
System	Emergency Vent
Size	6"
Vapor Flow Rate	133,000 CFH
Vapor Pipe Length	2216 CFM
EQ Pipe Length	115 ft
Pressure Drop	1.37 psig

System-Tank Pressures		
System	Normal Vent	PSI
Pipe Pressure drop	0.827	PSI
Breather valve	0.105	PSI
Deflagration valve	0.201	PSI
Set point	1.000	PSI
Total Tank Pressure	2.133	PSI
System	Emergency	PSI
Pipe Pressure drop	1.37	PSI
Breather valve	0.086	PSI
Deflagration valve	0.769	PSI
Set point	2.500	PSI
Total Tank Pressure	4.725	PSI



1 GENERATOR FUEL TANK PIPING SCHEMATIC
M6.04 SCALE:DETAIL



FUEL FILL STATION	
MARK NUMBER	FS 1
TYPE	WALL FLUSH MOUNT
INLET/OUTLET	2"Ø
CONTROL PANEL	SIDE MOUNT
ELECTRIC SHUT OFF	YES
CHECK VALVE	YES
QUICK CONNECT HOSE COUPLING	YES
MANUAL BALL VALVE	YES
OUTLET LOCATION	REAR
CONTROL POWER	115/1/60 -EMERGENCY
SPILL CONTAINMENT	7.5 GALLONS
CONTAINMENT SUMP DRAIN	YES
WEIGHT	325 LBS
HIGH LEVEL ALARM	90% TANK LEVEL
EMERGENCY SHUT-OFF	95% TANK LEVEL
BASIS OF DESIGN - PRYCO	230-22 AUTOMATIC FUELPORT

CONSTRUCTION SET

revision:	date:
1 REV 01	10.04.2019
2 REV 02	10.18.2019
3 REV 03	11.22.2019

GENERATOR DETAILS

M6.04



CONSTRUCTION SET

Table with columns: Issue, Date, Description. Includes items like 10% SD, 20% DD, PERMIT REV 1, etc.

Table with columns: Revision, Date, Description. Includes items like 1 REV 01, 2 REV 02, etc.

Series 670 / 6670 End-of-Line Deflagration Flame Arrester. Specifications, Dimensions, and Part Numbering System. Includes diagrams and tables for connection types and dimensions.

Series 670 / 6670 End-of-Line Deflagration Flame Arrester. Specifications, Dimensions, and Part Numbering System. Includes diagrams and tables for connection types and dimensions.

Series 18540 Pipe-Away Conservation Pressure / Vacuum Breather Vent. Specifications, Dimensions, and Ordering Information. Includes diagrams and tables for dimensions and pressure/vacuum settings.

Series 18540 Pipe-Away Conservation Pressure / Vacuum Breather Vent. Specifications, Dimensions, and Ordering Information. Includes diagrams and tables for dimensions and pressure/vacuum settings.

Series 670E End-of-Line Deflagration Flame Arrester. Specifications, Dimensions, and Part Numbering System. Includes diagrams and tables for connection types and dimensions.

Series 670E End-of-Line Deflagration Flame Arrester. Specifications, Dimensions, and Part Numbering System. Includes diagrams and tables for connection types and dimensions.

Series 17800 Pipe-Away Conservation Pressure Breather Vent. Specifications, Dimensions, and Ordering Information. Includes diagrams and tables for dimensions and pressure/vacuum settings.

Series 17800 Pipe-Away Conservation Pressure Breather Vent. Specifications, Dimensions, and Ordering Information. Includes diagrams and tables for dimensions and pressure/vacuum settings.

SUBMITTALS: CONTRACTOR TO PROVIDE FULL SUBMITTAL PACKAGE AND VALVE PRESSURE DROPS/FLOWS FOR PROPOSED EQUIPMENT

EMERGENCY VENT ACCESSORIES - BASIS OF DESIGN

M6.05 SCALE: DETAIL

600 W FRONT STREET

BOISE, IDAHO

JOB NO. 18-04400

Consulting Engineers 2007 S.E. Ash St. Portland, OR 97214 PHN: (503) 234-0548 FAX: (503) 234-0877 WWW.MFPA-ENG.COM CONTACT: Mark Denyer

6-18-2019



Expires May 31, 2021

CONSTRUCTION SET

02.11.2020

Table with columns: Issue, date, 50% SD, 100% SD, 100% DD, 20% CD, GMP SET, PERMIT REV 1, PERMIT REV 2, ADD 01, PERMIT REV 2, ADD 02, PERMIT REV 3, ADD 03, PERMIT REV 4, CONSTRUCTION SET, revision, date, 1 REV 01, 2 REV 02, 3 REV 03.

COMcheck Software Version 4.1.1.0 Mechanical Compliance Certificate. Project Information: 600 W Apartments, Boise, Idaho. Mechanical Systems List: PTHP-1, PTHP-2, RTU-1, HP-1.

Quantity System Type & Description. Mechanical Compliance Statement. Mark Denyer Signature. Project Title: 600 W Apartments. Report date: 08/05/19.

COMcheck Software Version 4.1.1.0 Inspection Checklist. Energy Code: 2015 IECC. Plan Review table with columns: Section # & Req ID, Plan Review, Complies?, Comments/Assumptions.

Table with columns: Section # & Req ID, Footing / Foundation Inspection, Complies?, Comments/Assumptions. Additional Comments/Assumptions section.

Table with columns: Section # & Req ID, Plumbing Rough-In Inspection, Complies?, Comments/Assumptions. Multiple entries for C404.5, C404.6, C404.7, C404.8.

Table with columns: Section # & Req ID, Plumbing Rough-In Inspection, Complies?, Comments/Assumptions. Multiple entries for C404.7, C404.8.

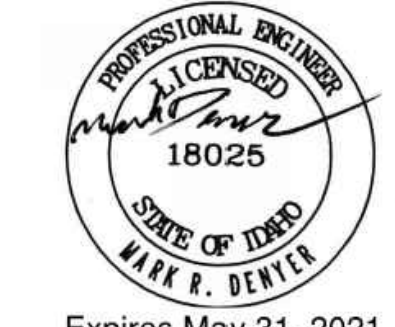
Table with columns: Section # & Req ID, Plumbing Rough-In Inspection, Complies?, Comments/Assumptions. Entry for C404.7.

Table with columns: Section # & Req ID, Mechanical Rough-In Inspection, Complies?, Comments/Assumptions. Multiple entries for C403.2, C403.6, C403.7, C403.8, C403.9.



COMCHECK FORMS

M6.06



CONSTRUCTION SET

02.11.2020

Issue:	date:
50% SD	01.25.2019
100% SD	03.04.2019
100% DD	04.26.2019
20% CD	05.14.2019
PERMIT SET	08.08.2019
GMP SET	10.04.2019
PERMIT REV 1	
ADD 01	10.18.2019
PERMIT REV 2	
ADD 02	11.22.2019
PERMIT REV 3	
ADD 03	02.04.2020
PERMIT REV 4	
CONSTRUCTION SET	02.11.2020
revision:	date:
1 REV 01	10.04.2019
2 REV 02	10.18.2019
3 REV 03	11.22.2019

Section # & Req. ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.2.9.1.3 [ME11]	Ductwork operating >3 in. water column requires air leakage testing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.2.9.1.3 [ME11]	Ductwork operating >3 in. water column requires air leakage testing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.4.2.3.2 [ME122]	Open- or closed circuit cooling towers have a separate heat exchanger to isolate the cooling tower from the heat pump loop, and heat loss is controlled by shutting down the circulation pump on the cooling tower loop.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.4.2.3.2 [ME122]	Open- or closed circuit cooling towers have a separate heat exchanger to isolate the cooling tower from the heat pump loop, and heat loss is controlled by shutting down the circulation pump on the cooling tower loop.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.4.2.3.2 [ME122]	Open- or closed circuit cooling towers have a separate heat exchanger to isolate the cooling tower from the heat pump loop, and heat loss is controlled by shutting down the circulation pump on the cooling tower loop.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.4.4.6 [ME110]	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
C403.4.4.6 [ME110]	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
C403.4.4.6 [ME110]	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
C403.4.4.6 [ME110]	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
C403.4.4.6 [ME110]	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

Project Title: 600 W Apartments Report date: 08/05/19
Data filename: G:\Holst Architecture\9738_600 W Front Street ID\Energy Forms\600W COMCHECK 8/5/19.cck Page 9 of 14

Section # & Req. ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.4.4.6 [ME110]	Multiple zone VAV systems with DDC of individual zone boxes have static pressure setpoint reset controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply. See the Mechanical Systems list for values.
C408.2.2.1 [ME53]	Air outlets and zone terminal devices have means for air balancing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.5.1 [ME123]	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered humidification/dehumidification systems that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

Project Title: 600 W Apartments Report date: 08/05/19
Data filename: G:\Holst Architecture\9738_600 W Front Street ID\Energy Forms\600W COMCHECK 8/5/19.cck Page 10 of 14

Section # & Req. ID	Final Inspection	Complies?	Comments/Assumptions
C303.3.3 [F18]	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.2.1 [F127]	HVAC systems and equipment capacity does not exceed calculated loads.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1 [F147]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1 [F147]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1 [F147]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1 [F147]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1 [F147]	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1 [F147]	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1 [F147]	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.2.4.1 [F147]	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

Project Title: 600 W Apartments Report date: 08/05/19
Data filename: G:\Holst Architecture\9738_600 W Front Street ID\Energy Forms\600W COMCHECK 8/5/19.cck Page 11 of 14

Section # & Req. ID	Final Inspection	Complies?	Comments/Assumptions
C403.2.4.1.1 [F142]	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.2.4.1.1 [F142]	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.2.4.1.2 [F138]	Thermostatic controls have a 5 °F deadband.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.1.3 [F120]	Temperature controls have setpoint overlap restrictions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.2 [F139]	Each zone equipped with setback controls using automatic time clock or programmable control system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.2.1 [F140]	Automatic Controls: Setback to 55°F (heat) and 85°F (cool) 7-day clock, 2-hour occupant override, 10-hour backup.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C403.2.4.2.3 [F141]	Systems include optimum start controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.2.4.2.3 [F141]	Systems include optimum start controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.2.4.2.3 [F141]	Systems include optimum start controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.2.4.2.3 [F141]	Systems include optimum start controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.
C403.2.4.2.3 [F141]	Systems include optimum start controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Exception: Requirement does not apply.

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

Project Title: 600 W Apartments Report date: 08/05/19
Data filename: G:\Holst Architecture\9738_600 W Front Street ID\Energy Forms\600W COMCHECK 8/5/19.cck Page 12 of 14

Section # & Req. ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.1 [F128]	Commissioning plan developed by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.2.3 [F133]	HVAC equipment has been tested to ensure proper operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.2.3 [F133]	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.2.4 [F129]	Preliminary commissioning report completed and certified by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.2.5 [F17]	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.2.5 [F143]	An air and/or hydronic system balancing report is provided for HVAC systems.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.2.5 [F130]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

Project Title: 600 W Apartments Report date: 08/05/19
Data filename: G:\Holst Architecture\9738_600 W Front Street ID\Energy Forms\600W COMCHECK 8/5/19.cck Page 13 of 14

Section # & Req. ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.5 [F130]	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

Project Title: 600 W Apartments Report date: 08/05/19
Data filename: G:\Holst Architecture\9738_600 W Front Street ID\Energy Forms\600W COMCHECK 8/5/19.cck Page 14 of 14