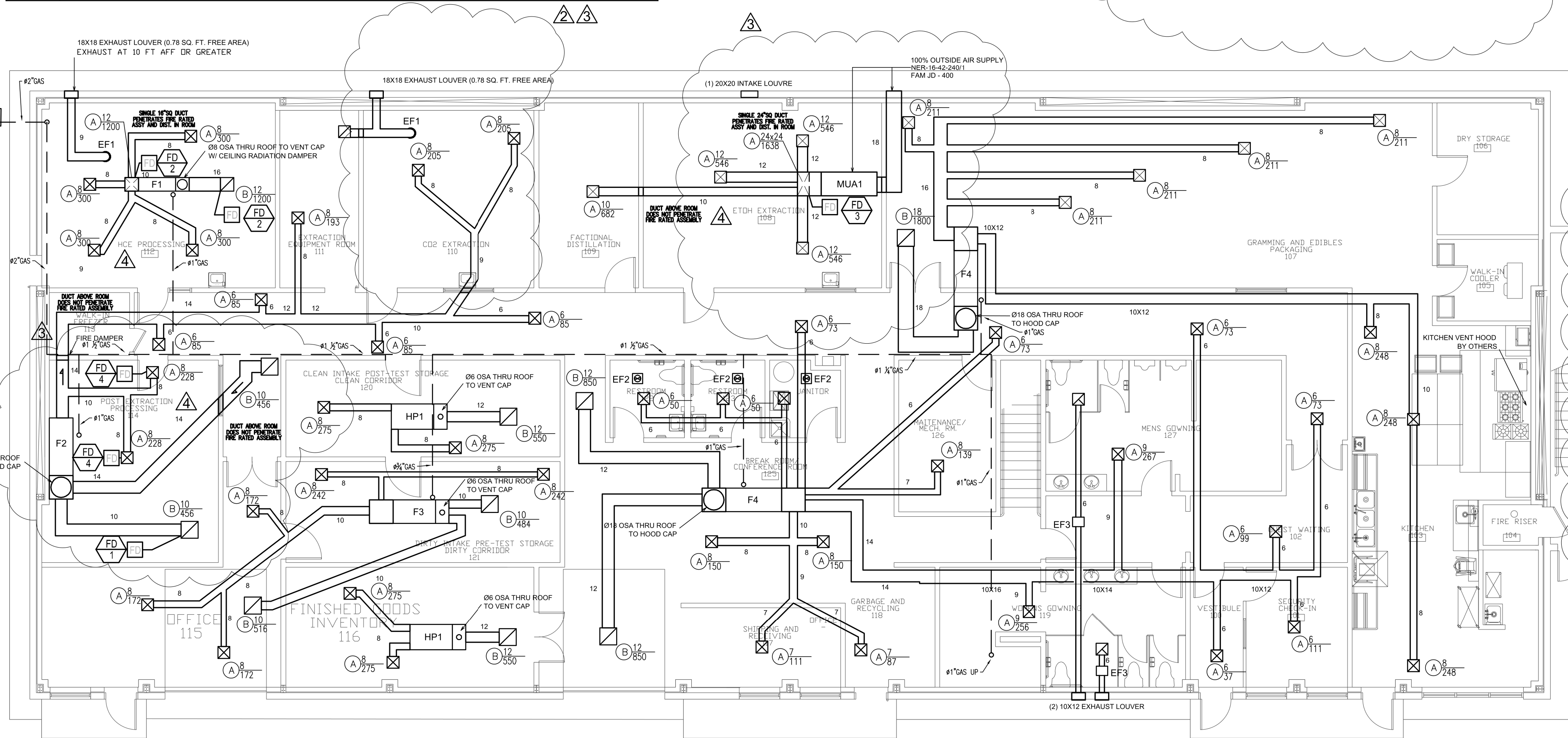


VENTILATION REQUIREMENTS								
TAG	SERVING	AREA (A _z)	OCCUPANT DENSITY (#/1000 SQ. FT.)	PEOPLE (P _z)	PEOPLE OUTDOOR AIR RATE (R _p)	AREA OUTDOOR AIR RATE (R _a)	ZONE AIR DISTRIBUTION EFFECTIVENESS (E _z)	ZONE OUTDOOR AIRFLOW (V _{oz})
F1	112	432	5	2.2	5	0.06	0.8	46
	113	340	6	2.0	5	0.06	0.8	39
F2	111	144	7	1.0	5	0.06	0.8	24
	110	306	8	2.4	5	0.06	0.8	36
F3	121	270	9	2.4	5	0.06	0.8	34
	115	288	10	2.9	5	0.06	0.8	35
F4	117	120	11	1.3	5	0.06	0.8	23
	118	94	12	1.1	5	0.06	0.8	21
	126	150	13	2.0	5	0.06	0.8	25
	100	40	14	0.6	5	0.06	0.8	17
F4	101	120	15	1.8	5	0.06	0.8	23
	102	107	16	1.7	5	0.06	0.8	22
	107	972	17	16.5	5	0.06	0.8	86
F4	103	684	18	12.3	5	0.06	0.8	65
	2ND FLOOR	2300	16	36.8	5	0.06	0.8	186
MUA1	108	432	17	7.3	5	0.06	0.8	46
HP1	109	180	18	3.2	5	0.06	0.8	27
HP1	120	270				0.06	0.8	34
HP1	116	288				0.06	0.8	35
-	104	4170						
-	107	1845						
EF2	122							
EF2	123							
EF2	2ND FLOOR R/R							
EF3	127							
EF3	128							

FIRE DAMPER SCHEDULE								
UNIT	BRAND NAME	MODEL NUM.	CFM	SP	SIZE	FIRE RATING	ACTUATION	LOCATION SERVICE
FD-1	RUSKIN	DIBD20G	500	0.3	10"X10"	1.5 HOURS	FUSIBLE LINK	SEE PLAN
FD-2	RUSKIN	DIBD20G	1200	0.3	12"X12"	1.5 HOURS	FUSIBLE LINK	SEE PLAN
FD-3	RUSKIN	DIBD20G	1700	0.3	24"X24"	1.5 HOURS	FUSIBLE LINK	SEE PLAN
FD-4	RUSKIN	DIBD20G	400	0.3	8"X8"	1.5 HOURS	FUSIBLE LINK	SEE PLAN

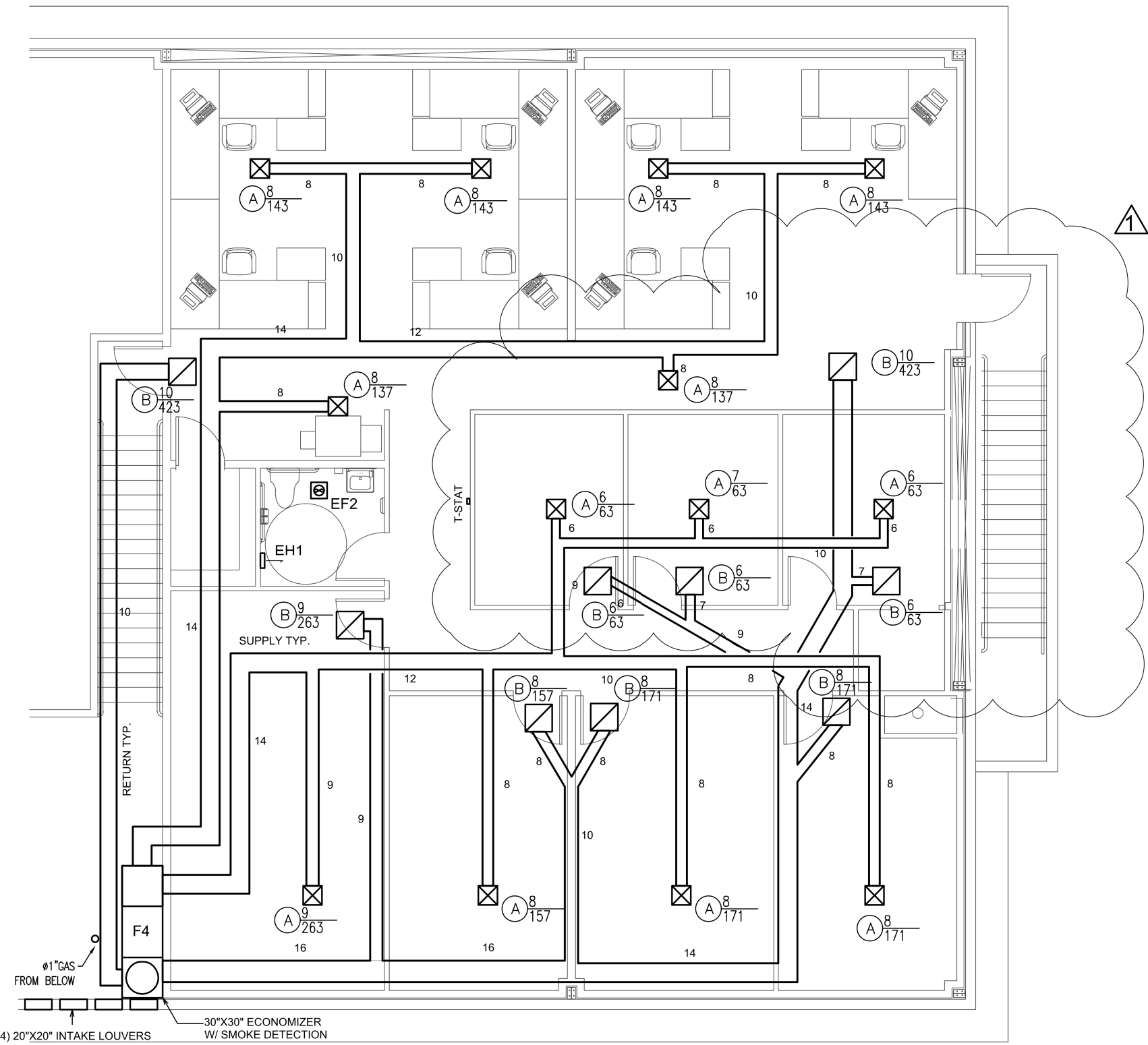
DIFFUSERS AND GRILLES		
TAG	SERVICE	DESCRIPTION
A	SUPPLY	MODULAR CORE DIFFUSER, MIN. NECK SIZE AS INDICATED
B	RETURN	FIXED BLADE GRILLE, MIN. NECK SIZE AS INDICATED



1 LOWER FLOOR MECHANICAL PLAN
1/8" = 1'-0"

EQUIPMENT SCHEDULE

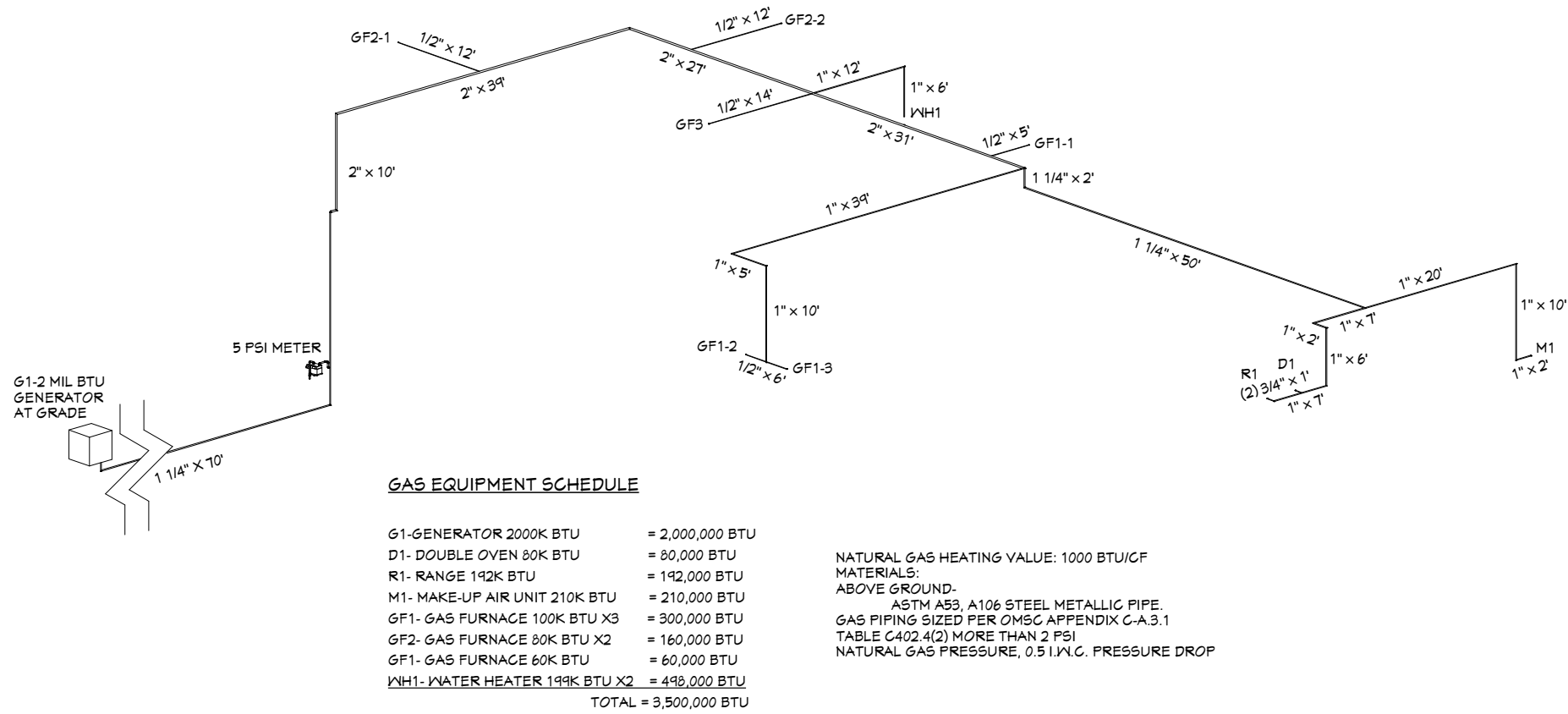
TAG	DESCRIPTION
EF1	INLINE EXHAUST FAN, FANTEK-FKD-12XL 2 STAGE OPERATIONAL
F1	SPLIT SYSTEM FURNACE, 80MBH, 3 TON TM9V080B12MP11C
F2	SPLIT SYSTEM FURNACE, 80 MBH, 4 TON TM9V080C16MP11C W/ ECONOMIZER
HP1	DUCTED MINI SPLIT HEAT PUMP, 18MBH SEZKD18NA4
F3	SPLIT SYSTEM FURNACE, 60MBH TM9V080B12MP11C
F4	SPLIT SYSTEM FURNACE, 100MBH, 5 TON TM9V100C20MP11C W/ ECONOMIZER AND DUCT SMOKE DETECTOR
EF2	EXHAUST FAN, 50 CFM @ 0.25 IWC 4" VENT THRU ROOF TO VENT CAP W/ BACKDRAFT DAMPER
EF3	INLINE EXHAUST FAN, 200 CFM @ 0.25 IWC
MUA1	ELECTRIC MAKE UP AIR UNIT WITH INLINE FAN, 42kW, 2320 CFM @ 0.25 IWC NER-16-42-240/1, W/FAM JD - 400
EH1	ELECTRIC WALL HEATER, 120V, 1000W INTEGRAL T-STAT



2 UPPER FLOOR MECHANICAL PLAN
1/8" = 1'-0"

5-18-17 CHANGE MARK NOTES:

1. DRAWING IS STAMPED BY ARCHITECT OF RECORD.
2. EXPLOSION CONTROL SYSTEM PROVIDED BY OTHERS. RETURN AIR GRILLE REMOVED FROM CO2 EXTRACTION ROOM. EXHAUST SYSTEM PROVIDED.
3. FIRE DAMPERS SHOWN ON ALL DUCTS PENETRATING CONTROL AREAS (ROOMS 108,110,112,114).
4. STRUCTURAL CALCULATIONS FOR SUPPORT OF NEW UNITS PROVIDED BY OTHERS.
5. SIGNED COMCHECK FORMS PROVIDED WITH THIS SUBMITTAL.



3 GAS PIPING ISOMETRIC
NO SCALE

EXPLOSION CONTROL NOTES:

1. PER NFPA 69 SECTION 9 A PREDEFLAGRATION DETECTION AND CONTROL OF IGNITION SOURCES METHOD HAS BEEN DESIGNED.
2. HANDLING AND PROCESSES WHERE FLAMMABLE GASES ARE USED SHALL BE RESTRICTED TO THE DESIGNATED CONTROL AREAS AS INDICATED IN THE ARCHITECTURAL DRAWINGS.
3. PER NFPA 69 SECTION 9.1.2 GAS SENSING SYSTEMS HAVE BEEN SPECIFIED AS A MEANS TO MITIGATE RISK OF IGNITION AND TO CONTROL AND PREVENT DEFLAGRATION. SENSING SYSTEMS ARE SHOWN ON ELECTRICAL DRAWINGS. THESE SYSTEMS ARE INTERLOCKED BY UL LISTED INTERLOCK PANEL PROVIDED BY KIRKLAND DYNAMICS, LLC. KIRKLAND, WASHINGTON. SYSTEM MEETS NFPA 70 ARTICLE 500 SECTION 507.1(K) PROTECTION METHOD. SYSTEM IS INSTALLED IN EACH CONTROL AREA AND ARE COMPLIANT TO NFPA 69 SECTION 9.3.3.1.
4. SEE PROCESS ANALYSIS FOR DEFLAGRATION MITIGATION AND CONTROL PER NFPA 69 SECTION 9.5.
5. DEFLAGRATION PREVENTION AND CONTROL SYSTEM AS PROVIDED BY KIRKLAND DYNAMICS SHALL CONTINUOUSLY MONITOR CONTROL AREAS FOR GAS DETECTION. PROVIDE FOR ACTIVATION OF VENTILATION AND LOCAL ALARM SYSTEMS AS WELL AS REMOVE ALL IGNITION SOURCES WITHIN CONTROL AREAS. SYSTEM SHALL BE COMMISSIONED AND TESTED BY KIRKLAND DYNAMICS ENGINEERS PRIOR TO OPERATION.

GENERAL NOTES:

1. THIS DRAWING IS DIAGRAMMATIC. ALL LOCATIONS ARE APPROXIMATE. BEFORE INSTALLATION, VERIFY ALL ITEMS WITH CONDITIONS AT SITE.
2. THIS DRAWING WAS PREPARED WITH INFORMATION PROVIDED BY OTHERS. RESPONSIBILITY FOR CORRECT INSTALLATION AND LOCATION RESTS WITH MECHANICAL CONTRACTOR.
3. PLUMBER SHALL ROUTE ALL CONDENSATE DRAINS TO NEAREST APPROVED RECEPTACLE, INCLUDING CONDENSATE PUMPS AS NECESSARY.
4. MECHANICAL CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND DUCT IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES.
5. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ALL TRADES FOR EQUIPMENT AND DUCT INSTALLATION.
6. MECHANICAL CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY FOR DUCT & EQUIPMENT INSTALLATION.
7. PLACE NEW CEILING DIFFUSERS AND RETURN GRILLES TO AVOID EXISTING LIGHT FIXTURES.
8. PROVIDE INTERIOR DUCT LINING FOR AT LEAST FIRST 5 DUCT DIAMETERS ON ALL NEW MAIN SUPPLY TRUNK DUCTING.



EXPIRES 12/31/17

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REVISIONS

- 3-1-17
- 4-26-17
- 5-18-17

DRAWING:
MECHANICAL SHEET

FILE:
CHC_M-00
DATE: 12/9/2016

SHEET

M1
1 OF 1