



CONSULTANTS:

MARK	DATE	DESCRIPTION



DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
DKR	DKR	MJV	JML

PROJECT No.:	DATE:	SCALE:
VGFD2001	JULY 2022	AS SHOWN

**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
 New Fire Station (Phase II)



872 Blooming Grove Turnpike  
 New Windsor, NY 12553

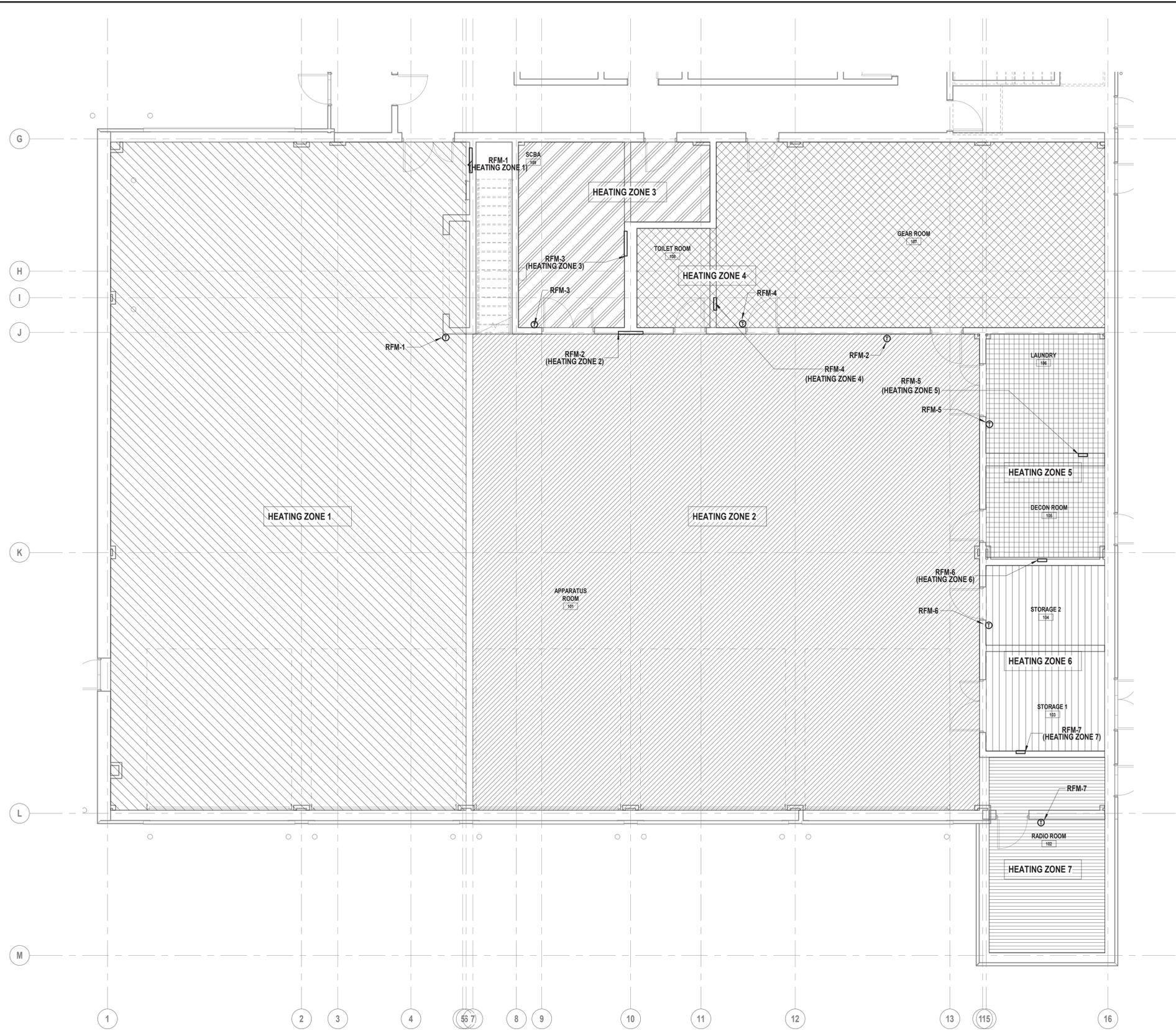
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**GENERAL CONSTRUCTION**

STATUS **FINAL BID DOCUMENT**

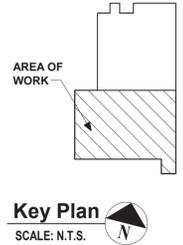
SHEET TITLE **SLAB HVAC PIPING PLAN AREA A**

DRAWING No. **M2 100A.00**

- RADIANT FLOOR ZONE LEGEND:**
- = ZONE 1, CONTAINS RADIANT FLOOR PIPING WITH 10 CIRCUITS TO MANIFOLD RFM-1.
  - = ZONE 2, CONTAINS RADIANT FLOOR PIPING WITH 10 CIRCUITS TO MANIFOLD RFM-2.
  - = ZONE 3, CONTAINS RADIANT FLOOR PIPING WITH 2 CIRCUITS TO MANIFOLD RFM-3.
  - = ZONE 4, CONTAINS RADIANT FLOOR PIPING WITH 4 CIRCUITS TO MANIFOLD RFM-4.
  - = ZONE 5, CONTAINS RADIANT FLOOR PIPING WITH 2 CIRCUITS TO MANIFOLD RFM-5.
  - = ZONE 6, CONTAINS RADIANT FLOOR PIPING WITH 2 CIRCUITS TO MANIFOLD RFM-6.
  - = ZONE 7, CONTAINS RADIANT FLOOR PIPING WITH 2 CIRCUITS TO MANIFOLD RFM-7.



**1 Slab HVAC Piping Plan**  
 SCALE: 3/16" = 1'-0"



CONSULTANTS:

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DESIGNED BY: DKR	DRAWN BY: DKR	CHECKED BY: MJV	REVIEWED BY: JML
PROJECT No: VGFD2001	DATE: JULY 2022	SCALE: AS SHOWN	

**CLIENT**

**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
New Fire Station (Phase II)



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New Windsor, NY 12553

CONTRACT  
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GENERAL CONSTRUCTION**

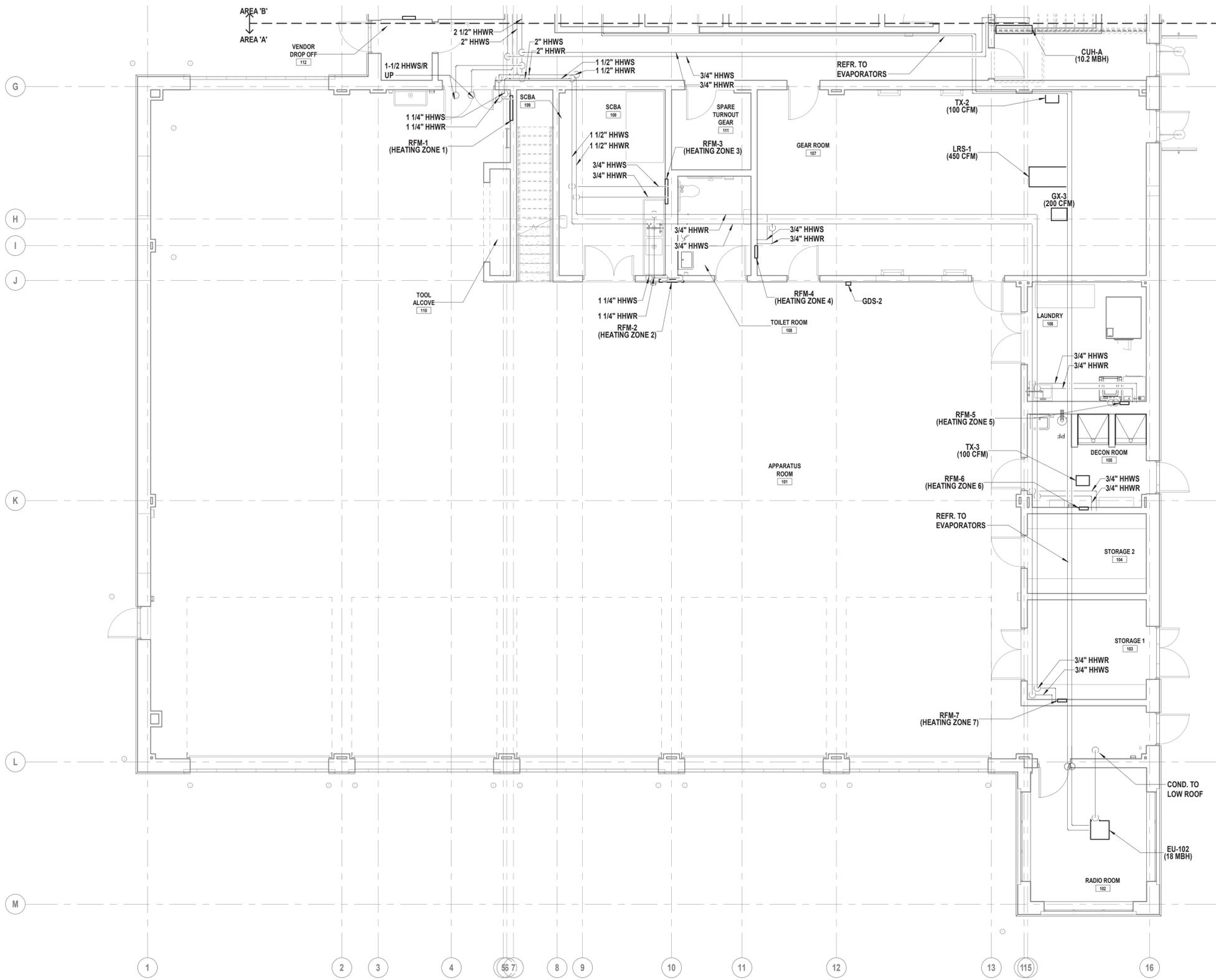
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SHEET TITLE  
**FIRST FLOOR HVAC PIPING PLAN  
AREA A**

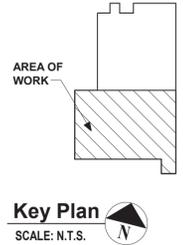
DRAWING No.  
**M2 101A.00**

**GENERAL NOTES:**

- REFRIGERANT PIPING IS SCHEMATIC. COORDINATE REFRIGERANT PIPE SIZE WITH MANUFACTURER. PROVIDE PIPING SHOP DRAWING FROM MANUFACTURER FOR REVIEW.
- ROUTE CONDENSATE PIPING TO NEAREST JANITORS SINK OR ROUTE TO FLOOR DRAIN AS SHOWN. ALL COND. PIPING NOT CONNECTED TO CONDENSATE PUMP (TAGGED AS CDP) TO BE SLOPED DOWN 1/8" -1'-0" MINIMUM TOWARDS DRAIN.
- SEE DETAILS FOR ISOLATION VALVE REQUIREMENTS.



**1 First Floor HVAC Piping Plan**  
SCALE: 3/16" = 1'-0"



**GENERAL NOTES:**

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PROJECT No: VGFD2001	DATE: JULY 2022	SCALE: AS SHOWN	

**CLIENT**  
**VAILS GATE FIRE DISTRICT**

**New Storage Building (Phase I)**  
**New Fire Station (Phase II)**



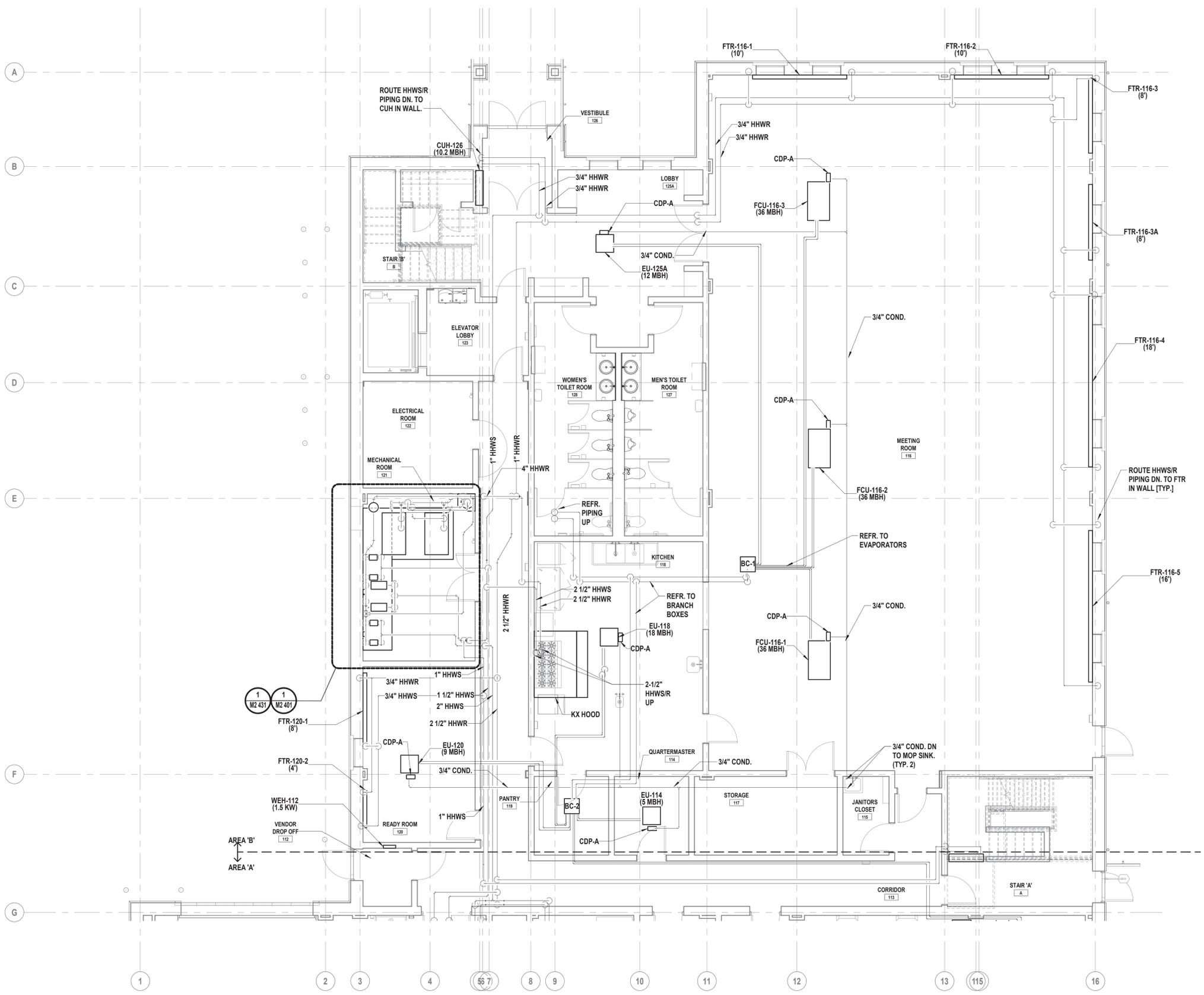
872 Blooming Grove Turnpike  
New Windsor, NY 12553

**CONTRACT**  
**CONTRACT G**  
**GENERAL CONSTRUCTION**

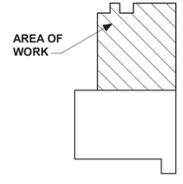
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**FINAL BID DOCUMENT**

**SHEET TITLE**  
**FIRST FLOOR HVAC PIPING PLAN**  
**AREA B**

**DRAWING No.**  
**M2 101B.00**



**1 First Floor HVAC Piping Plan**  
SCALE: 3/16" = 1'-0"



**Key Plan**  
SCALE: N.T.S.

CONSULTANTS:

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DESIGNED BY: DKR	DRAWN BY: DKR	CHECKED BY: MJV	REVIEWED BY: JML
PROJECT No: VGFD2001	DATE: JULY 2022	SCALE: AS SHOWN	

**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
New Fire Station (Phase II)



872 Blooming Grove Turnpike  
New Windsor, NY 12553

CONTRACT  
**CONTRACT G**  
GENERAL CONSTRUCTION

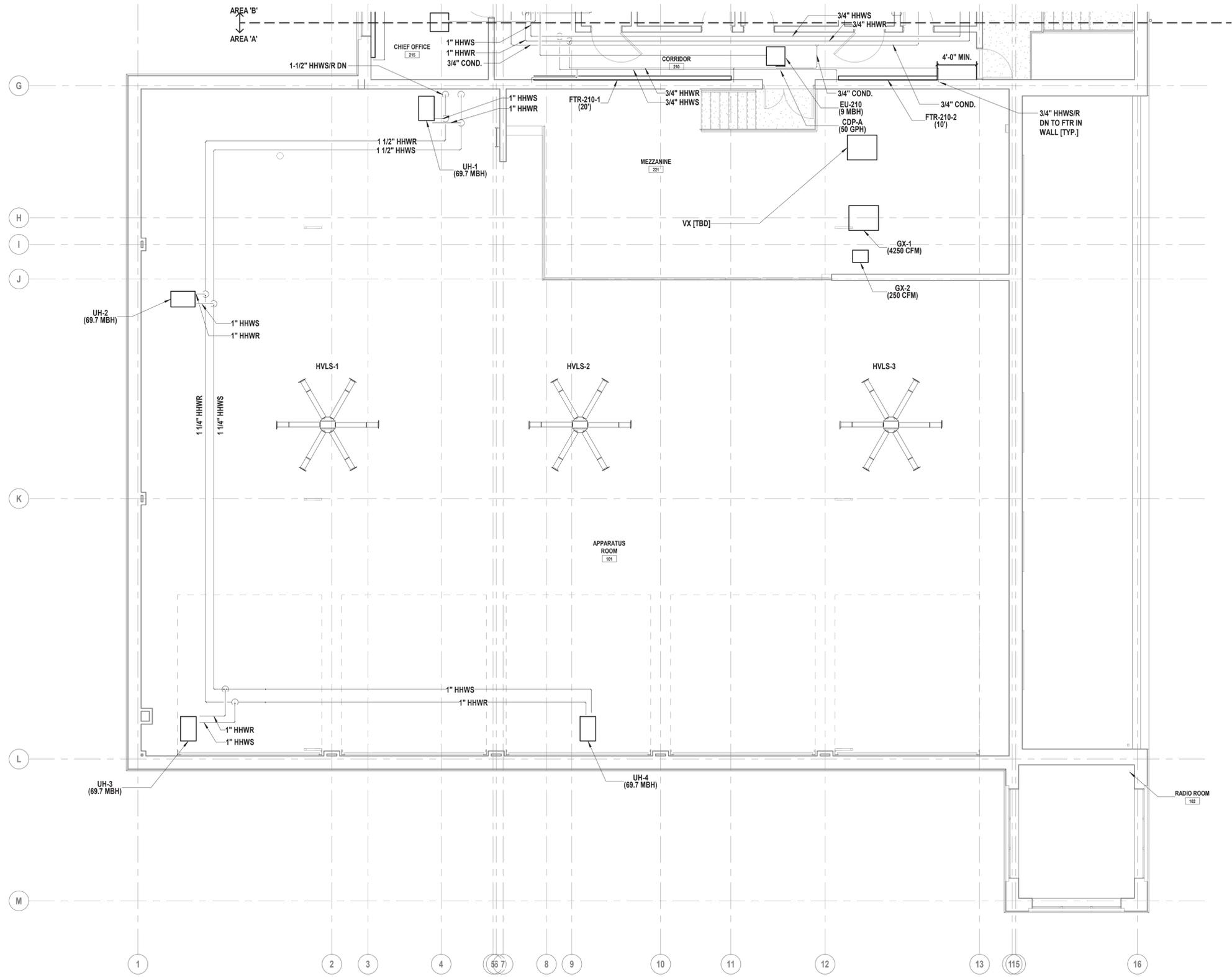
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SHEET TITLE  
**SECOND FLOOR HVAC PIPING PLAN  
AREA A**

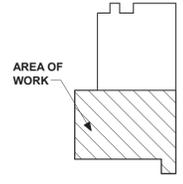
DRAWING No.  
**M2 102A.00**

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  - SEE DETAILS FOR ISOLATION VALVE REQUIREMENTS.

**KEYED NOTES:**  
VX BY DISTRICT FOR REFERENCE ONLY



**1 Second Floor HVAC Piping Plan**  
SCALE: 3/16" = 1'-0"



**Key Plan**  
SCALE: N.T.S.

CONSULTANTS:

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DESIGNED BY: DKR	DRAWN BY: DKR	CHECKED BY: MJV	REVIEWED BY: JML
PROJECT No: VGFD2001	DATE: JULY 2022	SCALE: AS SHOWN	

**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
New Fire Station (Phase II)



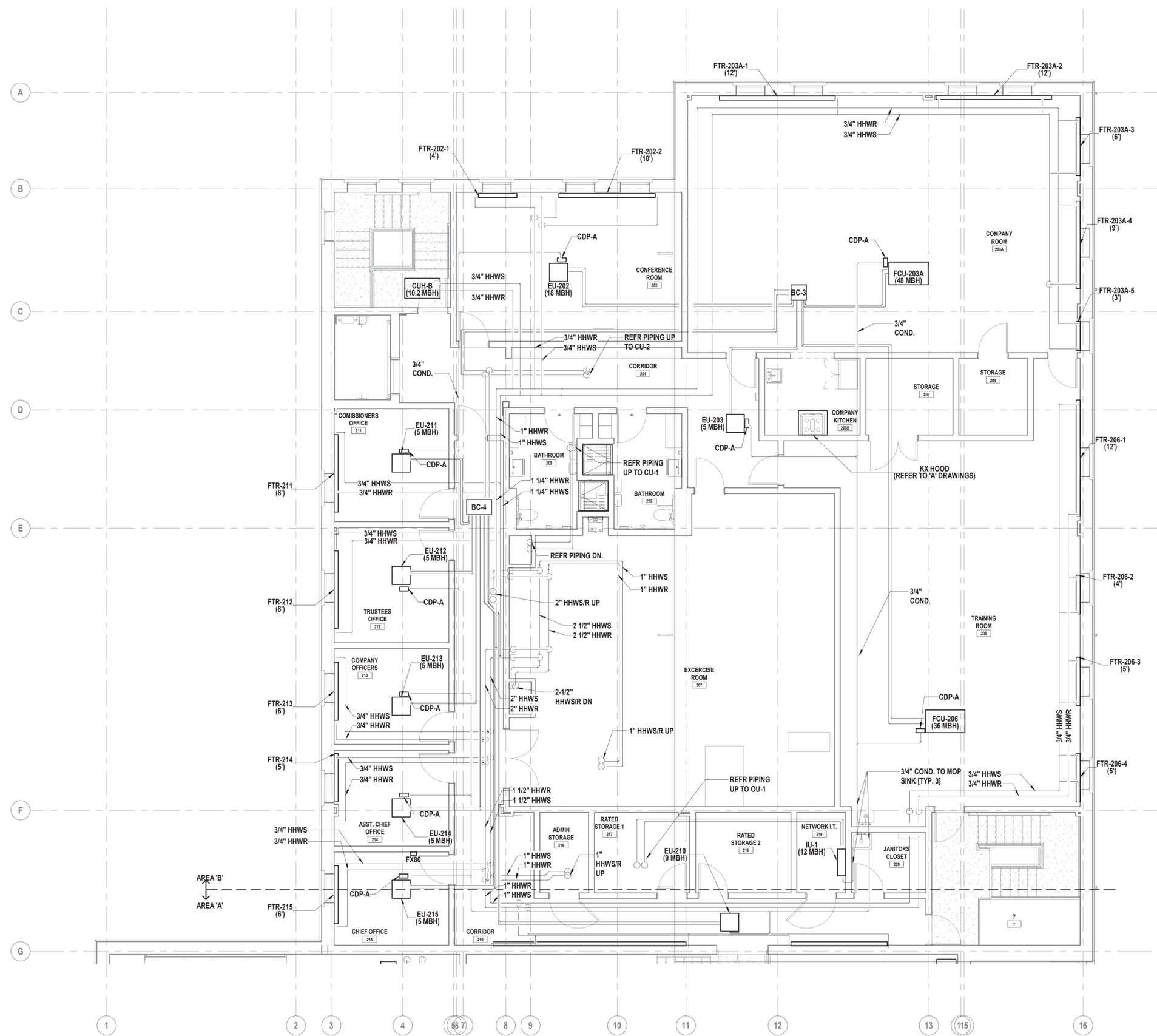
872 Blooming Grove Turnpike  
New Windsor, NY 12553

CONTRACT  
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GENERAL CONSTRUCTION**

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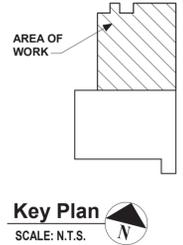
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**SECOND FLOOR HVAC PIPING PLAN  
AREA B**

DRAWING No.  
**M2 102B.00**



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**1 Second Floor HVAC Piping Plan**  
SCALE: 3/16" = 1'-0"



CONSULTANTS:

MARK	DATE	DESCRIPTION



DESIGNED BY: DKR	DRAWN BY: DKR	CHECKED BY: MJV	REVIEWED BY: JML
PROJECT No: VGFD2001	DATE: JULY 2022	SCALE: AS SHOWN	

**CLIENT**

**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
New Fire Station (Phase II)



872 Blooming Grove Turnpike  
New Windsor, NY 12553

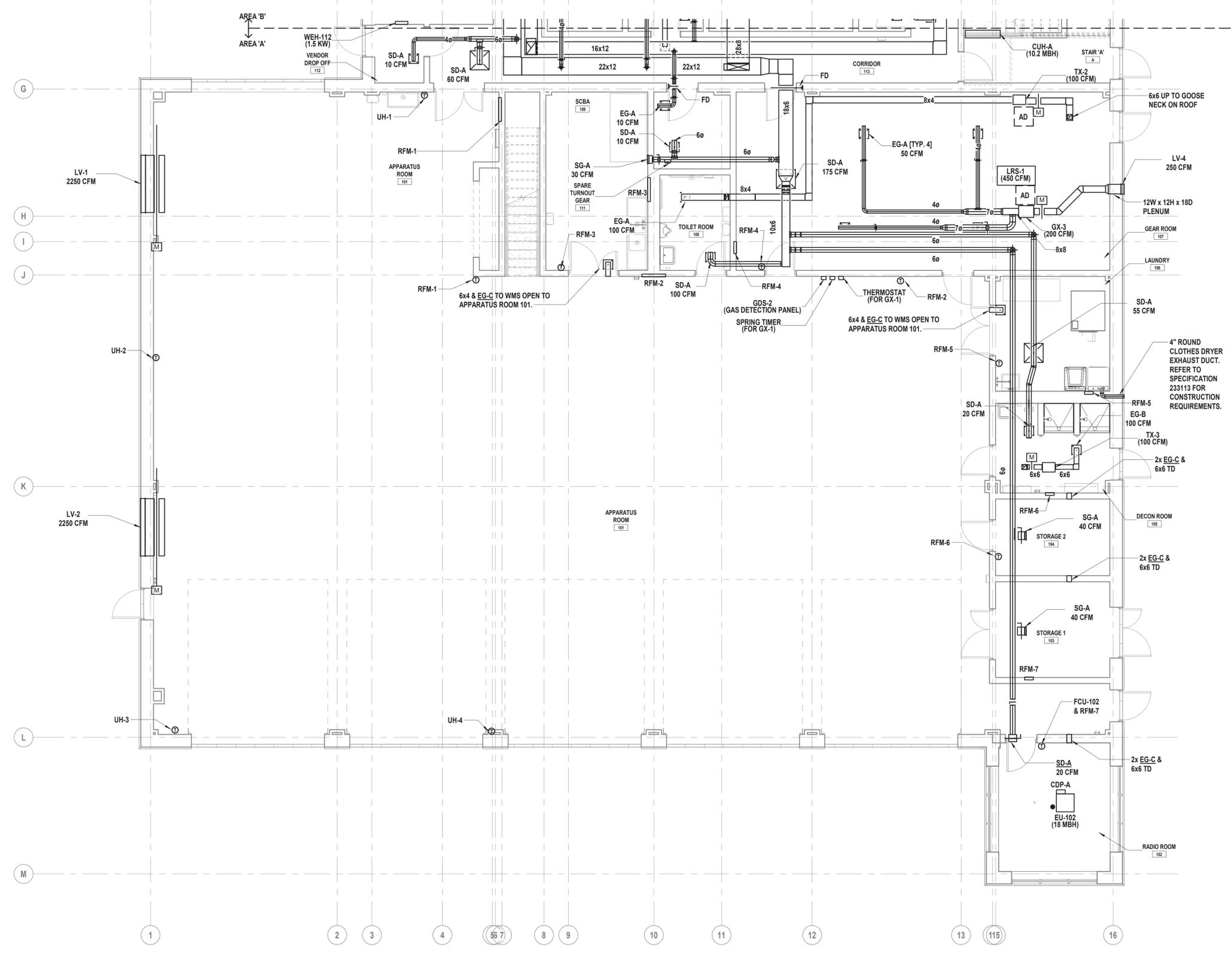
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**CONTRACT G  
GENERAL CONSTRUCTION**

STATUS  
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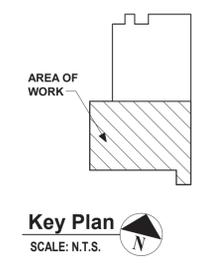
SHEET TITLE  
**FIRST FLOOR DUCTWORK PLAN  
AREA A**

DRAWING No.  
**M2 131A.00**

- GENERAL NOTES:**
- ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS. REFER TO SPECIFICATIONS FOR ALL DUCT CONSTRUCTION REQUIREMENTS.
  - ALL SUPPLY, RETURN AND EXHAUST BRANCH DUCTWORK SHALL BE PROVIDED WITH VOLUME DAMPERS.
  - MAINTAIN 10'-0" CLEARANCE BETWEEN OUTSIDE AIR AND EXHAUST AIR TERMINATIONS ON ROOF.
  - PROVIDE SOUND PROOFED PENETRATIONS THROUGH ALL NON FIRE RATED INTERIOR WALLS. USE TREMCO ACOUSTICAL SEALANT OR APPROVED EQUAL.



**1 First Floor Ductwork Plan**  
SCALE: 3/16" = 1'-0"



- GENERAL NOTES:**
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**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
 New Fire Station (Phase II)

872 Blooming Grove Turnpike  
 New Windsor, NY 12553

CONTRACT

**CONTRACT G  
 GENERAL CONSTRUCTION**

STATUS

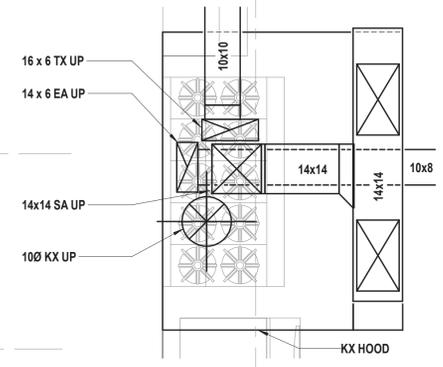
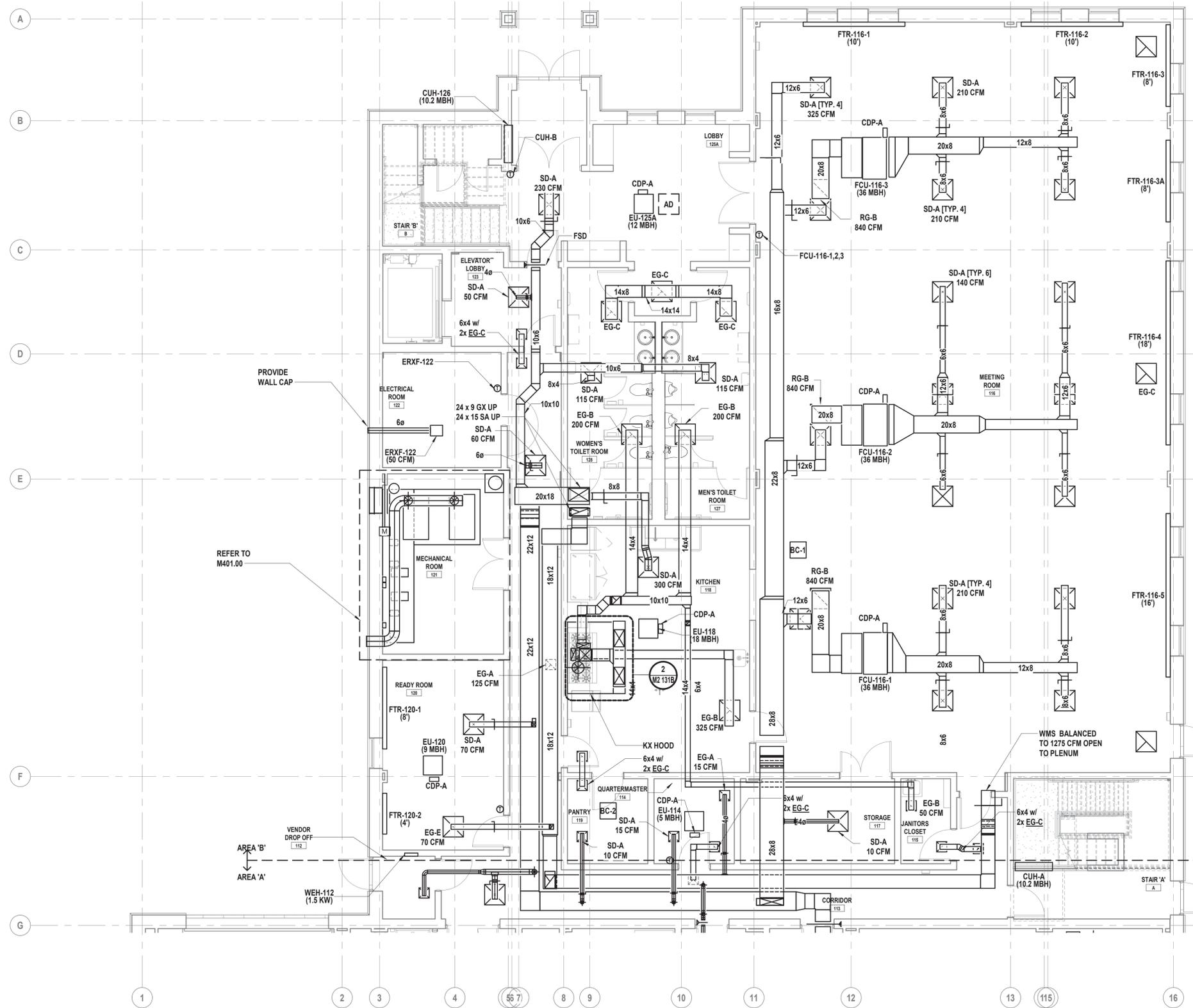
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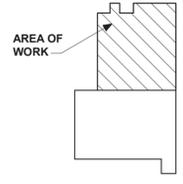
**FIRST FLOOR DUCTWORK PLAN  
 AREA B**

DRAWING No.

**M2 131B.00**



**2 HVAC KITCHEN HOOD EXPANDED VIEW**  
 SCALE: 1/2" = 1'-0"



**Key Plan**  
 SCALE: N.T.S.

**1 First Floor Ductwork Plan**  
 SCALE: 3/16" = 1'-0"

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CONSULTANTS:

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DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
DKR	DKR	MJV	JML
PROJECT No:	DATE:	SCALE:	
VGFD2001	JULY 2022	AS SHOWN	

**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
New Fire Station (Phase II)



872 Blooming Grove Turnpike  
New Windsor, NY 12553

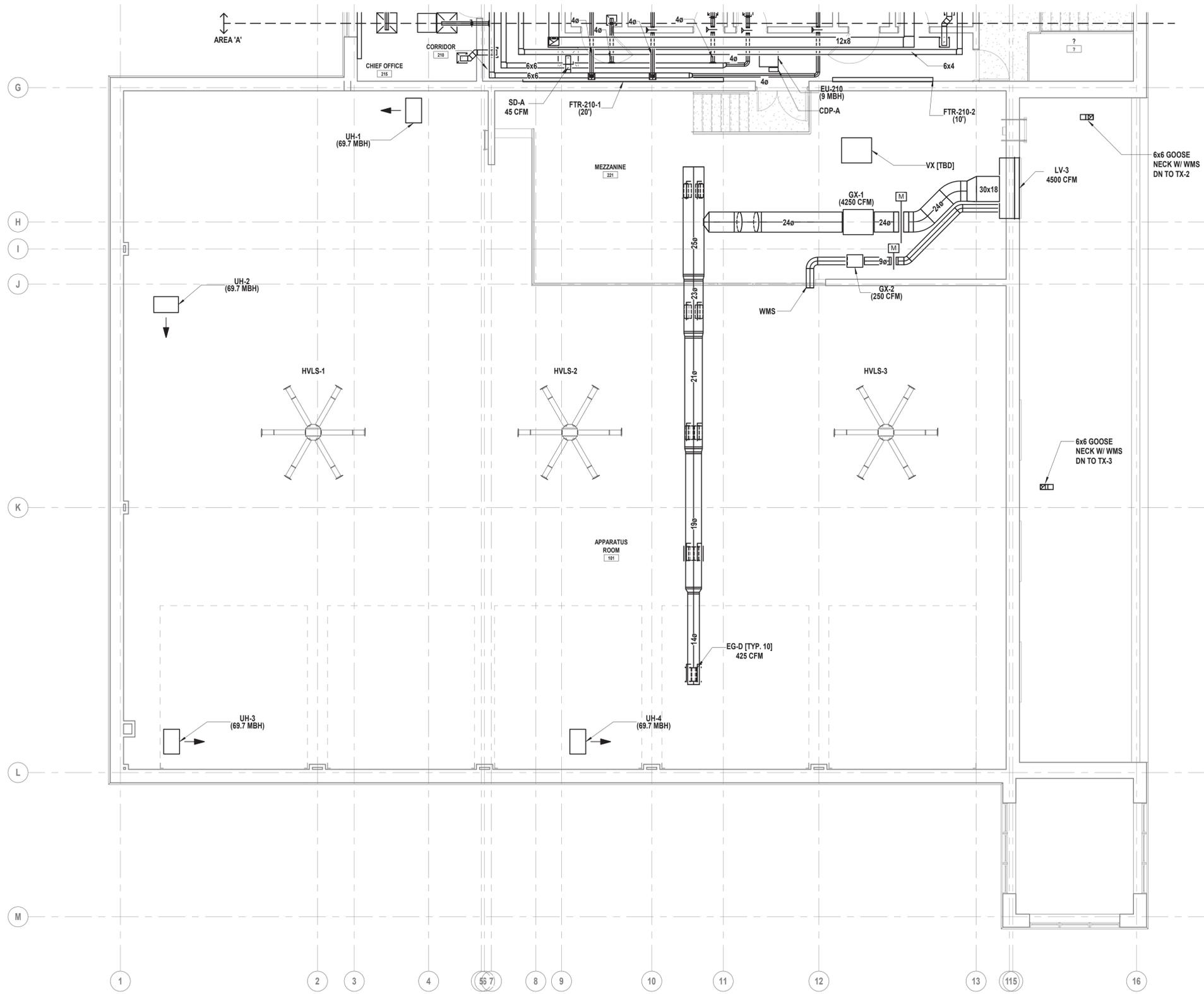
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**GENERAL CONSTRUCTION**

STATUS **FINAL BID DOCUMENT**

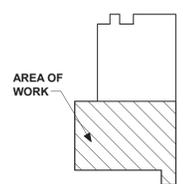
SHEET TITLE  
**SECOND FLOOR DUCTWORK PLAN  
AREA A**

DRAWING No. **M2 132A.00**

- GENERAL NOTES:**
- ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS. REFER TO SPECIFICATIONS FOR ALL DUCT CONSTRUCTION REQUIREMENTS.
  - ALL SUPPLY, RETURN AND EXHAUST BRANCH DUCTWORK SHALL BE PROVIDED WITH VOLUME DAMPERS.
  - MAINTAIN 10'-0" CLEARANCE BETWEEN OUTSIDE AIR AND EXHAUST AIR TERMINATIONS ON ROOF.
  - PROVIDE SOUND PROOFED PENETRATIONS THROUGH ALL NON FIRE RATED INTERIOR WALLS. USE TREMCO ACOUSTICAL SEALANT OR APPROVED EQUAL.



**1 Second Floor Ductwork Plan**  
SCALE: 3/16" = 1'-0"



**Key Plan**  
SCALE: N.T.S.

**GENERAL NOTES:**

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- PROVIDE SOUND PROOFED PENETRATIONS THROUGH ALL NON FIRE RATED INTERIOR WALLS. USE TREMCO ACOUSTICAL SEALANT OR APPROVED EQUAL.

**KEYED NOTES:**

- DENLAR D1030-D-JF-G HOOD AND FAN SHOWN. REFER TO ARCHITECTURAL DRAWINGS.

CONSULTANTS:

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DESIGNED BY: DKR	DRAWN BY: DKR	CHECKED BY: MJV	REVIEWED BY: JML
PROJECT No: VGFD2001	DATE: JULY 2022	SCALE: AS SHOWN	

**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
 New Fire Station (Phase II)



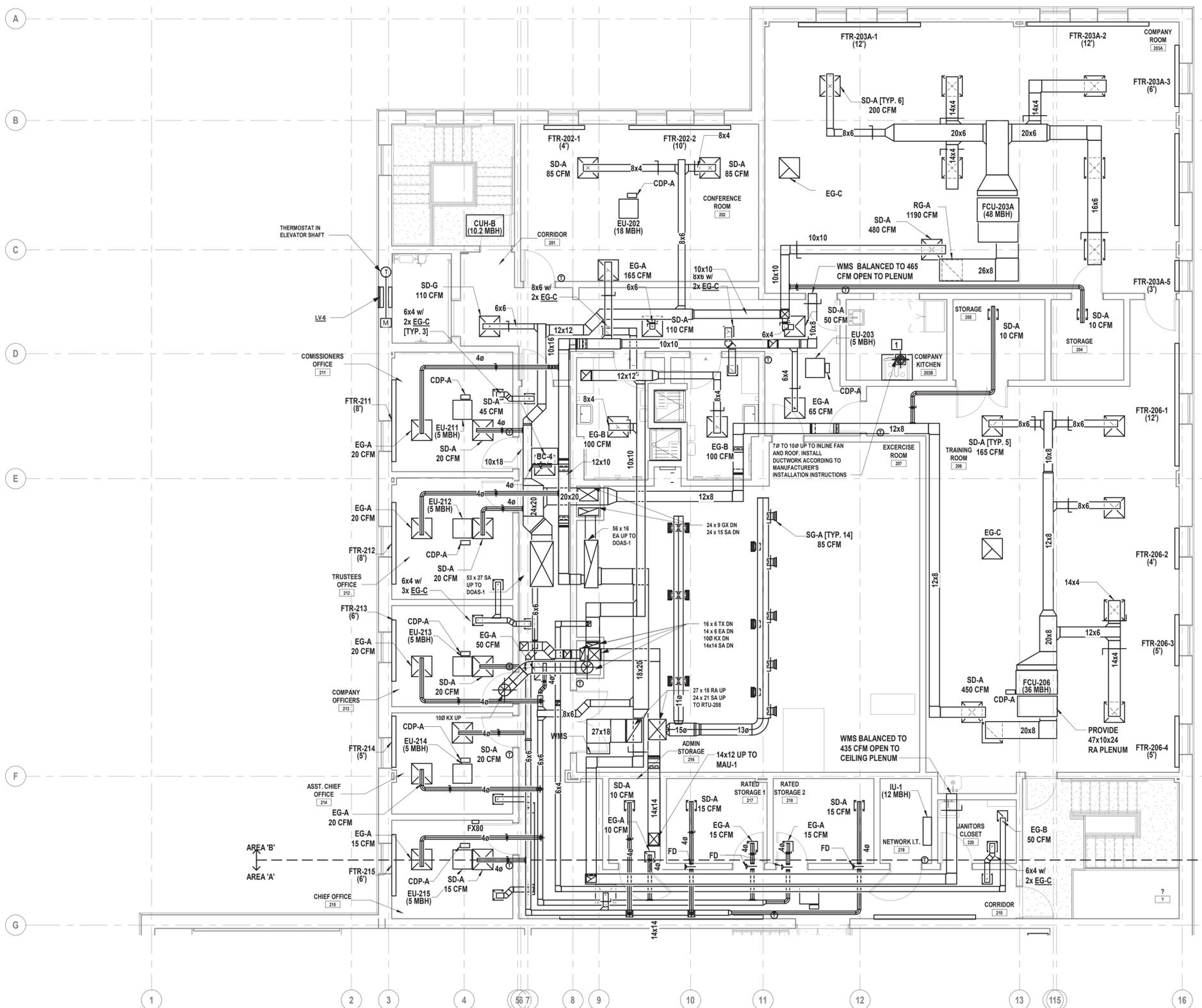
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 New Windsor, NY 12553

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**GENERAL CONSTRUCTION**

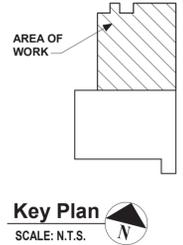
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**SHEET TITLE**  
**SECOND FLOOR DUCTWORK PLAN**  
**AREA B**

**DRAWING No.**  
**M2 132B.00**



**1 Second Floor Ductwork Plan**  
 SCALE: 3/16" = 1'-0"



CONSULTANTS:

MARK	DATE	DESCRIPTION



DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
DKR	DKR	MJV	JML
PROJECT No:	DATE:	SCALE:	
VGFD2001	JULY 2022	AS SHOWN	

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**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
 New Fire Station (Phase II)



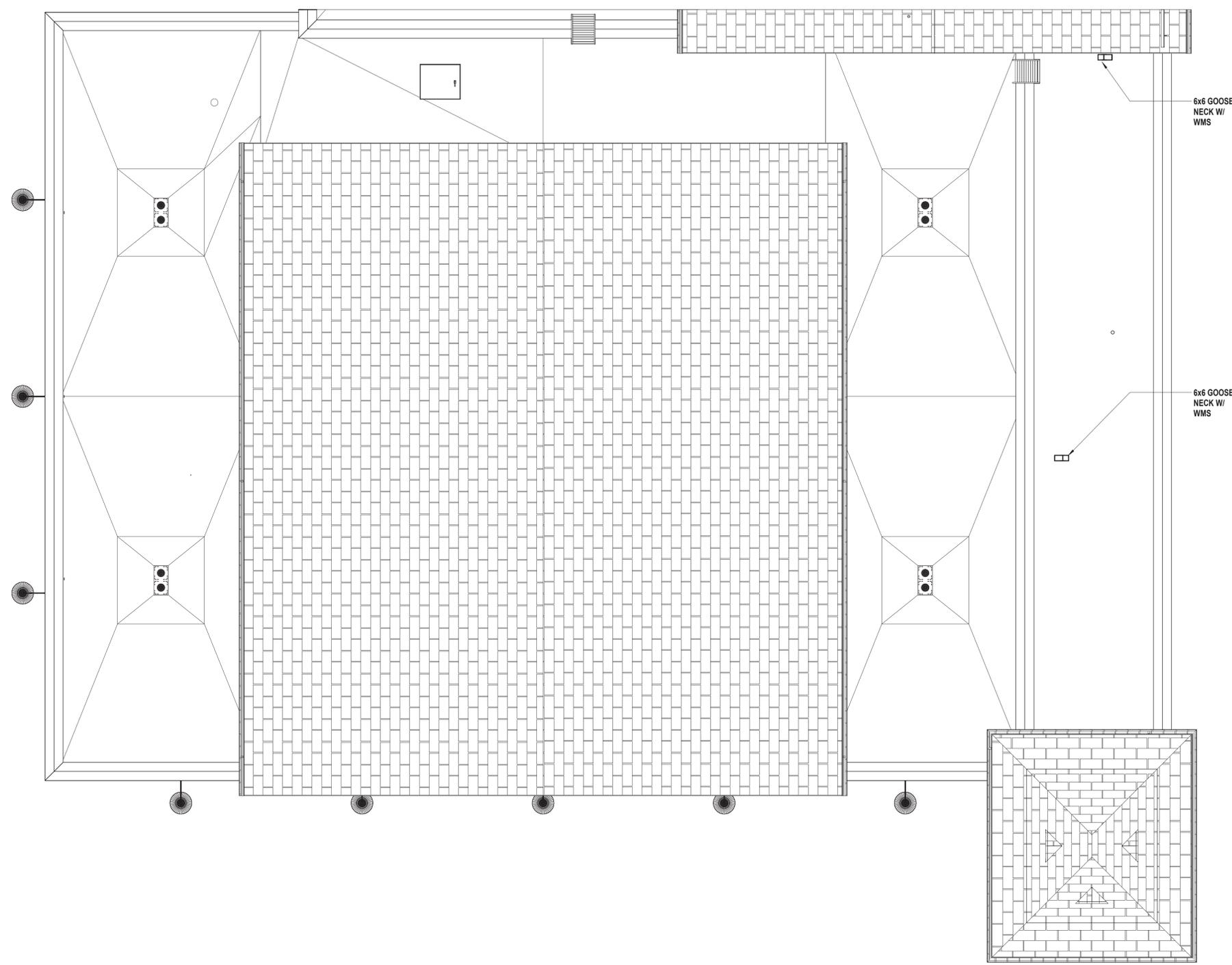
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 New Windsor, NY 12553

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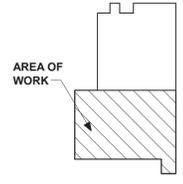
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SHEET TITLE  
**HVAC ROOF PLAN AREA A**

DRAWING No.  
**M2 133A.00**



**1 ROOF AREA A**  
 SCALE: 3/16" = 1'-0"



**Key Plan**  
 SCALE: N.T.S.

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DESIGNED BY:	DRAWN BY:	CHECKED BY:	REVIEWED BY:
DKR	DKR	MJV	JML
PROJECT No: VGFD2001	DATE: JULY 2022	SCALE: AS SHOWN	

**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
 New Fire Station (Phase II)



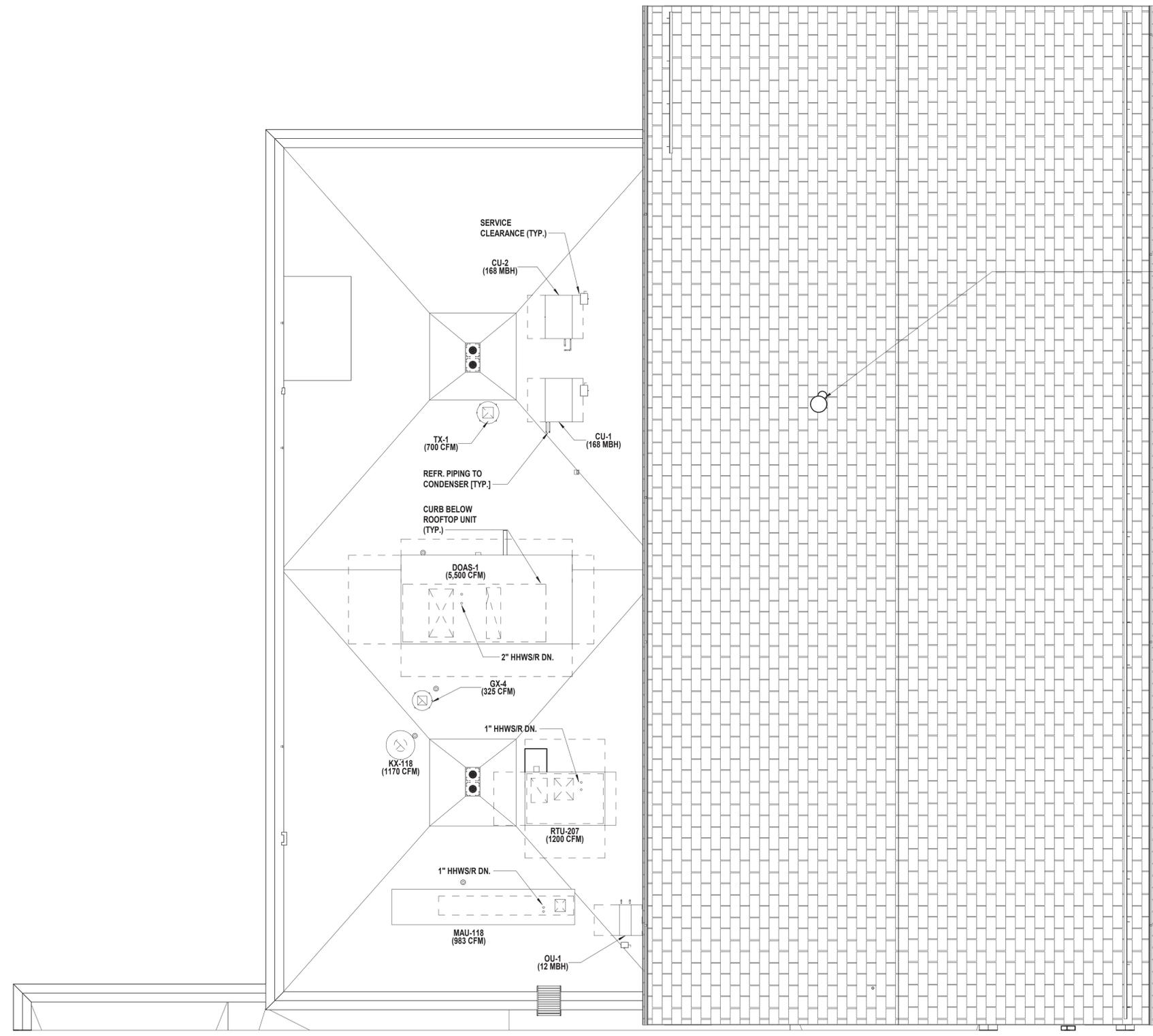
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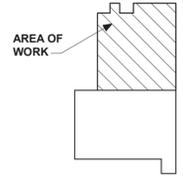
SHEET TITLE  
**HVAC ROOF PLAN AREA B**

DRAWING No.  
**M2 133B.00**



PROVIDE ROOF CAP ASSOCIATED WITH DENLAR D1030-D-IF-G HOOD AND FAN. INSTALL ACCORDING TO MANUFACTURER'S INSTALLATION INSTRUCTIONS

**1 ROOF AREA B**  
 SCALE: 3/16" = 1'-0"



**Key Plan**  
 SCALE: N.T.S.

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CONTRACT  
**CONTRACT G  
GENERAL CONSTRUCTION**

STATUS  
**FINAL BID DOCUMENT**

SHEET TITLE  
**BOILER ROOM EXPANDED HVAC  
PIPING PLAN**

DRAWING No.  
**M2 401.00**

- GENERAL NOTES:**
1. ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS. REFER TO SPECIFICATIONS FOR ALL DUCT CONSTRUCTION REQUIREMENTS.
  2. ALL SUPPLY, RETURN AND EXHAUST BRANCH DUCTWORK SHALL BE PROVIDED WITH VOLUME DAMPERS.
  3. MAINTAIN 10'-0" CLEARANCE BETWEEN OUTSIDE AIR AND EXHAUST AIR TERMINATIONS ON ROOF.
  4. COORDINATE WITH NEW STRUCTURE, OFFSET AS REQUIRED.
  5. MAINTAIN HEADROOM FOR ALL NEW HORIZONTAL DUCTWORK (6'-8" MINIMUM).
  6. PROVIDE SOUND PROOFED PENETRATIONS THROUGH ALL NON FIRE RATED INTERIOR WALLS, USE TREMCO ACOUSTICAL SEALANT OR APPROVED EQUAL.

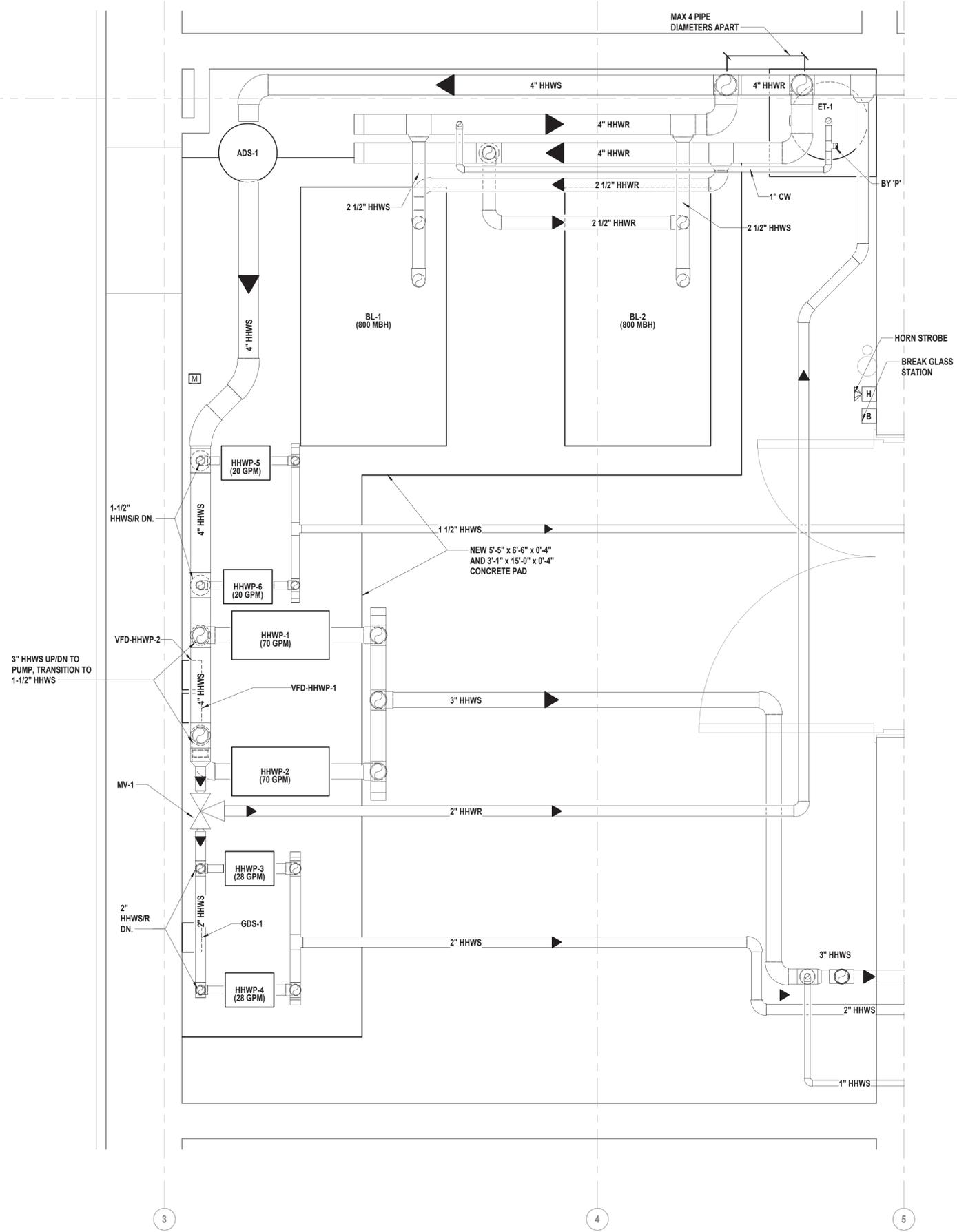
**COMBUSTION AIR REQUIRED:**

BOILER GAS INPUT RATING (CFH): 800 (PER BOILER)  
DOMESTIC WATER HEATER GAS INPUT RATING (MBH): 120  
TOTAL GAS INPUT RATING (MBH): (800 x 2) + 120 = 1,720

\*TO PROVIDE COMBUSTION AIR USING MECHANICAL COMBUSTION AIR SUPPLY IN ACCORDANCE WITH SECTION 304.9 OF THE 2020 NYS FUEL GAS CODE AND SECTION 701.1 OF THE 2020 NYS MECHANICAL CODE (I.E. NFPA 31).

VOLUMETRIC FLOW RATE OF COMBUSTION AIR REQUIRED BY CODE:  
1 IN<sup>3</sup>/2 PER 3,000 MBH OF TOTAL INPUT RATING OF ALL APPLIANCES LOCATED WITHIN THE SPACE

FREE AREA REQUIRED:  
1,720 MBH x (1 IN<sup>3</sup>/2 / 3,000 MBH) = 573.33 IN<sup>2</sup> x 1 FT<sup>2</sup> / 144 IN<sup>2</sup> = 3.98 FT<sup>2</sup>  
COMBUSTION AIR FREE AREA PROVIDED: 4.07 FT<sup>2</sup> > 3.98 FT<sup>2</sup>



**1 Boiler Room Partial Piping Floor Plan**  
SCALE: 1" = 1'-0"

CONSULTANTS:

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DESIGNED BY: JML	DRAWN BY: DKR	CHECKED BY: MJV	REVIEWED BY: JML
PROJECT No: VGFD2001	DATE: JULY 2022	SCALE: AS SHOWN	

**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
New Fire Station (Phase II)



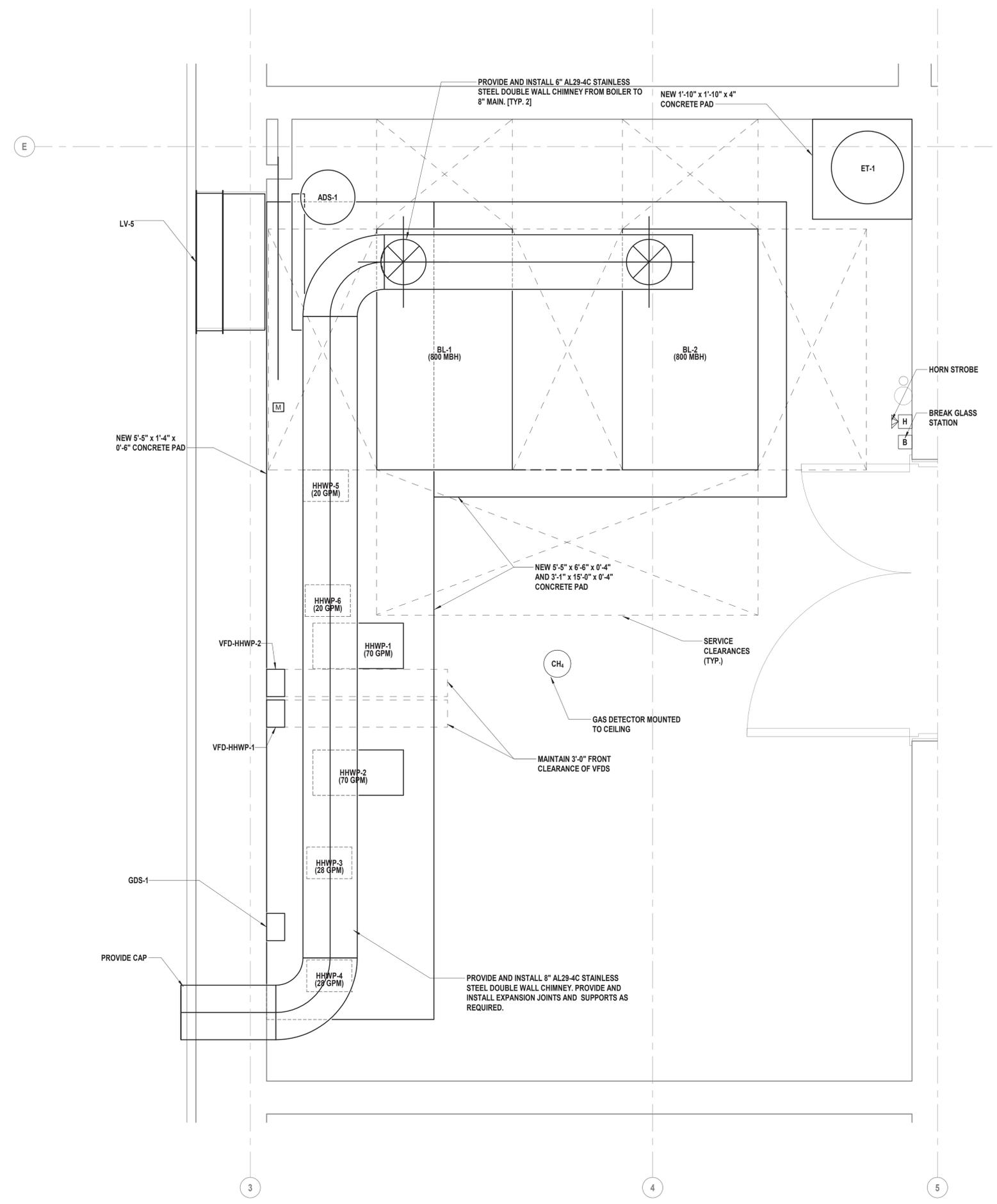
872 Blooming Grove Turnpike  
New Windsor, NY 12553

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**CONTRACT G**  
GENERAL CONSTRUCTION

STATUS  
**FINAL BID DOCUMENT**

SHEET TITLE  
**BOILER ROOM EXPANDED HVAC EQUIPMENT AND DUCTWORK PLAN**

DRAWING No.  
**M2 431.00**



**1 Boiler Room Partial Equipment and Breaching Floor Plan**  
SCALE: 1" = 1'-0"









VENTILATION INDEX BASED ON 2020 NEW YORK STATE MECHANICAL CODE													
ROOM NUMBER	ROOM NAME	OCCUPANCY CLASSIFICATION	FLOOR AREA (SF)	OCCUPANCY LOAD (PERSONS/1000 SF)	NUMBER OF OCCUPANTS	OCCUPANT BASED OA RATE (CFM/OCCUPANT)	AREA BASED OUTSIDE AIR RATE (CFM/SF)	EXHAUST RATE (CFM/SF)	FIXTURES	UNCORRECTED OA (CFM)	EFFICIENCY FACTOR (HEATING)	CORRECTED OA [HEATING] (CFM)	EXHAUST REQUIRED (CFM)
101 / 223	APP BAY	GARAGE	5051	0	0	0	0.00	0.75	0	0	0.80	0	3788
	MEZZANINE	GARAGE	900	0	0	0	0.00	0.75	0	0	0.80	0	675
102	RADIO ROOM	OFFICE	158	5	1	5	0.06	0.00	0	14	0.80	18	0
103	STORAGE1	STORAGE	121	0	0	0	0.12	0.00	0	15	0.80	18	0
104	STORAGE2	STORAGE	97	0	0	0	0.12	0.00	0	12	0.80	15	0
105	DECON	TOILET	117	0	0	0	0.00	0.00	2	-	-	-	100
106	LAUNDRY	LAUNDRY	145	20	3	7	0.12	0.00	0	40	0.80	50	0
107	GEAR ROOM	LOCKER	735	0	0	0	0.00	0.25	0	-	-	-	184
108	TOILET	TOILET	67	0	0	0	0.00	0.00	1	-	-	-	50
109	SCBA	OFFICE	201	5	2	5	0.06	0.00	0	22	0.80	28	0
111	SPARE TURNOUT GEAR	STORAGE	65	0	0	0	0.06	0.00	0	4	0.80	5	0
112	VENDOR DROP OFF	CORRIDOR	45	0	0	0	0.06	0.00	0	3	0.80	3	0
113	CORRIDOR	CORRIDOR	556	0	0	0	0.06	0.00	0	33	0.80	42	0
114	QUARTERMASTER	OFFICE	66	5	1	5	0.06	0.00	0	9	0.80	11	0
115	JC	JC	41	0	0	0	0.00	0.00	1	-	-	-	50
116	MEETING	CONFERENCE	3000	50	150	5	0.06	0.00	0	930	0.80	1163	0
117	STORAGE	STORAGE	126	0	0	0	0.06	0.00	0	15	0.80	19	0
118	KITCHEN	KITCHEN	433	20	9	7	0.12	0.70	0	119	0.80	149	303
119	PANTRY	STORAGE	66	0	0	0	0.06	0.00	0	4	0.80	5	0
120	READY ROOM	DAY ROOM	221	30	7	5	0.06	0.00	0	48	0.80	60	0
123	ELEVATOR LOBBY	CORRIDOR	45	0	0	0	0.06	0.00	0	3	0.80	3	0
125A	LOBBY	LOBBY	353	10	4	5	0.06	0.00	0	41	0.80	51	0
126	VESTIBULE	CORRIDOR	53	0	0	0	0.00	0.00	0	0	0.80	0	0
127	TOILET	TOILET	187	0	0	0	0.00	0.00	4	-	-	-	200
128	TOILET	TOILET	185	0	0	0	0.00	0.00	4	-	-	-	200
201	CORRIDOR	CORRIDOR	186	0	0	0	0.06	0.00	0	11	0.80	14	0
202	MEETING	CONFERENCE	381	50	20	5	0.06	0.00	0	123	0.80	154	0
203	MEMBER VESTIBULE	LOBBY/PREUNCTION	126	30	4	7	0.06	0.00	0	38	0.80	47	0
203A	COMPANY ROOM	CONFERENCE	1082	50	55	5	0.06	0.00	0	340	0.80	425	0
203B	KITCHEN	KITCHEN	78	20	2	7	0.12	0.70	0	24	0.80	30	55
204	STORAGE	STORAGE	39	0	0	0	0.06	0.00	0	5	0.80	6	0
205	STORAGE	STORAGE	78	0	0	0	0.06	0.00	0	9	0.80	12	0
206	TRAINING ROOM	CONFERENCE	1005	50	51	5	0.06	0.00	0	315	0.80	394	0
207	EXERCISE ROOM	WEIGHT ROOM	1000	10	10	20	0.06	0.00	0	260	0.80	325	0
208	BATHROOM	BATHROOM	95	0	0	0	0.00	0.00	2	-	-	-	100
209	BATHROOM	BATHROOM	95	0	0	0	0.00	0.00	2	-	-	-	100
210	CORRIDOR	CORRIDOR	505	0	0	0	0.06	0.00	0	30	0.80	38	0
211	COMMISSIONER'S OFFICE	OFFICE	144	5	1	5	0.06	0.00	0	14	0.80	17	0
212	TRUSTEE'S OFFICE	OFFICE	142	5	1	5	0.06	0.00	0	14	0.80	17	0
213	COMPANY OFFICERS	OFFICE	118	5	1	5	0.06	0.00	0	12	0.80	15	0
214	ASST. CHIEF'S OFFICE	OFFICE	118	5	1	5	0.06	0.00	0	12	0.80	15	0
215	CHIEF'S OFFICE	OFFICE	115	5	1	5	0.06	0.00	0	12	0.80	15	0
216	ADMIN STORAGE	STORAGE	42	0	0	0	0.06	0.00	0	5	0.80	6	0
217	RATED STORAGE 1	STORAGE	82	0	0	0	0.06	0.00	0	10	0.80	12	0
218	RATED STORAGE 1	STORAGE	82	0	0	0	0.06	0.00	0	10	0.80	12	0
220	JC	JC	64	0	0	0	0.00	0.00	1	-	-	-	50

AIR OUTLETS						
SYMBOL	BASIS OF DESIGN: MNF / MODEL NO.	DESCRIPTION	FACE SIZE (IN)	AIR FLOW RANGE (CFM)	NECK SIZE (IN.)	REMARKS
	NAILOR AUNI	SQUARE FACE CEILING DIFFUSER	24 X 24 OR 12 X 12, SEE DRAWINGS	0-200 201-230 231-320 321-460	6"Ø 8"Ø 10"Ø 12"Ø	1
	NAILOR 610V-O	DOUBLE DEFLECTION SUPPLY GRILLE	8 x 8 12 x 8 14 x 8	0-100 101-225 226-290	6 x 6 10 x 6 12 x 6	1
	NAILOR 61FB45-O	RETURN GRILLE	24 X 24	0-1190	20 x 20	1,3
	NAILOR 6145H-O	EXHAUST GRILLE	24 X 24 OR 12 X 12, SEE DRAWINGS	0-150 151-420	6x6 12 x 10	1
	NAILOR 5145H-OA	EXHAUST GRILLE	24 X 24 OR 12 X 12, SEE DRAWINGS	0-100 101-200 201-325	6x6 8x6 12x8	1,2
	NAILOR 5145H	EXHAUST GRILLE	24 x 24 OR 12 x 12, SEE DRAWINGS	N/A [MATCH DUCTWORK OR OPEN TO PLENUM]	N/A [MATCH DUCTWORK OR OPEN TO PLENUM]	1,2
	NAILOR 6145HC	EXHAUST GRILLE	18 x 10	0-450	16 x 8	1

- NOTES:
- PROVIDE VOLUME DAMPERS FOR ALL AIR INLETS AND OUTLETS
  - ALL ALUMINUM CONSTRUCTION (TERMINAL AND DAMPER), PROVIDE ALUMINUM CONSTRUCTION IN SHOWER AREAS.
  - PROVIDE WITH 2" FILTER BOX AND MERV-8 FILTER.

VEHICLE GAS DETECTION SYSTEM						
EQMT. NO.	LOCATION	SYSTEM SERVED	BASIS OF DESIGN INFORMATION			NOTES
			MNF	MODEL NO.	NOMINAL DIMENSIONS L" x W" x H"	
GDS-2	APPARATUS BAY	GX-2	RKI BEACON	410A (4 CHANNEL)	10.5 x 6.5 x 14	120/1 1-7

- NOTES:
- INCLUDE FOUR CHANNEL DIGITAL CONTROLLER IN NEMA 4 ENCLOSURE FOR WALL MOUNT.
  - LED DISPLAY FOR ALL FOUR CHANNELS FOR NO2 AND CO
  - INCLUDE (2) NITROGEN DIOXIDE SENSORS AND (2) CARBON MONOXIDE SENSORS
  - PROVIDE CONFIGURABLE ALARM OUTPUTS WITH ISOLATION RELAYS FOR INTERLOCK WITH THE EF & FACP.
  - PROVIDE PANEL MOUNTED AUDIBLE ALARM AND SILENCING SWITCH
  - PROVIDE ALARM HORN WITH STROBE.
  - PROVIDE STARTUP, TEST AND CALIBRATION REPORT.

FAN NO.	SYSTEM SERVED	PERFORMANCE/CONSTRUCTION REQUIREMENTS				BASIS OF DESIGN INFORMATION				NOTES		
		CFM	EXT S. P. (IN. W.C.)	FAN/MOTOR RPM	BHP	MNF	MODEL NO.	NOMINAL DIMENSION (DIA" x H") (L" x W" x H")	WEIGHT (LBS.)		ELECTRICAL DATA VOLTS /PHASE MOTOR HP	
GX-1	APPARATUS ROOM	4,250	0.60	728	2.52	GREENHECK	QEID-22	36.5 x 30 x 35.5	370	208V / 3	3	3,4,10
GX-2	APPARATUS ROOM	250	0.30	1,550	0.03	GREENHECK	SQ-090-VG	19 x 15 x 15	72	115V / 1	1/10	2,4,6,9
GX-3	GEAR ROOM	200	0.30	1,550	0.03	GREENHECK	SQ-090-VG	19 x 15 x 15	72	115V / 1	1/10	2,3,5,6
GX-4	KITCHEN	325	0.40	1,625	0.22	GREENHECK	G-080-VG	220 x 27	62	115V / 1	1/10	2,3,6-8
TX-1	TOILET EXHAUST	700	0.60	1,625	0.22	GREENHECK	G-098-VG	24.50 x 25.5	78	115V / 1	1/4	2,3,6-8
TX-2	APP BAY TOILET	100	0.25	1,550	0.02	GREENHECK	SQ-060-D	16 x 12 x 12	34	115V / 1	1/40	2,3,5
TX-3	DECON ROOM 105	100	0.25	1,550	0.02	GREENHECK	SQ-060-D	16 x 12 x 12	34	115V / 1	1/40	2,3,5
ERX-122	ELECTRIC ROOM 122	58	0.34	1,550	0.02	GREENHECK	SQ-060-D	16 x 12 x 12	34	115V / 1	1/40	2,11,12

- NOTES:
- CONTRACTOR TO PROVIDE WITH DISCONNECT SWITCH.
  - MANUFACTURER PROVIDED DISCONNECT SWITCH.
  - PROVIDE WITH 115VAC (WITH 115 VAC TRANSFORMER) MOTORIZED DAMPER WITH END SWITCH.
  - FAN TO OPERATE BASED ON SIGNALS FROM INTERLOCKED TEMPERATURE SENSOR OR GAS DETECTIONS SYSTEM IN ADDITION TO 30-MINUTE SPRING TIMER.
  - ELECTRICAL TO INTERLOCK WITH LIGHT SWITCH.
  - PROVIDE WITH DIAL FOR BALANCING ONLY
  - PROVIDE 12" INSULATED ROOF CURB WITH BUILT-IN DAMPER TRAY.
  - ELECTRICAL TO PROVIDE TIME CLOCK
  - ELECTRICAL TO PROVIDE WALL SWITCH
  - REFER TO MOTORIZED DAMPER SCHEDULES
  - FAN TO OPERATE BASED ON THERMOSTAT IN SPACE
  - PROVIDE GRAVITY BACKDRAFT DAMPER

LOUVERS													
EQMT. TAG	LOCATION	SERVING	PERFORMANCE/CONSTRUCTION REQUIREMENTS					BASIS OF DESIGN INFORMATION				NOTES	
			CFM	EXT S. P. (IN. W.C.)	FACE VELOCITY (FPM)	FREE AREA (FT²)	FRAME THICKNESS (IN.)	BLADE THICKNESS (IN.)	MNF	MODEL NO.	NOMINAL DIMENSIONS (W" x H" x D")		WEIGHT (LBS.)
LV-1	APPARATUS BAY	APPARATUS BAY	2,250	0.03	431	5.13	.125	.081	GREENHECK	ESD-635	72 x 24 x 6	39	1,3
LV-2	APPARATUS BAY	APPARATUS BAY	2,250	0.03	431	5.13	.125	.081	GREENHECK	ESD-635	72 x 24 x 6	39	1,3
LV-3	WORK ROOM	APPARATUS BAY	4,500	0.12	954	4.78	.125	.081	GREENHECK	ESD-635	72 x 24 x 6	39	2-3
LV-4	GEAR ROOM	GEAR ROOM	200	0.07	671	0.29	.081	.081	GREENHECK	ESD-435	12 x 12 x 4	3	3-4
LV-5	BOILER ROOM	BOILER ROOM	N/A	N/A	N/A	4.07	.125	.081	GREENHECK	ESD-635	30 x 36 x 6	30	1,3
LV-6	ELEVATOR	ELEVATOR	N/A	N/A	N/A	1.82	.081	.081	GREENHECK	ESD-435	24 x 24 x 4	15	5-8

- NOTES:
- PROVIDE 24" SLEEVE WITH VCD-23 MOTORIZED DAMPER 115V/1 INTERLOCKED WITH OPERATION OF APPARATUS BAY GENERAL EXHAUST.
  - PROVIDE 18" SLEEVE AND BLANK OFF PANEL.
  - PROVIDE WITH INTERNAL BIRSDCREEN.
  - PROVIDE 12" SLEEVE.
  - PROVIDE WITH (120V/1) VCD-23 MOTORIZED DAMPER W/ INTERNAL ACTUATOR
  - MOUNTING CLIPS TO REMOVE LOUVER AND ACCESS DAMPER FROM BUILDING EXTERIOR
  - DAMPER CONTROLLED BY THERMOSTAT SET TO OPEN DAMPER AT 90°
  - CONFIRM INSTALL WITH ELEVATOR MANUFACTURER

HIGH VOLUME LOW SPEED FANS										
FAN NO.	AREA SERVED	BASIS OF DESIGN INFORMATION								REMARKS
		FAN/MOTOR RPM	MNF	MODEL NO.	NOMINAL DIMENSION (DIA" x H")	WEIGHT (LBS.)	VOLTS /PHASE	OPERATING AMPERAGE	MOTOR HP	
HVLS-1 THRU 3	APPARATUS BAY	148	BIG ASS FANS	BASIC6-10	120 x 46.5	135	208 / 3	10 A	1.0	1,2

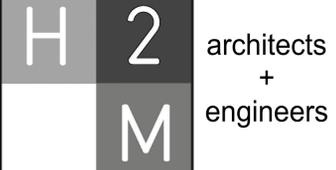
- NOTES:
- MANUFACTURER TO PROVIDE VFD MOTOR.
  - PROVIDE BAFCON CONTROLLER SERVING ALL HVLS FANS IN AREA SERVED. PROVIDE MULTI-FAN KIT.

MOTORIZED DAMPERS													
EQMT. TAG	PERFORMANCE/CONSTRUCTION REQUIREMENTS					BASIS OF DESIGN INFORMATION							REMARKS
	CFM	EXT S. P. (IN. W.C.)	FACE VELOCITY (FPM)	FRAME THICKNESS	FAILURE MODE	MNF	MODEL NO.	ACTUATOR MNF	ACTUATOR MODEL NO.	ACTUATOR COUNT	NOMINAL DIMENSIONS (W" x H" x D")	ELECTRICAL DATA VOLTAGE POWER DRAW (W)	
MD-1	4,250	0.095	905	16 GAUGE	CLOSED	GREENHECK	VCD-23	HONEYWELL	MS8104F1210	1	26 x 26 x 5	24VAC 18	1-4

- NOTES:
- TWO POSITION W/ SPRING RETURN
  - EXTERNALLY MOUNTED ACTUATOR, COORDINATE LOCATION IN FIELD
  - PROVIDE WITH STANDARD SLEEVE
  - INTERLOCK WITH OPERATION OF GX-1
  - ELECTRICAL CONTRACTOR TO PROVIDE 208V/3 TO 24VAC TRANSFORMER

AIR SCRUBBERS												
EQUIPMENT NO.	LOCATION	PERFORMANCE/ CONSTRUCTION REQUIREMENTS					BASIS OF DESIGN INFORMATION					NOTES
		AIR FLOW (CFM) [LO-MED-HI]	SOUND LEVEL (dBA) [LO-MED-HI]	VOLTS / PHASE	OPERATING CURRENT (A)	FILTER EFFICIENCY	MNF	MODEL NO.	NOMINAL DIMENSIONS L" x W" x H"	NOMINAL OPERATING WEIGHT (LBS.)		
LRS-1	GEAR ROOM	450 - 825 - 1,150	53 - 57 - 61	120V / 1	8.0	95% @ 0.3 MICRONS	HONEYWELL	F111C1012W-3S	48 x 24 x 21.5	198	1-3	

- NOTES:
- PROVIDE WITH THREE SPEED SWITCH.
  - ELECTRICAL CONTRACTOR TO PROVIDE DISCONNECT SWITCH.
  - PROVIDE WITH CPZ ODOR ELIMINATION MODULE.



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MARK	DATE	DESCRIPTION

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DESIGNED BY: DKR	DRAWN BY: DKR	CHECKED BY: MJV	REVIEWED BY: JML
PROJECT NO.: VGFD2001	DATE: JULY 2022	SCALE:	AS SHOWN

**VAILS GATE FIRE DISTRICT**

















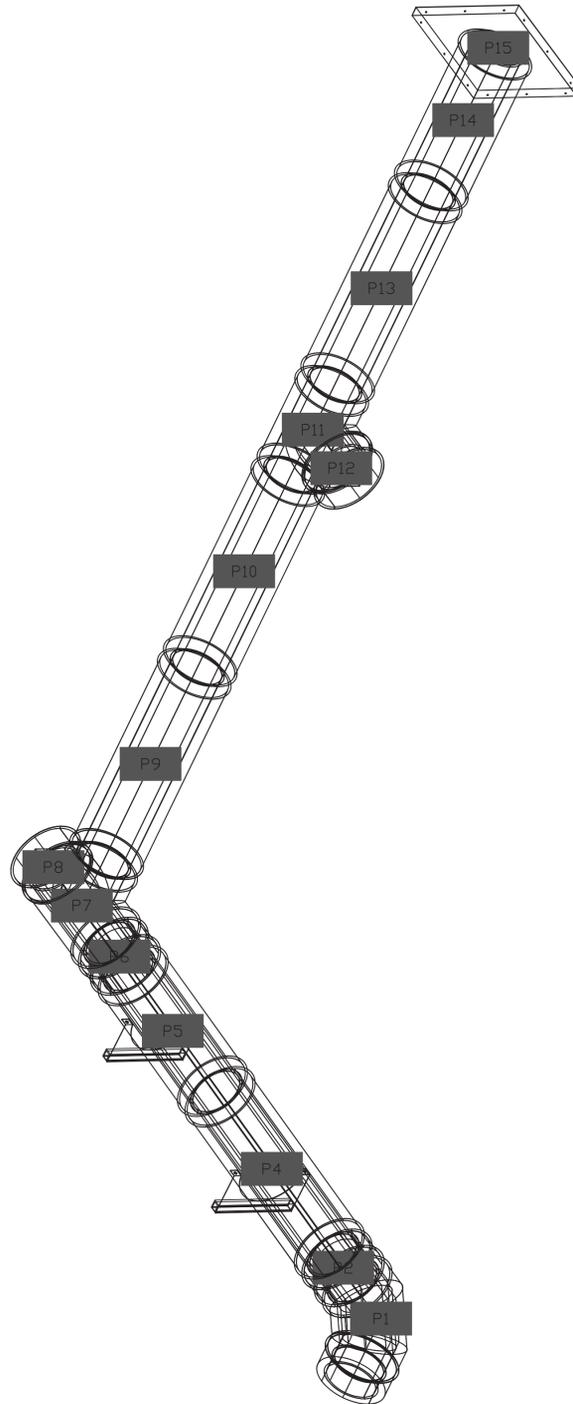
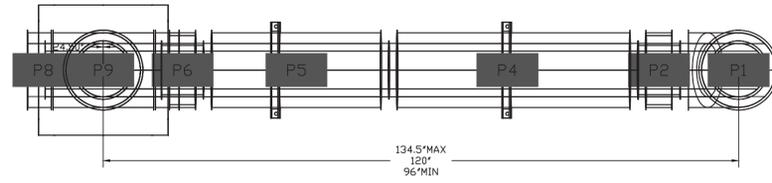
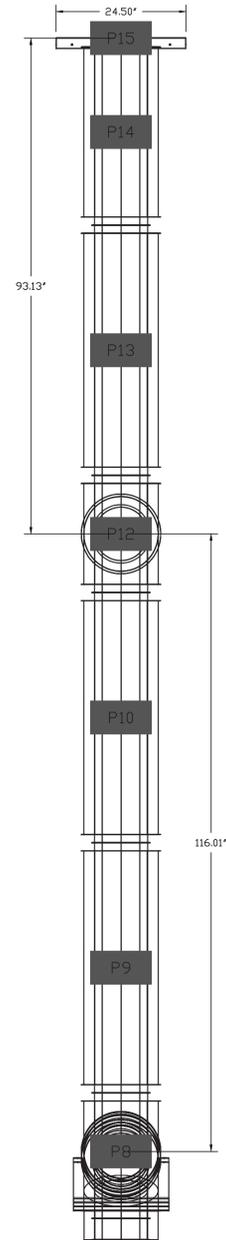




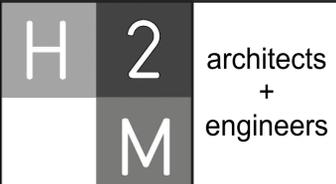


DUCTWORK #1 SIDE VIEW DUCTWORK #1 TOP VIEW

DUCTWORK #1 SE VIEW



X:\GFD\100 - CDR Fire Dept\GFD2001\0100 - Vails Gate FD New Firehouse\02-BIM\CAD\Construction\2022\0100 - Vails Gate Firehouse\02-BIM\CAD\Construction\2022\0100 - Vails Gate Firehouse.dwg, Jul 15, 2022, 12:33pm, Plotter: Jul 15, 2022, 1:00pm, B. Maguire



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CLIENT

**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
New Fire Station (Phase II)

872 Blooming Grove Turnpike  
New Windsor, NY 12553

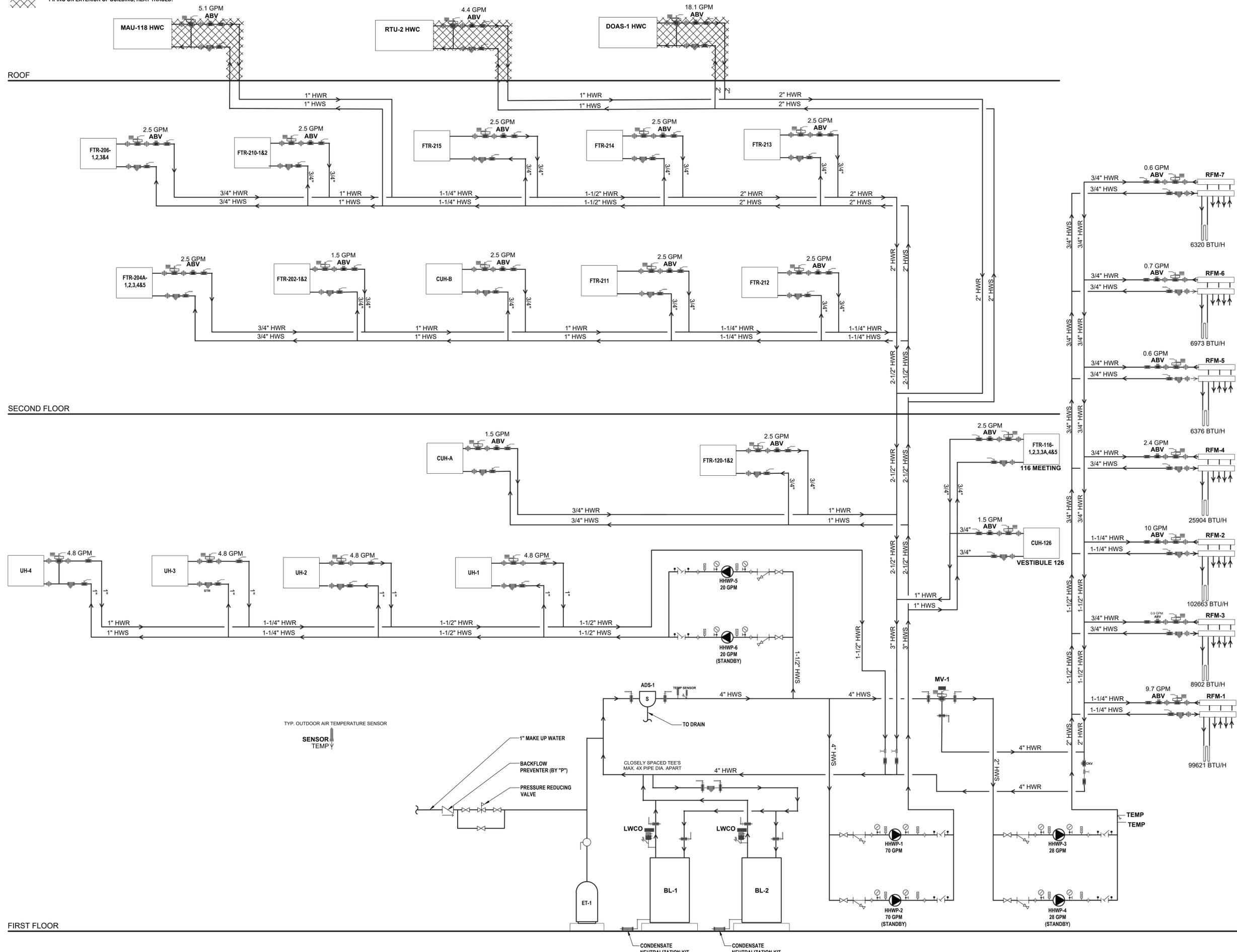
CONTRACT  
**CONTRACT G  
GENERAL CONSTRUCTION**

STATUS  
**FINAL BID DOCUMENT**

SHEET TITLE  
**HVAC KITCHEN  
SCHEDULES (10 OF 10)**

DRAWING No.  
**M2 619.00**

XXXXXX = PIPING ON EXTERIOR OF BUILDING, HEAT TRACED.



NOTE: PRIMARY BOILER PUMP(S) ARE INTERNAL TO THE BOILER PACKAGE

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DESIGNED BY: DKR	DRAWN BY: DKR	CHECKED BY: MJV	REVIEWED BY: JML
PROJECT NO.: VGFD2001	DATE: JULY 2022	SCALE: AS SHOWN	

**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
New Fire Station (Phase II)



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New Windsor, NY 12553

CONTRACT  
**CONTRACT G**  
GENERAL CONSTRUCTION

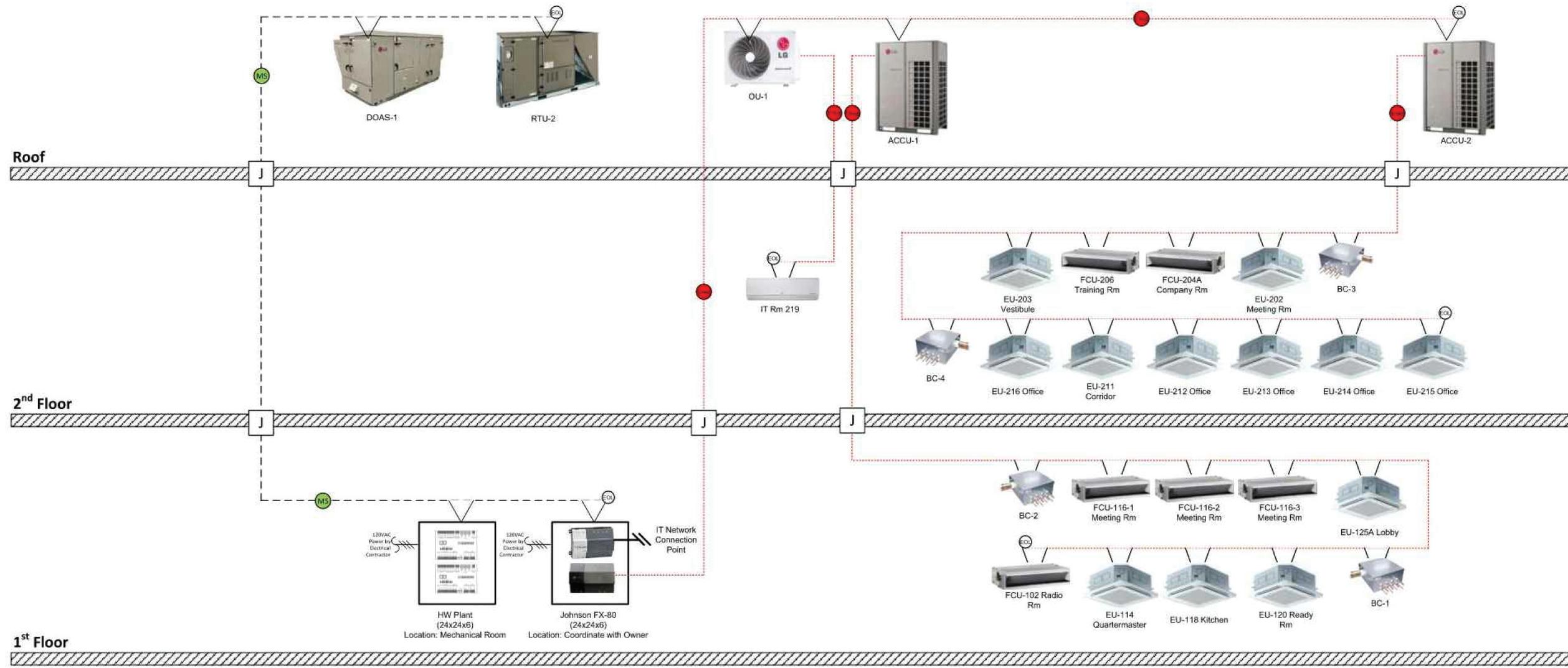
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SHEET TITLE  
**HVAC FLOW DIAGRAM (1 OF 1)**

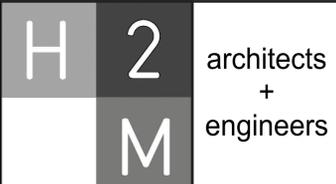
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**M2 640.00**

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# System Architecture



- Wiring Legend**
- 4S ——— 18 AWG / 4 conductor, stranded, shielded, plenum rated copper wire
  - MS ——— MS/TP 22 AWG / 3 conductor, low capacitance, stranded, shielded, plenum rated copper wire
  - ——— MS/TP 18 AWG / 2 conductor, stranded, shielded, plenum rated copper wire



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DESIGNED BY: DKR	DRAWN BY: DKR	CHECKED BY: MJV	REVIEWED BY: JML
PROJECT NO: VGFD2001	DATE: JULY 2022	SCALE: AS SHOWN	

**VAILS GATE FIRE DISTRICT**

New Storage Building (Phase I)  
 New Fire Station (Phase II)



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CONTRACT G  
 GENERAL CONSTRUCTION

STATUS: FINAL BID DOCUMENT

SHEET TITLE: HVAC CONTROLS DIAGRAM (1 OF 1)

DRAWING No: **M2 650.00**

X:\VGFD\1000 - Vails Gate Fire Dept\VGFD2001 - Vails Gate Fire Station\02-BAU-CADD\Controls\HVAC\2650.00 - Controls Diagram.dwg, Last Modified: Jul 14, 2022, 2:21 pm, Plotted on: Jul 15, 2022, 1:00 pm, By: dgrays