

VILLAGE OF HAVERSTRAW
ROCKLAND COUNTY, NEW YORK



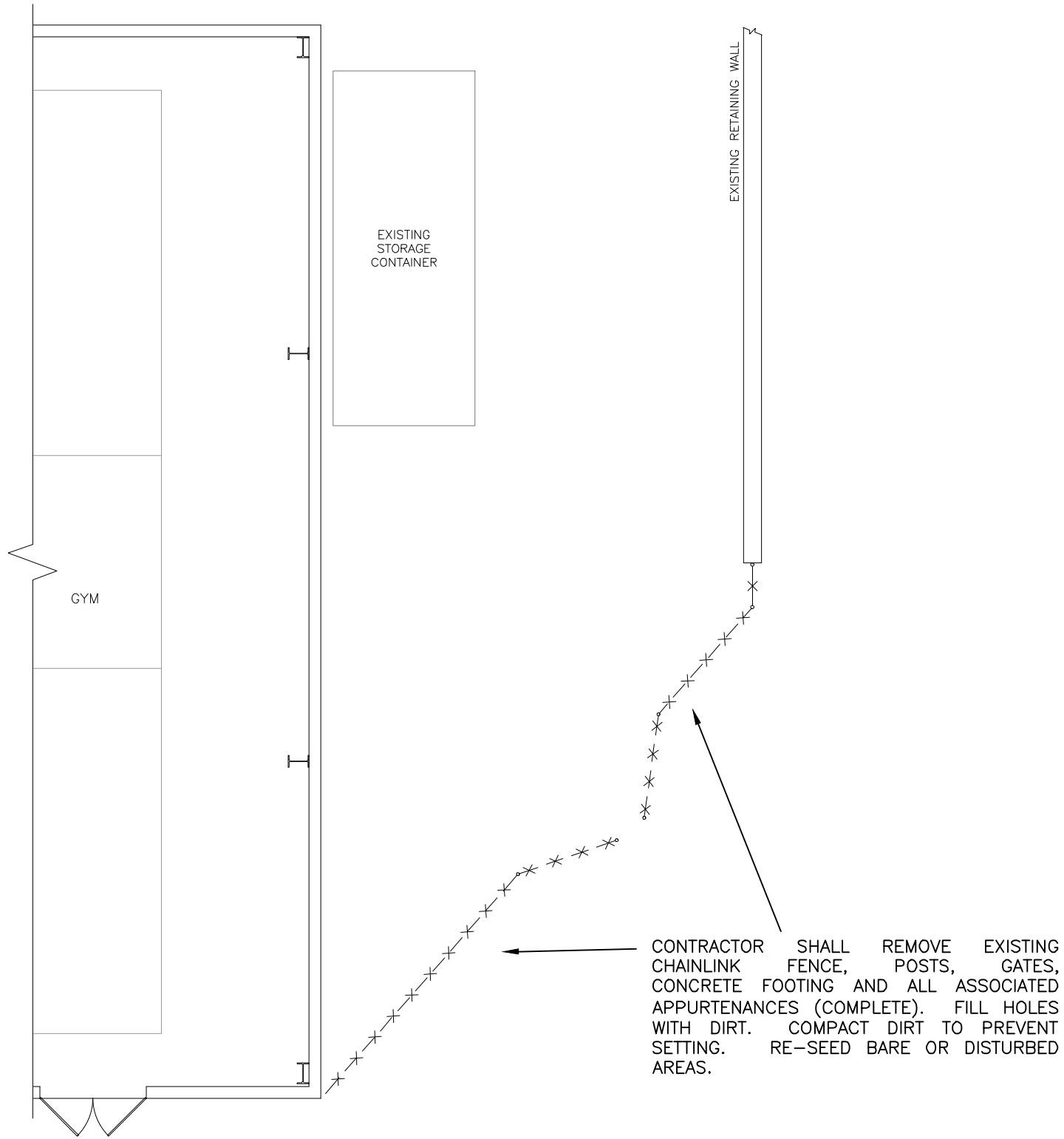
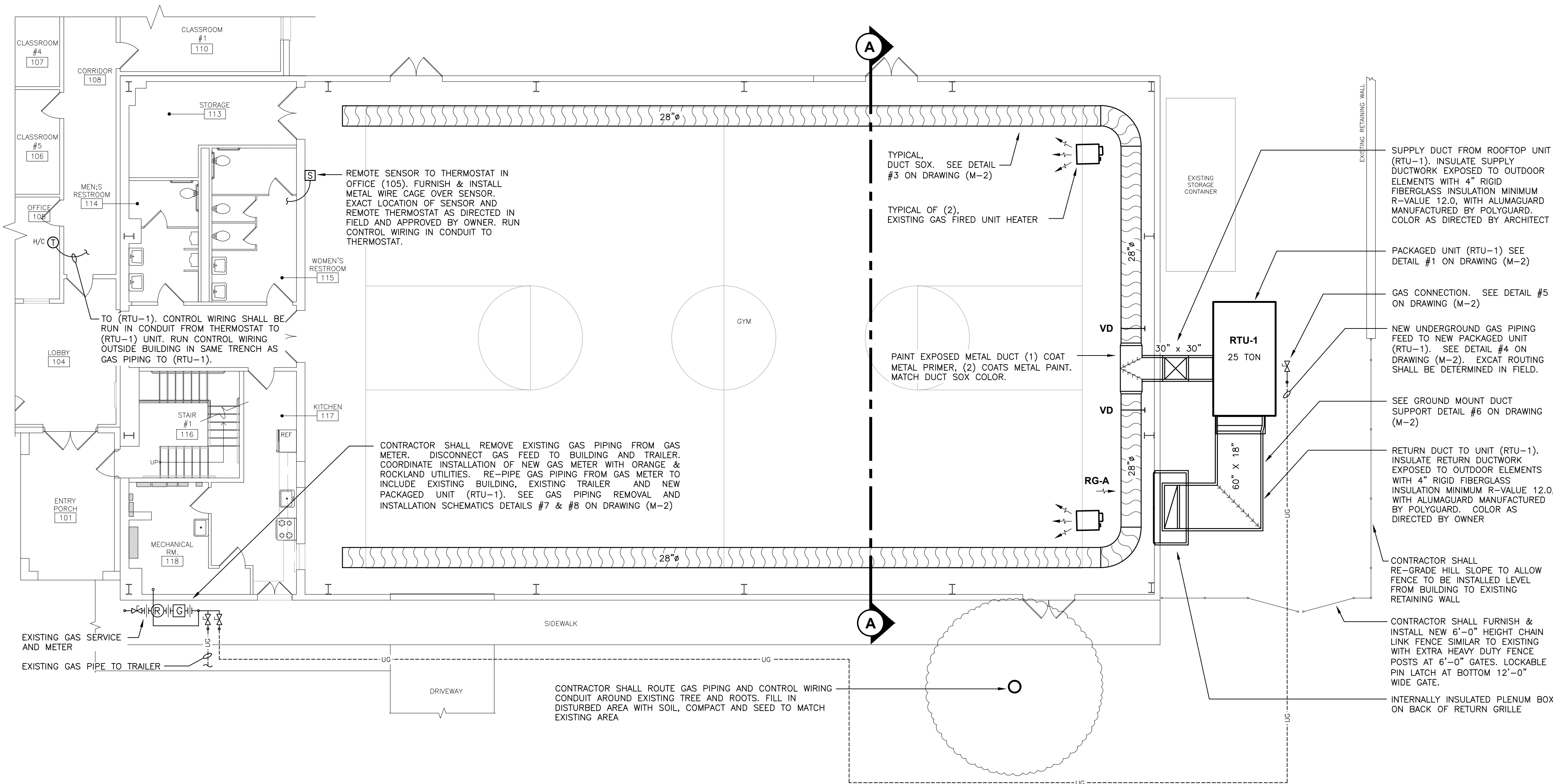
OWNER:
VILLAGE OF HAVERSTRAW
40 NEW MAIN STREET
HAVERSTRAW,
NEW YORK 10927
(845) 429-0300

SHEET LIST

1. TITLE SHEET
2. M-1 MECHANICAL: FLOOR PLANS
3. M-2 MECHANICAL: DETAILS
4. M-3 MECHANICAL: EQUIPMENT SCHEDULES AND NOTES
5. E-1 ELECTRICAL: FLOOR PLANS, EQUIPMENT SCHEDULES AND NOTES

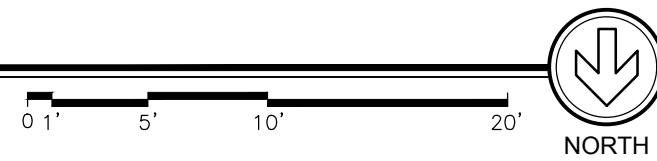
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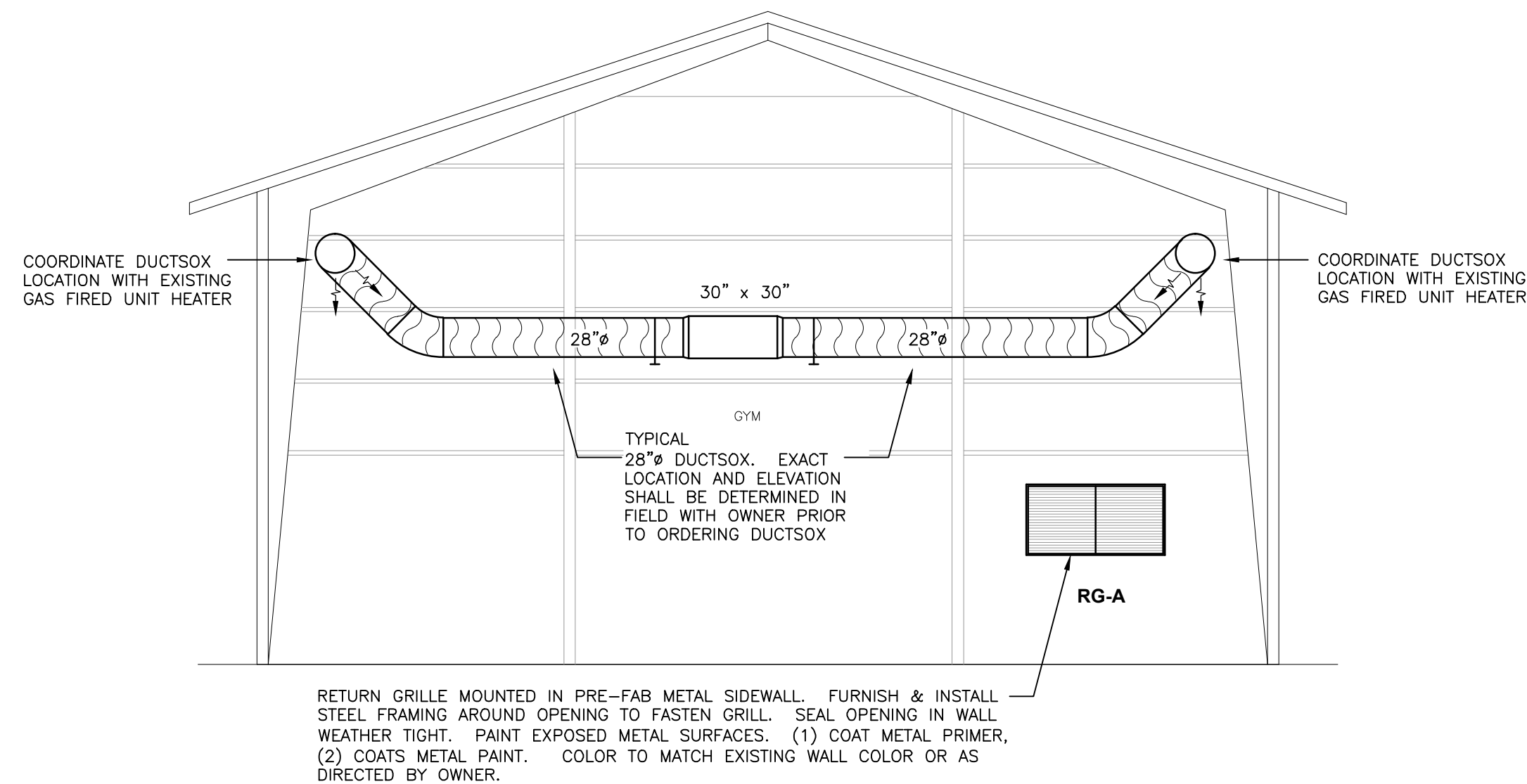


NOTE:
FENCE AND BLOCK WALL SHOWN ARE BASED ON CASUAL FIELD MEASUREMENTS. VERIFY EXACT MEASUREMENTS IN FIELD

1 MECHANICAL: PARTIAL FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

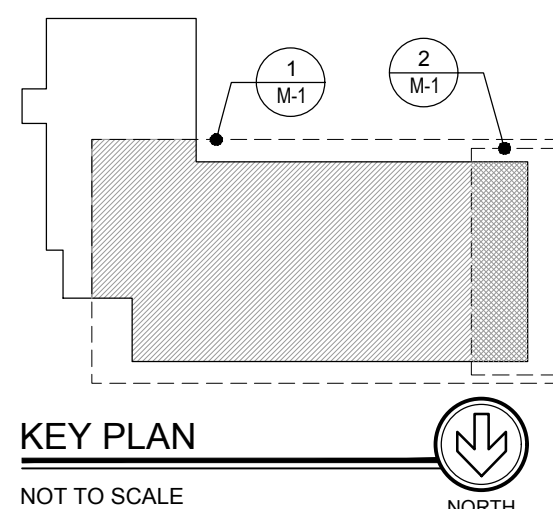
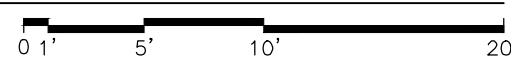


2 MECHANICAL: PARTIAL FIRST FLOOR REMOVAL PLAN
SCALE: 1/8" = 1'-0"

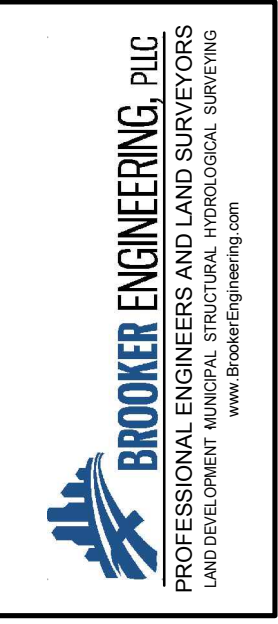


NOTE:
MEASUREMENTS FOR "SECTION A" WERE BASED ON CASUAL FIELD MEASUREMENTS. VERIFY EXACT LOCATION AND SIZE OF EXISTING STEEL AND CROSS SUPPORTS SHOWN

3 MECHANICAL: SECTION "A"
SCALE: 1/8" = 1'-0"



REVISION	DATE	DESCRIPTION
1	05-05-22	ISSUED FOR BID



MECHANICAL:
FLOOR PLANS
VILLAGE OF HAVERSTRAW COMMUNITY CENTER
50 WEST BROAD STREET
HAVERSTRAW NY 10827

DATE:
MAY 5, 2022
PROJECT NO.:
GA21055
DRAWN BY:
RL/KC
CHECKED BY:
JT/GH

SHEET NO.:
M-1
1 OF 4

UNAUTHORIZED ADDITION OR ALTERATION OF THIS PLAN IS A VIOLATION OF ARTICLE 146, SECTION 2209 (2) OF THE NEW YORK STATE EDUCATION LAW.

GENERAL HVAC NOTES

1. ALL HVAC WORK SHALL BE INSTALLED IN ACCORDANCE WITH 2020 MECHANICAL CODE, FIRE CODE, PLUMBING CODE, FUEL GAS CODE, BUILDING CODE, AND ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE, ALL LOCAL CODES AND GENERALLY ACCEPTED STANDARDS.
2. HVAC CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, PIPING, VALVES, ACCESS DOORS, HANGERS, FITTINGS AND MISCELLANEOUS COMPONENTS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER THE HVAC SYSTEMS COMPLETE, OPERABLE, AND IN ACCORDANCE WITH APPLICABLE CODES AND GENERALLY ACCEPTED INDUSTRY STANDARDS.
3. HVAC CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL EQUIPMENT TO ENGINEER FOR APPROVAL. DEMONSTRATE NEW HVAC SYSTEMS TO VILLAGE OF HAVERSTRAW MAINTENANCE PERSONNEL AND REVIEW MAINTENANCE PROCEDURES.
4. HVAC CONTRACTOR SHALL SEAL AROUND ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED WALLS, FLOORS AND CEILINGS WITH HILTI INTUMESCENT FIRE STOP MATERIALS TO MAINTAIN FIRE AND SMOKE RATINGS. DUCTS PENETRATING FIRE RATED WALLS, FLOORS AND CEILINGS SHALL BE INSTALLED WITH FIRE DAMPER AND ACCESS DOORS WHETHER SPECIFICALLY SHOWN ON THE DRAWINGS OR NOT. PROVIDE FIRE STOP SEALANT ON ALL EXISTING PIPING AND DUCTWORK PENETRATING NEW FIRE RATED WALLS CONSTRUCTED AS PART OF THE PROJECT.
5. HVAC CONTRACTOR SHALL NOT DRILL OR CUT ANY STRUCTURAL MEMBERS WITHOUT PERMISSION OF ENGINEER.
6. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
7. HVAC CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL WIRING (24V) FOR SYSTEMS SHOWN ON HVAC DRAWINGS AND DESCRIBED IN HVAC SPECIFICATIONS, INCLUDING ALL RELAYS, TRANSFORMERS, CONDUIT, JUNCTION BOXES, CONDUCTORS, THERMOSTATS, APPURTENANCES AND ALL NECESSARY EQUIPMENT TO MAKE SYSTEMS COMPLETE AND OPERABLE.
8. HVAC CONTRACTOR SHALL PAY FOR ALL PERMITS AND INSPECTION FEES REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.
9. HVAC CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING, TRENCHING, EXCAVATION, BACKFILL, COMPACTION, SEEDING, CONCRETE AND RESURFACING TO MATCH EXISTING ASSOCIATED WITH HVAC WORK.
10. ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SHEET METAL AND AIR CONDITIONING HVAC CONTRACTORS NATIONAL ASSOCIATION (SMACNA) DUCT STANDARDS. PROVIDE RADIUS TURNS OR TURNING VANES ON ALL CHANGES IN DIRECTION IN ACCORDANCE WITH SMACNA STANDARDS.
11. ALL CONTROL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (N.E.C.) AND ALL LOCAL CODES. ALL CONDUCTORS SHALL BE COPPER WITH THHN INSULATION IN EMT CONDUIT. 120V/1 – MINIMUM CONDUCTOR SIZE #12. 24V – MINIMUM CONDUCTOR SIZE #18. MINIMUM CONDUIT SIZE SHALL BE ¾". CONDUIT INSTALLED OUTDOORS SHALL BE GALVANIZED.
12. UNLESS OTHERWISE NOTED, ALL DUCTWORK SHALL BE FABRICATED WITH MINIMUM 26 GAGE GALVANIZED STEEL INCLUDING ROUND DUCTS.
13. FINAL LOCATIONS OF ALL THERMOSTATS AND SENSORS SHALL BE APPROVED BY OWNER PRIOR TO INSTALLATION, COORDINATE IN FIELD. THERMOSTATS AND SENSORS SHALL BE LOCATED 4'-0" ABOVE FINISHED FLOOR.
14. HVAC CONTRACTOR SHALL FURNISH AND INSTALL VALVE TAGS, PIPE LABELS, DUCT LABELS AND EQUIPMENT LABELS. LOG ALL TAGS AND LABELS IN A 3-RING BINDER WITH LOCATION, DESCRIPTION AND FUNCTION. SEE SPECIFICATIONS FOR MORE INFORMATION.
15. HVAC CONTRACTOR SHALL PROVIDE ALL AIR BALANCING FOR NEW HVAC SYSTEMS. PROVIDE ALL NECESSARY MOTOR, DRIVE, BELT CHANGES AND ETC. SEE SPECIFICATIONS FOR BALANCE PROCEDURES AND ADDITIONAL REQUIREMENTS. HVAC CONTRACTOR SHALL COMFORT BALANCE ALL HVAC SYSTEMS TO THE SATISFACTION OF ENGINEER. SUBMIT BALANCE REPORT TO ENGINEER. SEE HVAC SPECIFICATIONS BALANCE REPORT REQUIREMENTS.
16. HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SUPPLEMENTAL STRUCTURAL STEEL SUPPORT ASSOCIATED WITH NEW HVAC EQUIPMENT HUNG OR SUPPORTED FROM OR ON THE BUILDING STRUCTURE. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO STEEL FABRICATION AND INSTALLATION OF EQUIPMENT.
17. HVAC CONTRACTOR SHALL SUBMIT PIPING AND DUCTWORK FULLY COORDINATED SHOP DRAWINGS FOR ENGINEERS REVIEW. SEE GENERAL CONDITIONS FOR NUMBER OF SHOP DRAWINGS.
18. HVAC CONTRACTOR SHALL INSTRUCT VILLAGE OF HAVERSTRAW AND KEY PERSONNEL ON OPERATION OF ALL HVAC SYSTEMS. SET ALL THERMOSTATS TO TEMPERATURES AND SCHEDULES AS DIRECTED BY VILLAGE OF HARESTRAW.
19. HVAC CONTRACTOR SHALL INCLUDE IN BID ALL MATERIALS, RIGGING AND LABOR REQUIRED FOR THE COMPLETE AND PROPER INSTALLATION OF THE MECHANICAL SYSTEM.
20. HVAC CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO THE BEGINNING OF WORK, AND COORDINATE WORK ALL OTHER TRADES.
21. PROVIDE ALL PIPE OPENINGS THROUGH PARTITIONS WITH PIPE SLEEVES.
22. PROVIDE VOLUME DAMPERS ON SUPPLY BRANCH DUCTWORK, WHETHER SPECIFICALLY INDICATED ON DRAWINGS OR NOT.
23. ALL MOTOR STARTERS AND DISCONNECT SWITCHES FOR HVAC EQUIPMENT SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR. DISCONNECT SWITCHES FURNISHED BY THE MECHANICAL CONTRACTOR FOR HVAC EQUIPMENT SHALL BE HEAVY DUTY TYPE AND SHALL BE NEMA 3R WHEN LOCATED OUTSIDE.
24. HVAC CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIAL INSTALLED UNDER THIS CONTRACT FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUBSTANTIAL COMPLETION AND ACCEPTANCE BY THE OWNER AND AGREES TO REPLACE DEFECTIVE WORK (INCLUDING ALL REQUIRED LABOR AND MATERIAL) AT NO ADDITIONAL COST TO OWNER DURING THE GUARANTEE PERIOD.
25. HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING START-UP OF ALL NEW EQUIPMENT, CONTROLS, AND ETC. TO ENSURE CORRECT OPERATION OF INSTALLED DEVICES.
26. HVAC CONTRACTOR SHALL PROVIDE OWNER WITH CATALOG DATA, OPERATING INSTRUCTIONS, MAINTENANCE INSTRUCTIONS, AND RECORD (AS-BUILT) DRAWINGS OF ALL COMPLETED WORK.
27. LIGHT FIXTURES AND DEVICES SHOWN ARE BASED ON CASUAL FIELD OBSERVATIONS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING EQUIPMENT PRIOR TO BIDDING PROJECT.
28. HVAC CONTRACTOR SHALL SCHEDULE ALL SHUT-DOWNS OF EXISTING BASE BUILDING EQUIPMENT/SYSTEMS WITH VILLAGE OF HAVERSTRAW AS REQUIRED FOR PERFORMING WORK. NOTICE SHALL BE GIVEN NO LESS THAN (5) FIVE BUSINESS DAYS PRIOR REQUIRED SHUT-DOWN. SHUT-DOWNS SHALL NOT BE PERFORMED WITHOUT APPROVAL FROM VILLAGE OF HAVERSTRAW.
29. HVAC CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING, PATCHING AND PAINTING ASSOCIATED WITH HVAC WORK. PATCH OPENINGS/AREAS WITH SIMILAR MATERIALS AND RESTORE TO ORIGINAL FIRE/SMOKE RATING AND STRUCTURAL INTEGRITY.
30. UNLESS OTHERWISE NOTED CEILING REMOVAL, TEMPORARY PROTECTION, AND REPLACEMENT AS REQUIRED PERFORMING SCOPE OF WORK SHALL BE BY THIS CONTRACTOR. CEILING TILES DAMAGED AS A RESULT OF THIS CONTRACTOR'S WORK SHALL BE REPLACED AT NO ADDITIONAL COST TO VILLAGE OF HAVERSTRAW.

MINIMUM DUCT INSULATION	
COMMERCIAL	
ALL SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHEN LOCATED IN UNCONDITIONED SPACES AND WITH A MINIMUM OF R-12 INSULATION WHEN LOCATED OUTSIDE THE BUILDING ENVELOPE. WHEN LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY A MINIMUM OF R-12 INSULATION.	
EXCEPTIONS: 1. WHEN LOCATED WITHIN EQUIPMENT. 2. WHEN THE DESIGN TEMPERATURE DIFFERENCE BETWEEN THE INTERIOR AND EXTERIOR OF THE DUCT OR PLENUM DOES NOT EXCEED 15°F (8°C).	
ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS, AND CONNECTIONS IN DUCTWORK, SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC-PLUS- EMBEDDED FABRIC SYSTEMS OR TAPES. TAPES AND MASTICS USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. UNLISTED DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS.	
NOTE: DUCT INSULATION, COVERINGS AND LINING MATERIALS AND ADHESIVES SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25, AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50, IN ACCORDANCE WITH 2020 IMC SECTION 604.3.	

MINIMUM HANGER SIZES FOR ROUND DUCT				
DIAMETER	MAXIMUM SPACING	WIRE DIAMETER	ROD	STRAP
10" DN.	12'	—	¼"	1" x 22go.
11" – 18"	12'	—	¼"	1" x 22go.
19" – 24"	12'	—	¼"	1" x 22go.
25" – 36"	12'	—	⅜"	1" x 22go.
37" – 50"	12'	—	TWO ⅜"	TWO 1" x 20go.
51" – 60"	12'	—	TWO ⅜"	TWO 1" x 18go.
61" – 84"	12'	—	TWO ⅜"	TWO 1" x 16GA.
NOTES: 1. STRAPS AND RODS ARE GALVANIZED STEEL. 2. TABLE ALLOWS FOR CONVENTIONAL WALL THICKNESS, AND JOINT SYSTEMS PLUS ONE LB/SF OF INSULATION WEIGHT. IF HEAVIER DUCTS ARE TO BE INSTALLED, ADJUST HANGER SIZES.				


HVAC EQUIPMENT SCHEDULE			
SYMBOL	MANUFACTURER	CATALOG #	DESCRIPTION
RTU-1	CARRIER	48TCTE29E7M5-6W2G0	SINGLE PACKAGE ROOFTOP UNIT NOMINAL 25 TONS (2) STAGE COOLING, HORIZONTAL DISCHARGE, 11.2 IEER. FULLY MODULATING GAS VALVE NATURAL GAS HEAT INPUT 400,000 BTU/HR, STAGE OUTPUT 324,000 BTU/HR 81.0 % THERMAL EFFICIENCY, STAINLESS STEEL HEAT EXCHANGER, DIFFERENTIAL INPUT ECONOMIZER, OUTDOOR AIR HOOD, BAROMETRIC HOOD, OUTDOOR AIR DAMPER, HINGED ACCESS PANELS, BELT DRIVE, ADJUSTABLE DRIVE, CONVENIENCE OUTLET (POWERED), PHASE MONITOR, COIL GUARD, HAIL GUARD, MOTOR STARTER W/OVERLOADS H.O.A., SLIDE OUT FILTER RACK, FLUE DISCHARGE DEFLECTOR, HINGED ACCESS DOORS & TOOLLESS ACCESS PANEL, SA SMOKE DETECTOR AND UNIT MOUNTED CO ₂ SENSOR WITH DEMAND CONTROL VENTILATION (DVC), STAGED AIR VOLUME (SAV) SYSTEM 2-SPEED FAN CONTROLLER (VFD) W/2 SPEED VFD, THERMOSTAT (33CS2PPRH-03) WITH REMOTE SENSOR, PROVIDE (1) COMPLETE EXTRA SET OF FILTERS FOR UNIT (MERV-8). OPEN MULTI-PROTOCOL CONTROLLER, 24" HIGH INSULATED ROOF CURB, NON-FUSED DISCONNECT. REFRIGERANT R-410A. HIGH EFFICIENCY 10.0 HP FAN MOTOR WITH VARIABLE SPEED DRIVE, 9,000 CFM @ 1.0" W.C. EXTERNAL STATIC – 208V/3
	RGF	PHI-PKG14-24V	MAGNETIC MOUNT PACKAGED AIR PURIFICATION SYSTEM. A PHOTOHYDROIONIZATION (PHI) TECHNOLOGY. DESIGNED TO ELIMINATE SICK BUILDING SYNDROME RISKS BY REDUCING VOCs, MOLs, BACTERIA AND VIRUSES, (24V) SUITABLE FOR PACKAGED UNITS UP TO TONS. USE (2) UNITS FOR (RTU-1)
—CD—	—	—	CONDENSATE DRAIN PIPING. SCHEDULE 40 PVC.
U	—	—	TRAP.
Ⓢ _{H/C}	CARRIER	1F95-1280	COMMERCIAL HEATING/COOLING THERMOSTAT, 7-DAY PROGRAMMABLE 2-PERIODS PER DAY. MULTI-STAGE (4) HEAT – (2) COOL. PERMANENT PROGRAM RETENTION. PROGRAMMABLE FAN, ECONOMISER AND OCCUPIED DAMPER CONTROL. KEY PAD LOCKOUT, ENERGY MANAGEMENT RECOVERY. LOW VOLTAGE (24V). REVIEW MOUNTING LOCATION IN FIELD WITH OWNER.
		F145-1328	REMOTE SENSOR WITH WIRE CAGE PROTECTIVE COVER SUITABLE FOR GYMNASIUMS.
—C—	—	—	NATURAL GAS PIPING, SCHEDULE 40 STEEL WITH SCREWED JOINTS UP TO 3" DIAMETER. WELDED JOINTS ON ALL PIPE SIZES ABOVE 3" DIAMETER.
---UC---	—	—	UNDERGROUND NATURAL GAS PIPING , PE PIPE: ASTM D 2513, SDR 11. PE FITTINGS ASTM D 2683, SOCKET-FUSION TYPE OR ASTM D 3261, BUTT FUSION TYPE WITH DIMENSIONS MATCHING PE PIPE. ANODELESS SERVICE LINE RISERS : FACTORY FABRICATED AND LEAK TESTED.
⋈	—	—	GAS VALVE FULL PORT, AGA APPROVED.
U	—	—	TRAP.
⋈	—	—	TURNING VALVES.
⌒A" x B"⌒	—	—	RECTANGULAR DUCTWORK, GALVANIZED STEEL, THICKNESS AND CONSTRUCTION PER SMACNA. MINIMUM 26 GAUGE
DUCTSOX	DUCTSOX	SKELECORE FTS	DUCTSOX FABRIC DUCTWORK SYSTEM WITH SKELECORE FTS INTERNAL FRAMEWORK AND VERTICAL SUSPENSION SYSTEM (0% DEFLATION). LINEAR VENTS. CUSTOM COLOR AS DIRECTED BY OWNER.
VD	—	—	VOLUME DAMPER
RG-A	PRICE	97	HEAVY DUTY GYM GRILLES, CONSTRUCTED OF EXTRUDED ALUMINUM, ⅝" BLADE SPACING, "0" DEGREE DEFLECTION. (96" x 48"). LOUVER BLADES PARALLEL TO LONG DIMENSION. VERIFY EXACT SIZE IN FIELD. COLOR AS DIRECTED BY OWNER.

VENTILATION SCHEDULE																			
Space Name	Gross Area	Net Area	Ra	Ventilation based on Net Floor Area	Occupanct Density	Calculated Occupants (Pz)	People Used	Rp Cfm/Person	Ventilation based on People	Total OA Ventilation (Vbz)	Zone Air Distribution Effectiveness (Ez)	Zone OA Required (Voz)	OA Ventilation Provided	Exhaust Airflow Rates	Exhaust Required	Exhaust Provided			
	sqft	sqft	CFM/sqft	CFM	#/1000 sqft				CFM			CFM	CFM	CFM/sqft	CFM	CFM			
	Multi-purpose	5970	5185	0.06	312	+	100	300.0	300	7.5		2250	=	2562	x	0.8	3203	3205	-

MINIMUM HANGER SIZES FOR RECTANGULAR DUCT								
MINIMUM HALF OF DUCT PERIMETER	PAIR AT 10ft SPACING		PAIR AT 8ft SPACING		PAIR AT 5ft SPACING		PAIR AT 4ft SPACING	
	STRAP	ROD	STRAP	ROD	STRAP	ROD	STRAP	ROD
P/2 = 30"	1" x 22go	¼"	1" x 22go	¼"	1" x 22go	¼"	1" x 22go	¼"
P/2 = 72"	1" x 18ga	⅜"	1" x 20ga	¼"	1" x 22go	¼"	1" x 22go	¼"
P/2 = 96"	1" x 16go	⅜"	1" x 18ga	⅜"	1" x 20ga	⅜"	1" x 22go	⅜"
P/2 = 120"	1½" x 16ga	½"	1" x 16go	½"	1" x 16ga	⅜"	1" x 18ga	⅜"
P/2 = 192"	—	—	1" x 16go	½"	1" x 16ga	⅜"	1" x 18ga	⅜"
SINGLE HANGER MAXIMUM ALLOWABLE LOAD								
WHEN STRAPS ARE LAP JOINED USE THESE MINIMUM FASTENERS:								
1" x 18, 20, 22go – ON ⅝" BOLT								
1" x 16go – TWO ¼" Dia.								
1" x 16go – TWO ⅜" Dia.								
PLACE FASTENERS IN SERIES, NOT SIDE BY SIDE.								
NOTES: 1. DIMENSIONS OTHER THAN GAUGE ARE IN INCHES. 2. TABLES ALLOW FOR DUCT WEIGHT, 1 LB./SF. INSULATION WEIGHT AND NORMAL REINFORCEMENT AND TRAPEZE WEIGHT, BUT NO EXTERNAL LOADS. 3. STRAPS ARE GALVANIZED STEEL. 4. ALLOWABLE LOADS FOR P/2 ASSUME THAT DUCTS ARE 16 GA. MAXIMUM, EXCEPT WHEN MAXIMUM DUCT DIMENSION (W) IS OVER 60" THEN P/2 MAXIMUM IS 1.25 W.								

PIPE HANGER SCHEDULE											
PIPE SIZE (INCHES)	MAXIMUM HORIZONTAL SPACING (FEET)				SINGLE STEEL ROD HANGER SIZE (INCHES)		HANGER TYPE STEEL	MAXIMUM VERTICAL SPACING (FEET)			
	COPPER TUBE	CAST IRON	STEEL PIPE	CPVC PIPE	TUBING	PIPING		COPPER TUBE	CAST IRON	STEEL PIPE	CPVC PIPE
½"	6	5	8 (5)	3	¼"	⅜"	BAND	10	15	15	10
¾"	6	5	8 (5)	3	¼"	⅜"	BAND	10	15	15	10
1"	6	5	8 (5)	3	¼"	⅜"	BAND	10	15	15	10
1¼"	6	5	9 (5)	4	¼"	⅜"	CLEVIS	10	15	15	10
1½"	6	5	9 (5)	4	¼"	⅜"	CLEVIS	10	15	15	10
2"	10	5	10 (5)	4	¼"	⅜"	CLEVIS	10	15	15	10
2½"	10	5	12 (5)	4	⅜"	½"	CLEVIS	10	15	15	10
3"	10	5	12 (5)	4	⅜"	½"	CLEVIS	10	15	15	10
4"	10	5	12 (5)	4	½"	⅝"	CLEVIS	10	15	15	10
5"	10	5	12 (5)	4	½"	⅝"	CLEVIS	10	15	15	10
6"	10	5	12 (5)	4	½"	⅝"	CLEVIS	10	15	15	10
8"	10	5	12 (5)	4	⅝"	⅞"	CLEVIS	10	15	15	10
10"	10	5	12 (5)	4	⅝"	⅞"	CLEVIS	10	15	15	10
12"	10	5	12 (5)	4	⅝"	⅞"	CLEVIS	10	15	15	10
NOTES: 1. MAXIMUM HORIZONTAL SPACING OF CAST-IRON PIPE HANGERS SHALL BE INCREASED TO 10 FEET WHERE 10 FOOT LENGTHS OF PIPE ARE INSTALLED. 2. INSTALL HANGER OR SUPPORT CLOSE TO THE POINT OF CHANGE OF DIRECTION IN ALL PIPE RUNS. 3. INSTALL ADDITIONAL HANGERS ON SUPPORTS AT CONCENTRATED LOADS. 4. SUPPORT ALL BRANCH PIPING OVER 5'-0" IN LENGTH. 5. ½" GAS PIPING SHALL BE SUPPORTED EVERY 6'-0". ¾" AND 1" GAS PIPING SHALL BE SUPPORTED EVERY 8'-0". 1¼" AND LARGER GAS PIPING SHALL BE SUPPORTED EVERY 10'-0". 6. SUPPORT VERTICAL PIPING AT EVERY FLOOR.											

DESCRIPTION		DATE	ISSUED FOR	BID
REVISION				
Δ		05-05-22		



BROOKER ENGINEERING, P.L.C.
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MECHANICAL:
EQUIPMENT SCHEDULES AND NOTES

VILLAGE OF HAVERSTRAW COMMUNITY CENTER
50 WEST BROAD STREET
HAVERSTRAW NY , 10827

DATE:
MAY 5, 2022

PROJECT NO.:
GA210055

DRAWN BY:
RL/KC

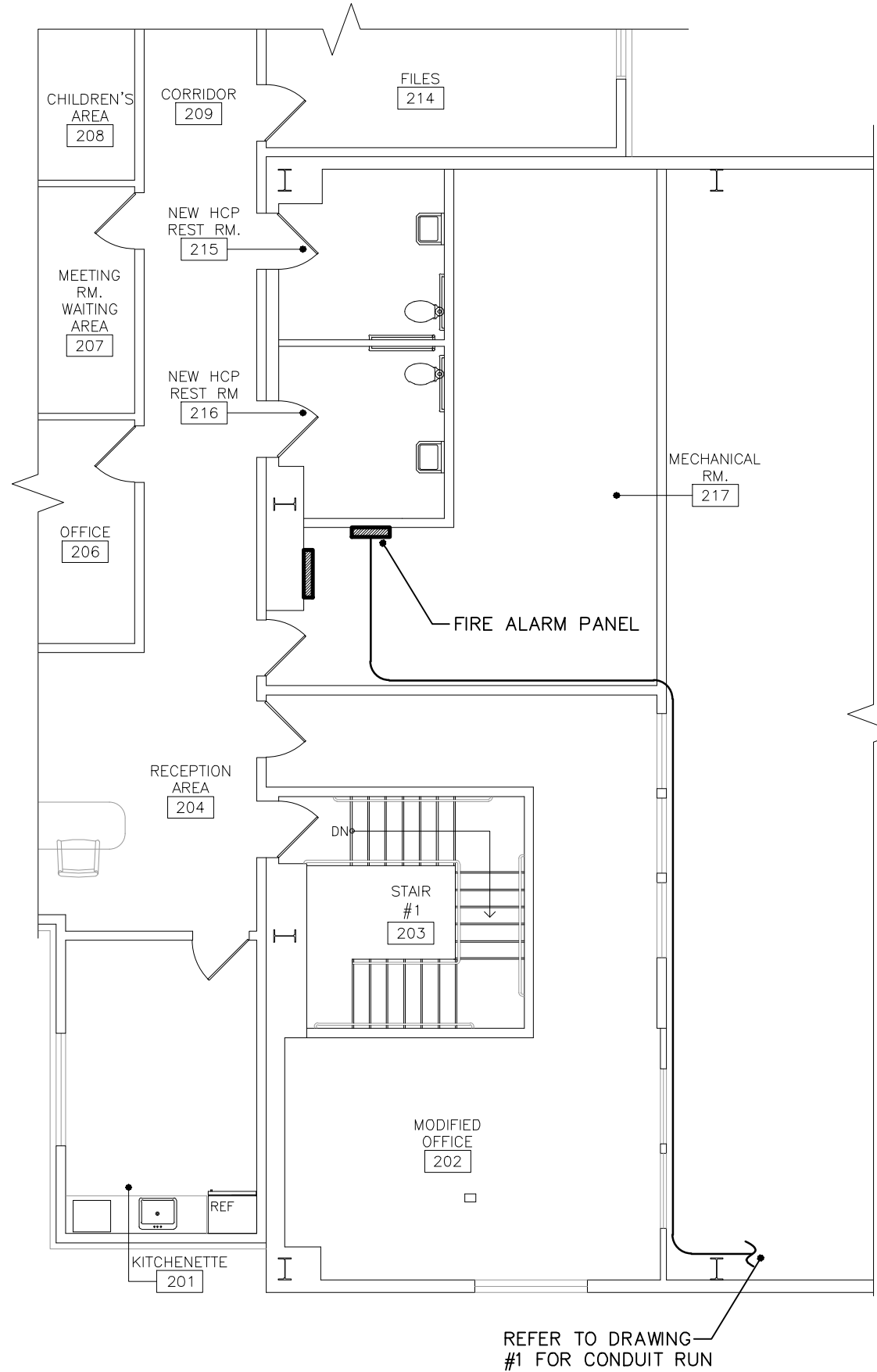
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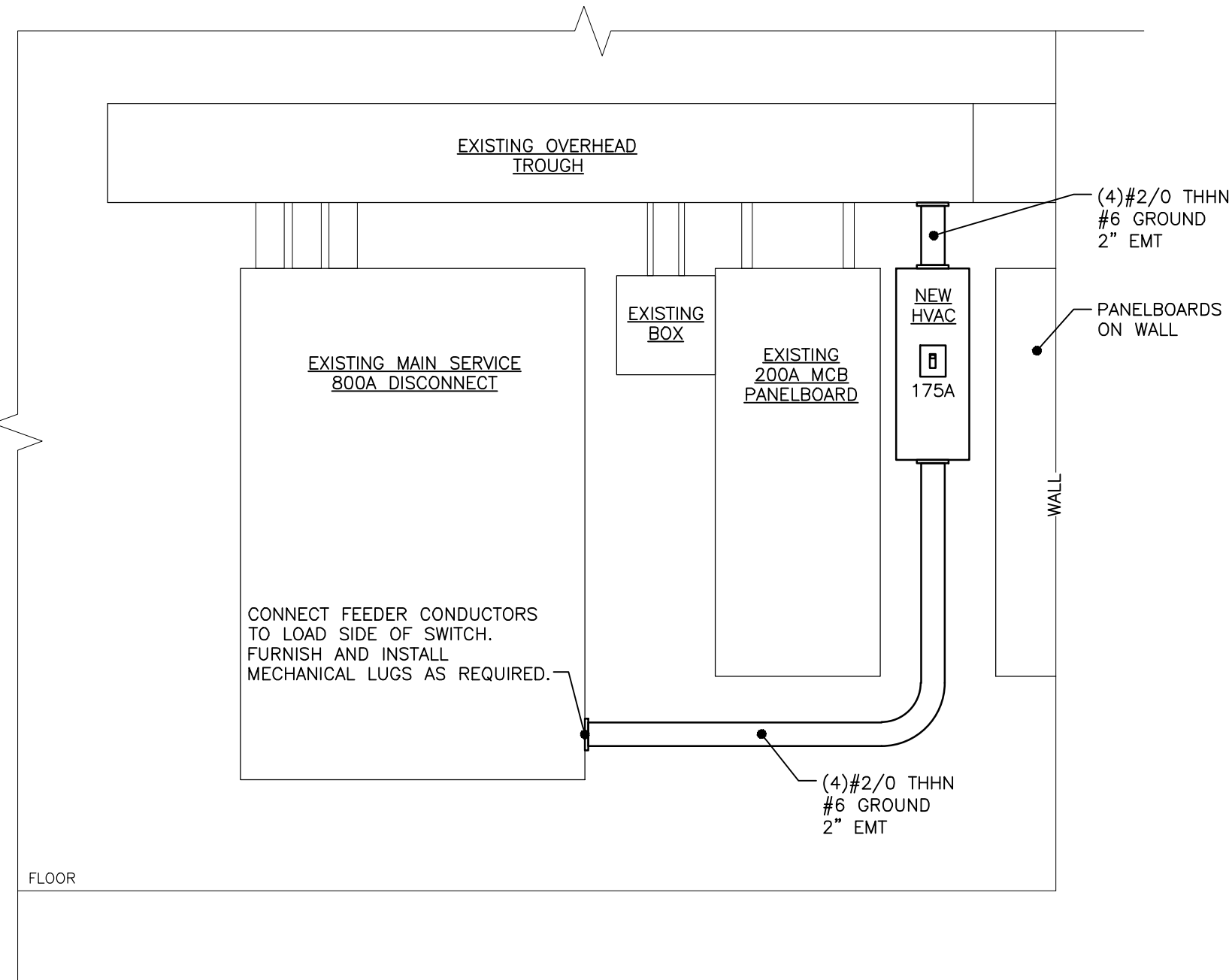
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3 OF 4

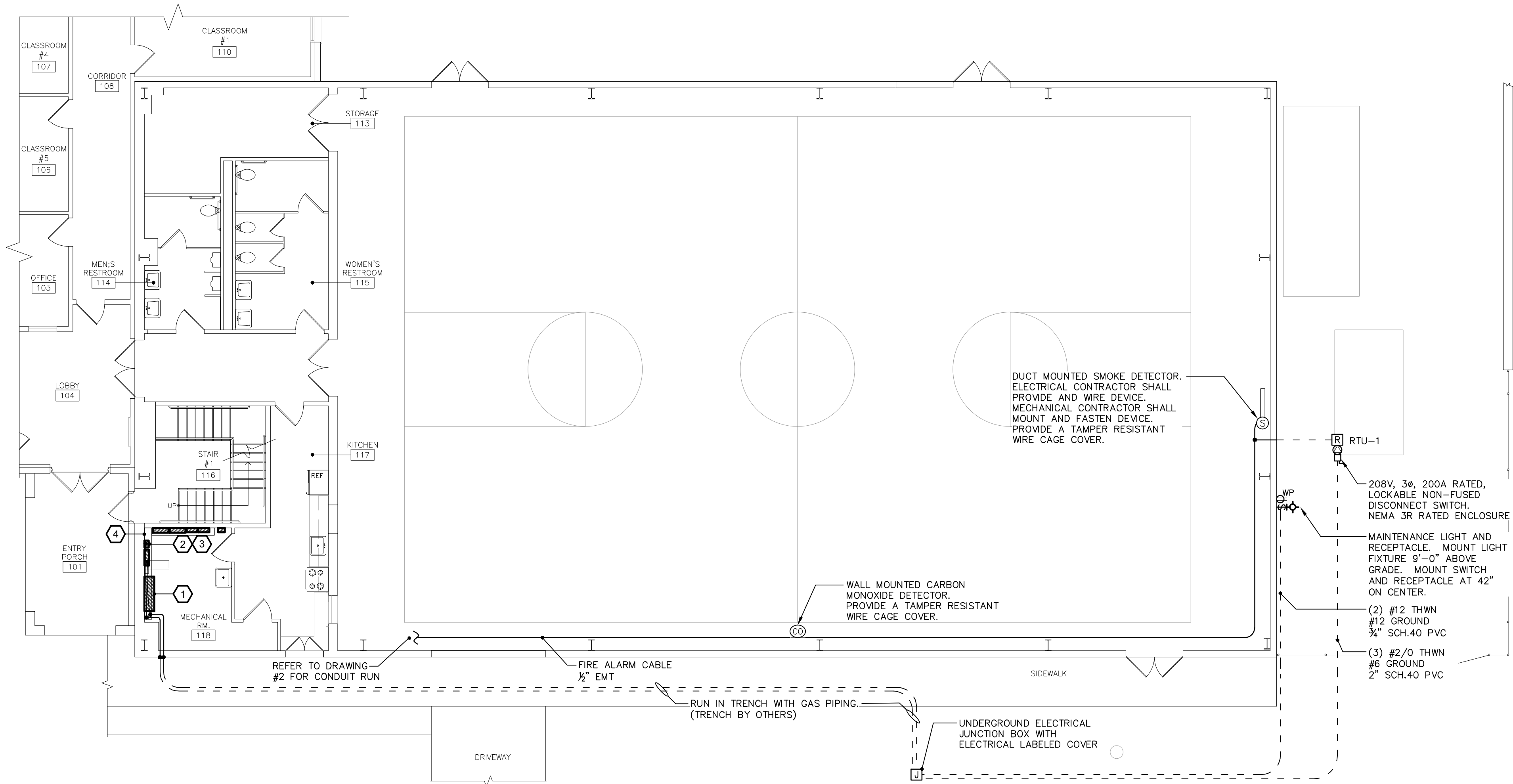
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2 ELECTRICAL: PARTIAL SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"
NORTH



3 MECHANICAL ROOM - ELECTRICAL EQUIPMENT DETAIL
NOT TO SCALE



1 ELECTRICAL: PARTIAL FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"
NORTH

ELECTRICAL EQUIPMENT SCHEDULE			
SYMBOL	MANUFACTURER	CATALOG #	DESCRIPTION
	—	—	FAN SHUTDOWN RELAY.
	—	—	DUCT MOUNTED SMOKE DETECTOR.
	—	—	CARBON MONOXIDE DETECTOR WITH INTEGRAL SOUNDER BASE.
	—	—	DUPLEX RECEPTACLE WITH GFCI PROTECTION AND WEATHERPROOF COVER, SPECIFICATION GRADE, 20 AMPERES, 125 VOLTS.
	—	—	HARD WIRED CONNECTION - WHERE EQUIPMENT OR APPLIANCE DOES NOT HAVE INTEGRAL DISCONNECTING MEANS, ELECTRICAL CONTRACTOR SHALL PROVIDE INDEPENDENT DISCONNECT SWITCH.
	—	—	NON-FUSED DISCONNECT SWITCH - NEMA 3R ENCLOSURE FOR OUTDOOR USE.
	—	—	SINGLE POLE TOGGLE SWITCH AND WEATHERPROOF COVER, SPECIFICATION GRADE, 20 AMPERES, 125 VOLTS.
	RAB	FFLED18N/PCU	MAINTENANCE AREA LED FLOOD LIGHT. 18W, 120V, 4000K, WITH PHOTOSENSOR. (OR EQUAL)

GENERAL ELECTRICAL NOTES

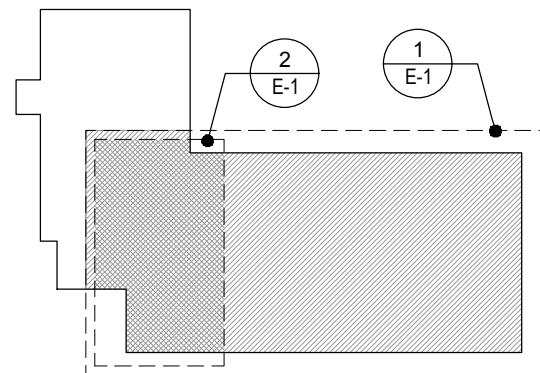
- ELECTRICAL CONTRACTOR SHALL PROVIDE TYPEWRITTEN SCHEDULES OF ALL CIRCUITRY IN ALL PANELS. SCHEDULES SHALL MATCH THE LOADS SHOWN IN THE PROJECT PANEL SCHEDULE INCLUDED WITH THESE DRAWINGS. ALL SPARE PANEL SPACES SHALL BE FULLY PROTECTED WITH METAL BLANKS.
- ELECTRICAL DEVICES MATERIALS AND PACKAGED EQUIPMENT SHALL BE LISTED AND LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) SUCH AS UNDERWRITERS LABORATORIES INC. (UL), FOR THE INTENDED USE, AND SHALL BEAR ITS LABEL. NOTE THAT NRTL APPROVAL OF INDIVIDUAL COMPONENTS OF PACKAGED EQUIPMENT DOES NOT CONSTITUTE APPROVAL OF THE ENTIRE PACKAGE.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE 2017 EDITION (NFPA 70), AND THE BUILDING CODE OF NEW YORK STATE.
- ELECTRICAL CONTRACTOR SHALL OBTAIN, PAY FOR AND COMPLY WITH ALL REQUIRED PERMITS. THE ELECTRICAL CONTRACTOR SHALL ARRANGE FOR ALL INSPECTIONS AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO OWNER PRIOR TO COMPLETION OF PROJECT.
- ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS, NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER THE ELECTRICAL INSTALLATION COMPLETE AND OPERATIVE, AND IN COMPLIANCE WITH APPLICABLE CODES.
- ALL WIRING SHALL BE COPPER CONDUCTOR, MINIMUM SIZE #12 AWG.
- ELECTRICAL CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING EQUIPMENT AND NOTE CONDITIONS AND AREAS WHERE WORK WILL OCCUR IN FIELD.
- ELECTRICAL CONTRACTOR SHALL SEAL AROUND ALL PIPE PENETRATIONS THROUGH WALLS, FLOORS AND CEILINGS WITH AN INTUMESCENT FIRE STOP MATERIAL TO MAINTAIN FIRE AND SMOKE RATINGS.
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH AND MEET ALL REQUIREMENTS OF SERVING POWER UTILITY COMPANY.
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES TO AVOID CONFLICTS OF EQUIPMENT INSTALLATION. ELECTRICAL CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL EQUIPMENT CONNECTIONS, WIRING DEVICES WITH OWNER AND ENGINEER PRIOR TO INSTALLATION.
- ELECTRICAL CONTRACTOR SHALL SUBMIT EQUIPMENT SHOP DRAWINGS FOR APPROVAL BY OWNER AND ENGINEER PRIOR TO COMMENCING INSTALLATION.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING AND PAINTING ASSOCIATED WITH ELECTRICAL WORK.
- ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORKMANSHIP AND MATERIAL INSTALLED UNDER THIS CONTRACT TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF COMPLETION AND ACCEPTANCE BY THE OWNER. CONTRACTOR AGREES TO REPLACE ANY DEFECTIVE EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER FOR THE DURATION OF THE GUARANTEE PERIOD.

KEYED NOTES

- (APPLIES TO THIS SHEET ONLY)
- EXISTING 800A MAIN FUSED DISCONNECT.
 - EATON ECCVH2175S - 200A RATED NEMA 1 CIRCUIT BREAKER ENCLOSURE FURNISHED WITH 120/208V, 3-PHASE, 175A, TYPE CCVH CIRCUIT BREAKER.
 - ELECTRICAL CONTRACTOR SHALL TAP LOAD SIDE OF MAIN FUSED DISCONNECT WITH (4)#2/0 THHN, #6 GROUND, AND FEED TO LINE SIDE OF 175A CIRCUIT BREAKER FOR HVAC UNIT. WHERE EXPOSED, FURNISH CONDUCTORS IN 2" EMT CONDUIT. FEEDER RUN SHALL TAKE THE SHORTEST PATH THAT IS PRACTICAL AND COMPLIES WITH 2017 NEC. FURNISH AND INSTALL MECHANICAL LUGS APPROVED FOR USE, AS REQUIRED.
 - EXISTING OVERHEAD TROUGH.

FIRE ALARM NOTES

- FIRE ALARM SYSTEM WIRING, NUMBER AND SIZE OF CONDUCTORS SHALL BE PER MANUFACTURER'S RECOMMENDATIONS BUT NOT LESS THAN 18 AWG. COPPER CONDUCTOR. UL LISTED PLENUM RATED SIGNALING CABLE MAY BE USED IN CONCEALED SPACES.
- FIRE ALARM DEVICES SHALL MATCH BRAND AND BE COMPATIBLE WITH THE EXISTING BUILDING FIRE ALARM SYSTEM.
- ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE AND OPERABLE FIRE ALARM AND SMOKE DETECTION SYSTEM IN ACCORDANCE WITH NFPA 72, BUILDING CODE OF NEW YORK STATE AND ALL LOCAL CODES, INCLUDING ALL CIRCUITRY, DEVICES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THIS DRAWING TO RENDER FIRE ALARM SYSTEM COMPLETE AND OPERATIVE.
- ELECTRICAL CONTRACTOR SHALL HIRE MANUFACTURER'S REPRESENTATIVE TO FULLY DEMONSTRATE SYSTEM FUNCTION, OPERATION AND MAINTENANCE OF FIRE ALARM SYSTEM TO OWNER.
- HVAC CONTRACTOR SHALL INSTALL DUCT SMOKE DETECTORS IN DUCTS. DUCT SMOKE DETECTORS SHALL BE PROVIDED AND WIRED BY ELECTRICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL WIRING, RELAYS AND MISCELLANEOUS EQUIPMENT ASSOCIATED WITH HVAC AIR HANDLER UNIT SHUTDOWN FROM FIRE ALARM PANEL.



KEY PLAN
NOT TO SCALE
NORTH

DESCRIPTION	
DATE	05-05-22
ISSUED FOR	BID
REVISION	



ELECTRICAL:
FLOOR PLANS, EQUIPMENT SCHEDULES AND NOTES
VILLAGE OF HAVERSTRAW COMMUNITY CENTER
50 WEST BROAD STREET
HAVERSTRAW NY, 10827

DATE: MAY 5, 2022
PROJECT NO.: GA21055
DRAWN BY: RL/KC
CHECKED BY: JT/GH

SHEET NO:
E-1
4 of 4