ROCKLAND GREEN MRF FACILITY IMPROVEMENTS

CONTRACT 3 - MECHANICAL

420 TORNE VALLEY ROAD HILLBURN NY 10931











ng Environmental Engineering, P.C

____ BUILDING SITE

— BUILDING SITE

OWNER:

htington Quadrangle, 3S01 ph: 631-756-1060 fax: 631-756-1064

OWNER ENGINEER:

CURRENT REVISION

ARCHITECT:

WWW.ADGARCHITECT.COM

ME

MECHANICAL, ELECTRICAL AND PLUMBING ENGINEER:

CIVIL ENGINEER:

I. Rockland Green is soliciting proposals for the construction of improvements to its existing Materials Recovery Facility (MRF), as further detailed in the Drawings and Specifications. These Facility Improvements include, but are not limited to, a building addition, site work, interior demolition work, interior build-out work, electric service upgrades and reworked mechanical, plumbing, electrical, fire sprinkler and fire alarm systems to accommodate a new state-of-the-art dual stream recyclables processing system supplied and installed under Contract No. I - Processing Equipment.

ROCKLAND GREEN FACILITY IMPROVEMENTS PHASING NOTE

The Facility Improvements are being procured through separate contracts as follows:
 Ontract No. 2 - Facility Improvements: General Construction

CONSTRUCTION NOTES

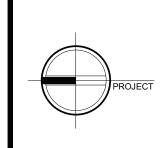
- Contract No. 3 Facility Improvements: Mechanical/HVAC
 Contract No. 4 Facility Improvements: Plumbing
 Contract No. 5 Facility Improvements: Electrical
 Contract No. 6 Facility Improvements: Fire Protection System
- The building has been divided into the following area designations:
- I ne building has been divided into the following area designati
 Area I Existing Tipping Area.
 Area 2 Existing Processing Area.
 Area 3 Existing Administration Area.
- Area 3 Existing Administration Area.
 Area 4 New Commingled Tipping Area.
 Area 5 New Storage & Glass Processing Area
- Area 6 New Truck Loading Dock Area.
 4. Work shall commence on the exterior and in the Areas 1 and 2 for its Substantial Completion to be achieved prior to the start of delivery and installation of the Dual Stream Recyclables Processing System. It shall include all Work as defined in the Contract Drawings, Specifications, and RFP Appendices. It shall also include all rough-ins associated with Mechanical, Electrical, Plumbing, and Fire Protection Equipment. All final connections of Mechanical, Electrical, Plumbing and Fire

Protection (including equipment fire sprinkler system) in Areas 1 and 2 shall be completed prior to the

- 5. Work in Area 3 shall be sequenced to allow sufficient access and use of existing space for Contractors on-site as approved by the Engineer and shall the Contractors for Contract Nos. 2-6 shall achieve Substantial Completion prior to the required date for the Operator to mobilizing on-site and have partial occupancy and use of Area 3. Additionally, any Work by Contract Nos. 1 and 3-6 related to all other Areas 1, 2, 4-6 and the site work/exterior shall progress and be completed to support and not delay
- 6. Contract Nos. 2-6 Work in Areas 4 6 shall be sequenced by each applicable Contractor to make most use and access of working space where the building erection is complete, so the work of Contract No.

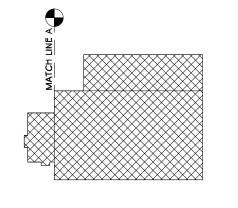






the overall Project Schedule.

PROJECT



NORTH

KEY PLAN

AREA OF CONSTRUCTION



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MONTGOMERY NY 12549

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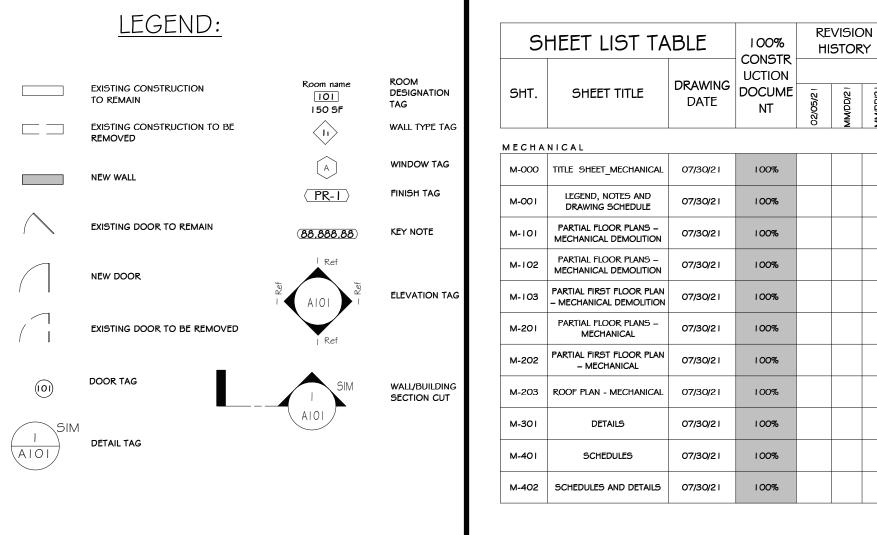
₹ockland Green

ROCKLAND GREEN
MATERIALS RECOVERY FACILITY,
FACILITY IMPROVEMENTS
420 TORNE VALLEY ROAD, HILLBURN, NY 10931

NY COA # 0017967

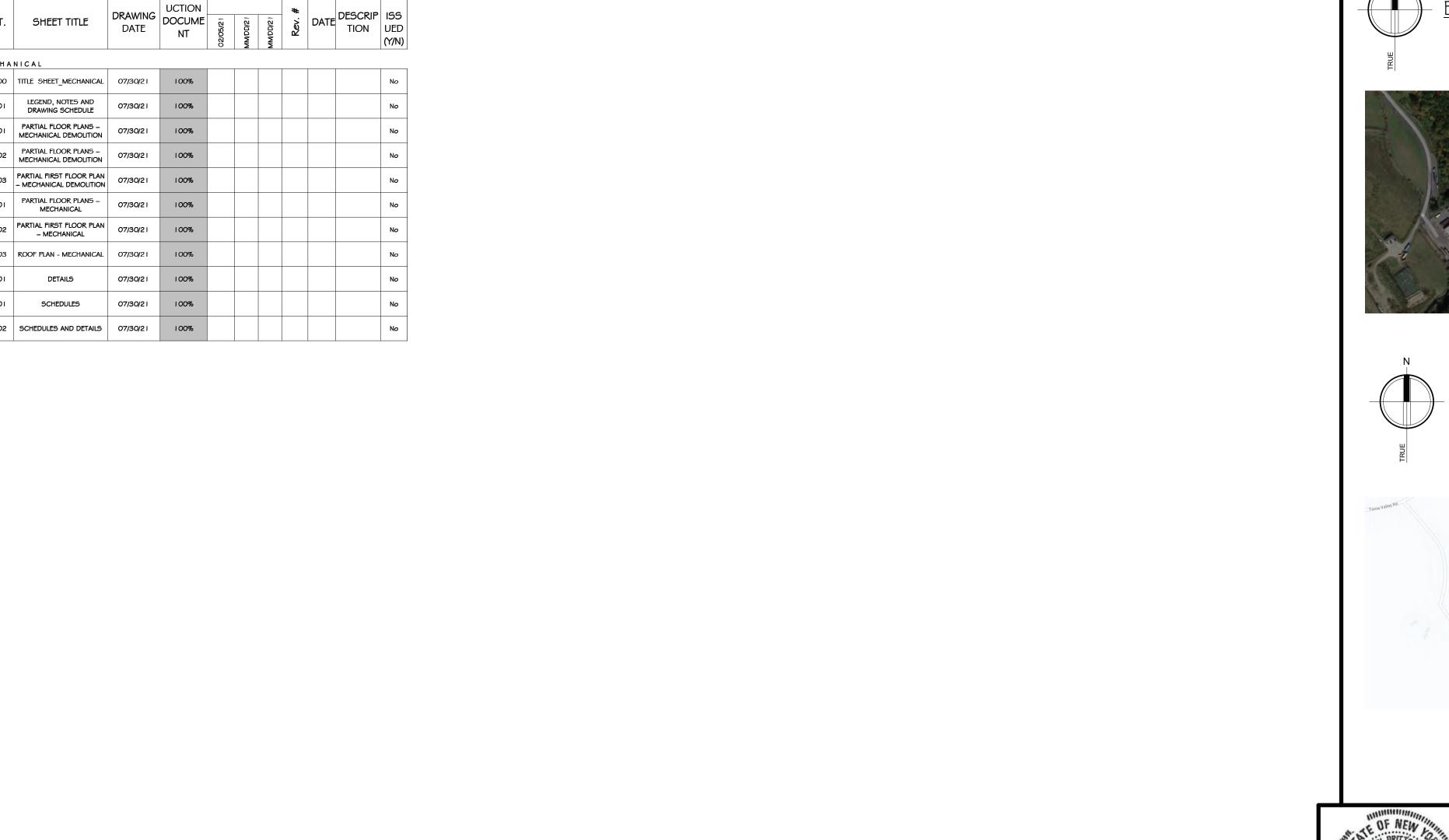
TITLE SHEET_MECHANICAL

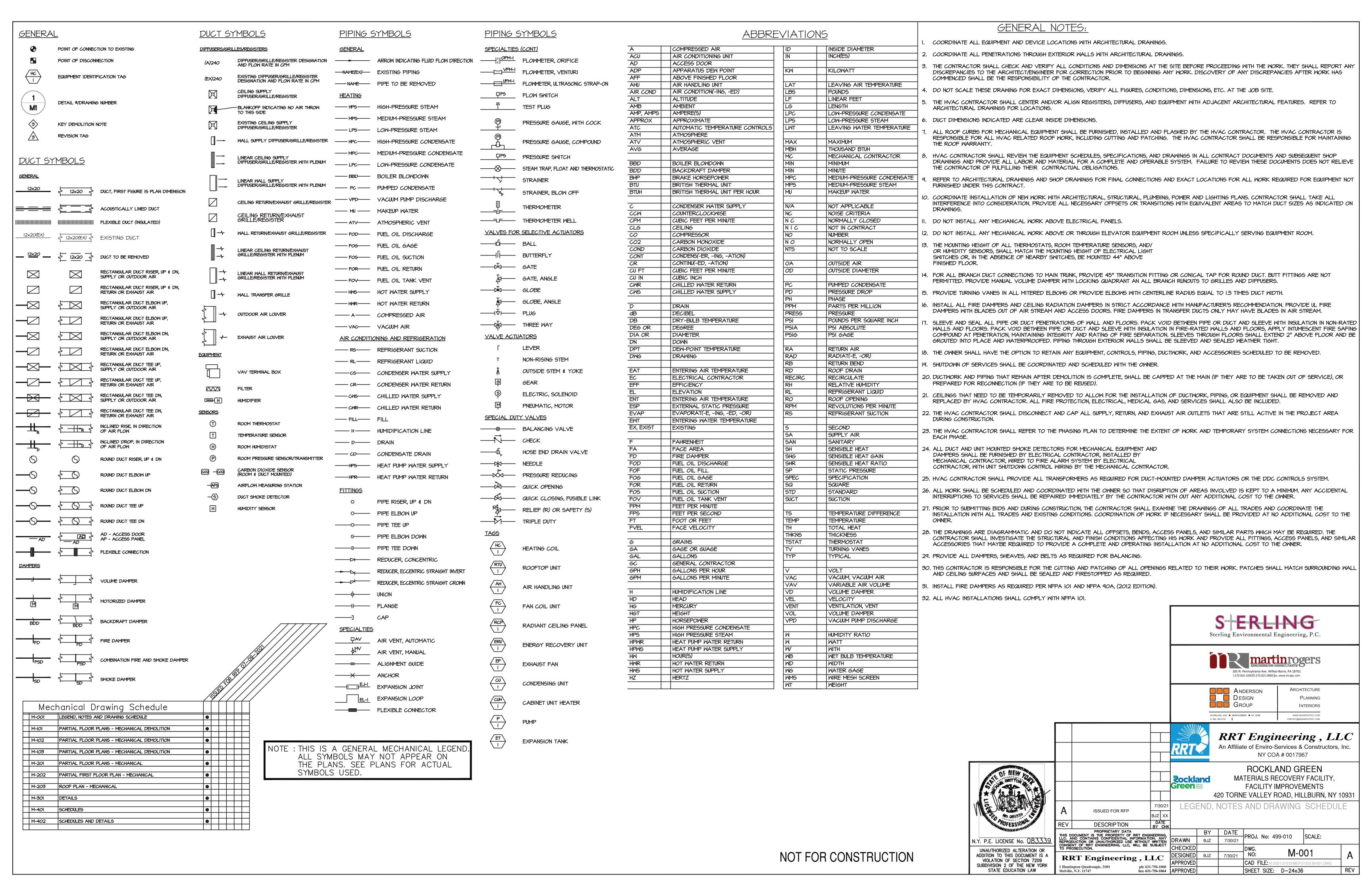
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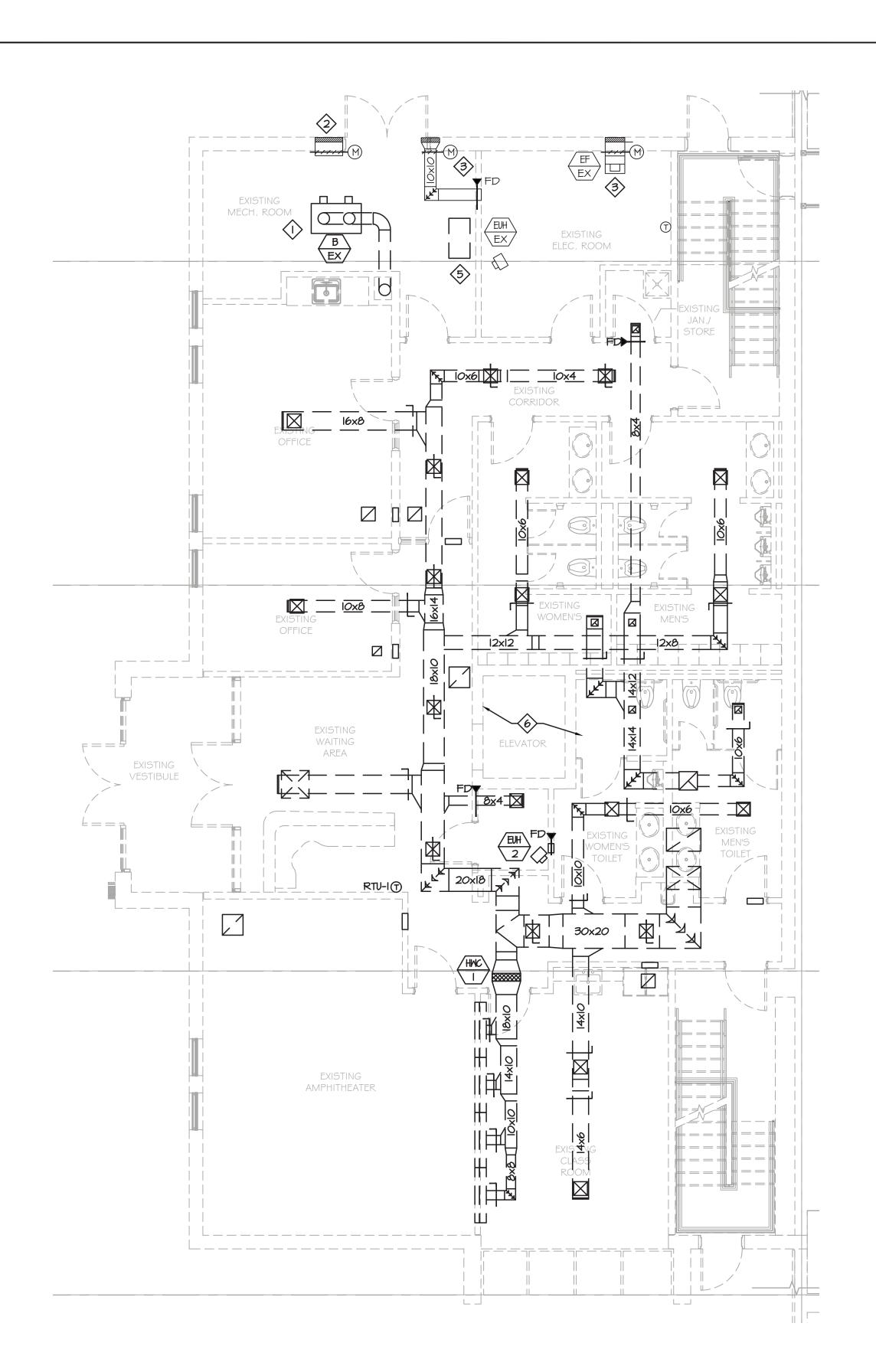


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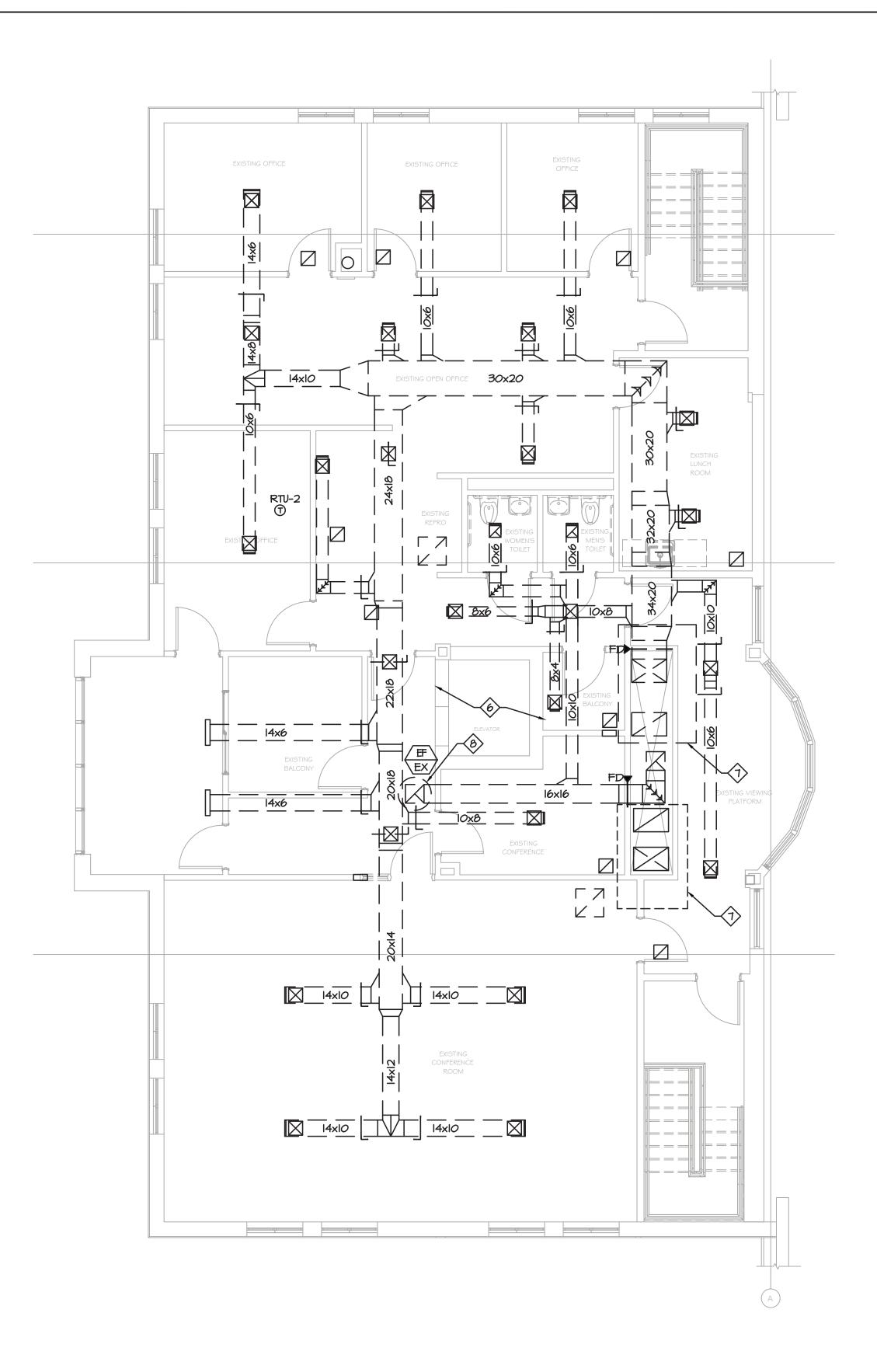
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	ABBREVIA	HONS:	
		1101101	
AB.	ANCHOR BOLT	MAT.	MATERIAL
A.C.T. A.F.F.	ACOUSTICAL CEILING TILE ABOVE FINISH FLOOR	MAX. MECH.	MAXIMUM MECHANICAL
A.T.T. APPX.	APPROXIMATE	MIN.	MINIMUM
ARCH.	ARCHITECT	MIR.	MIRROR
BSMT.	BASEMENT	MISC.	MISCELLANEOUS
BM	BEAM	MTL	METAL
BD	BOARD	NOM.	NOMINAL
BOT.	ВОТТОМ	N.T.S	NOT TO SCALE
BLDG.	BUILDING	O.C.	ON CENTER
CAB.	CABINET	O.H.	OVERHEAD
CLG.	CEILING	PTD.	PAINTED
C.T.	CERAMIC TILE	P. LAM.	PLASTIC LAMINATE
CIR.	CIRCLE	PL.	PLATE
COL	COLUMN	P.S.F.	POUNDS PER SQ. FOOT
C.J.	CONTROL JOINT	P.S.I.	POUNDS PER SQ. INCH.
CORR.	CORRIDOR	PREFAB	PREFABRICATED
D.L.	DEAD LOAD	P.T.	PRESSURE TREATED (WOOD)
DTL.	DETAIL	RAD.	RADIUS
DIAM.	DIAMETER	RLG.	RAILING
DIM.	DIMENSION	REF.	REFRIGERATOR
D.W.	DISHWASHER	REINF.	REINFORCE(ED), (ING)
D.H.	DOUBLE HUNG	REV.	REVIS(ION), (E), (ED)
D.S.	DOWNSPOUT	R.	RISER
DWG.	DRAWING	RFG.	ROOFING
ELEC.	ELECTRICAL	RM.	ROOM
ELEV.	ELEVATION	SEC.	SECTION
EQ.	EQUAL	SHTHG.	SHEATHING
EXIST.	EXISTING	SHT.	SHEET
EXT. E.I.F.S	EXTERIOR EXTERIOR INSULATED FINISH	SIM	SIMILAR SOUD CORE
L.I.I .3	SYSTEM	SPEC.	SOLID CORE SPECIFICATION
FIN.	FINISH	5Q.	SQUARE
F.P.	FIREPLACE	STD.	STANDARD
FLR	FLOOR	STO.	STORAGE
F.D.	FLOOR DRAIN	STRL.	STRUCTURAL
FTG.	FOOTING	THK	THICKNESS
FND.	FOUNDATION	THR.	THRESHOLD
FUR.	FURRED	T¢G	TONGUE AND GROOVE
G.C.	GENERAL CONTRACTOR	T.O.C.	TOP OF CONCRETE
GL.	GLASS, GLAZING	T.O.B.	TOP OF BEAM
GYP.BD	GYPSUM BOARD	T.O.F.	TOP OF FOUNDATION
HDW.	HARDWARE	T.O.P.	TOP OF PLATE
HDR.	HEADER	TR	TREAD
HTG.	HEATING	TYP.	TYPICAL
HVAC	HEATING/VENTALATION/AIR	UNF.	UNFINISHED
	CONDITIONING	U.O.N.	UNLESS OTHERWISE NOTED
HGT.	HEIGHT	V.B.	VAPOR BARRIER
HORZ.	HORIZONTAL	VERT.	VERTICAL
HB.	HOSE BIBB	V.I.F.	VERIFY
INS.	INSULAT(ED), (ION)	W.C.	WATER CLOSET
JT.	JOINT	W.P.	WATER PROOFING
JST.	JOIST	W.R.	WATER RESISTANT
KIT	KITCHEN	WWF.	WELDED WIRE FABRIC
LAV.	LAVATORY	WN.	WINDOW
LT.	LIGHT	W/O	WITHOUT
L.L.	LIVE LOAD	WD.	WOOD
MFR.	MANUFACTURE(R)		
MAS.	MASONRY		







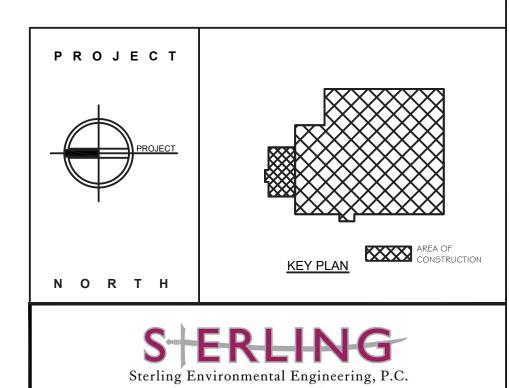




PARTIAL SECOND FLOOR PLAN - MECHANICAL DEMOLITION M-101 SCALE: 3/16"=1'-0"

DEMOLITION NOTES:

- REMOVE EXISTING BOILER, HOT WATER PUMP, EXPANSION TANK, AND ALL RELATED HOT WATER SYSTEM COMPONENTS IN THEIR ENTIRETY.
- REMOVE AND RETAIN EXISTING INTAKE LOUVER AND DAMPER FOR REINSTALLATION SEE NEW WORK PLAN.
- REMOVE AND RETAIN EXISTING LOUVER AND DUCTWORK FOR REINSTALLATION SEE NEW WORK PLAN. REMOVE EXISTING FIRE DAMPER NOT REQUIRED FOR
- REMOVE EXHAUST LOUVER, EXHAUST FAN, AND RELATED DUCTWORK AND DEVICES AND RETAIN FOR REINSTALLATION TO AVOID NEW ELECTRICAL SWITCHGEAR - SEE NEW WORK PLAN.
- 5 REMOVE EXISTING ATC AIR COMPRESSOR, AIR DRYER AND ALL RELATED APPURTENANCES IN THEIR ENTIRETY. ALL EXISTING PNEUMATIC CONTROL SYSTEM DEVICES, TUBING, ETC. SHALL BE REMOVED IN THEIR ENTIRETY. NEW CONTROLS SHALL BE ALL ELECTRONIC/DDC.
- 6 REMOVE ALL EXISTING SUPPLY, RETURN, AND EXHAUST DUCTWORK THROUGHOUT THE ADMINISTRATION BUILDING IN ITS ENTIRETY INCLUDING ALL DIFFUSERS, REGISTERS, GRILLES, DAMPERS, SUPPORTS, HANGERS, AND RELATED DEVICES. NOTHING SHALL REMAIN FROM EXISTING SYSTEMS AT COMPLETION OF DEMOLITION UNLESS SPECIFICALLY NOTED OTHERWISE.
- REMOVE ROOFTOP UNIT IN ITS ENTIRETY.
- (8) REMOVE ROOFTOP FAN IN ITS ENTIRETY.





ANDERSON DESIGN GROUP PLANNING INTERIORS WWW.ADGARCHITECT.COM

2ockland

APPROVED

ph: 631-756-1060 fax: 631-756-1064 APPROVED

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DESCRIPTION

RRT Engineering , LLC

RRT Engineering, LLC An Affiliate of Enviro-Services & Constructors, Inc. NY COA # 0017967

ROCKLAND GREEN MATERIALS RECOVERY FACILITY, FACILITY IMPROVEMENTS

420 TORNE VALLEY ROAD, HILLBURN, NY 10931 PARTIAL FLOOR PLANS -MECHANICAL DEMOLITION

M-101 DESIGNED BJZ 7/30/21

CAD FILE:

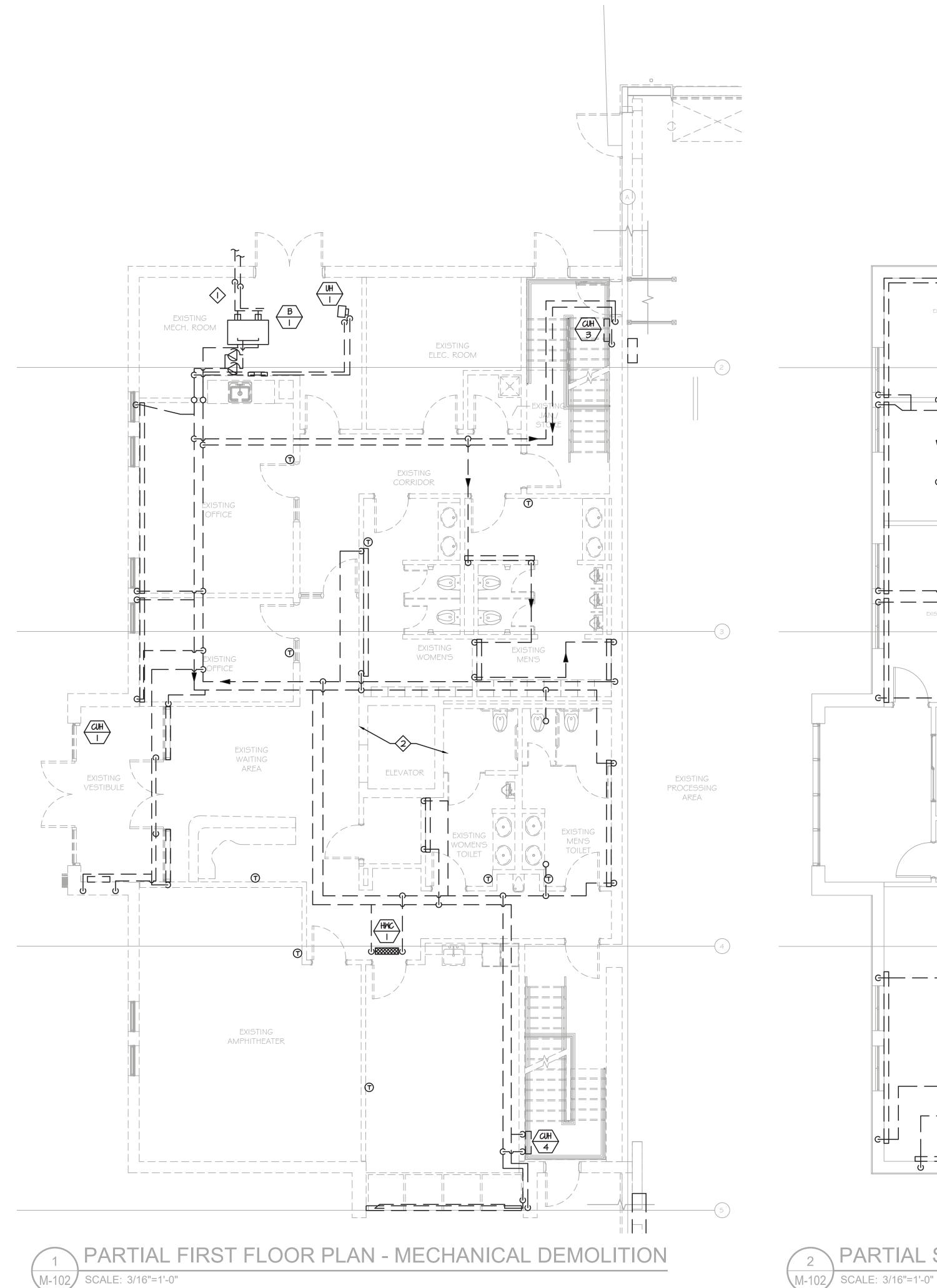
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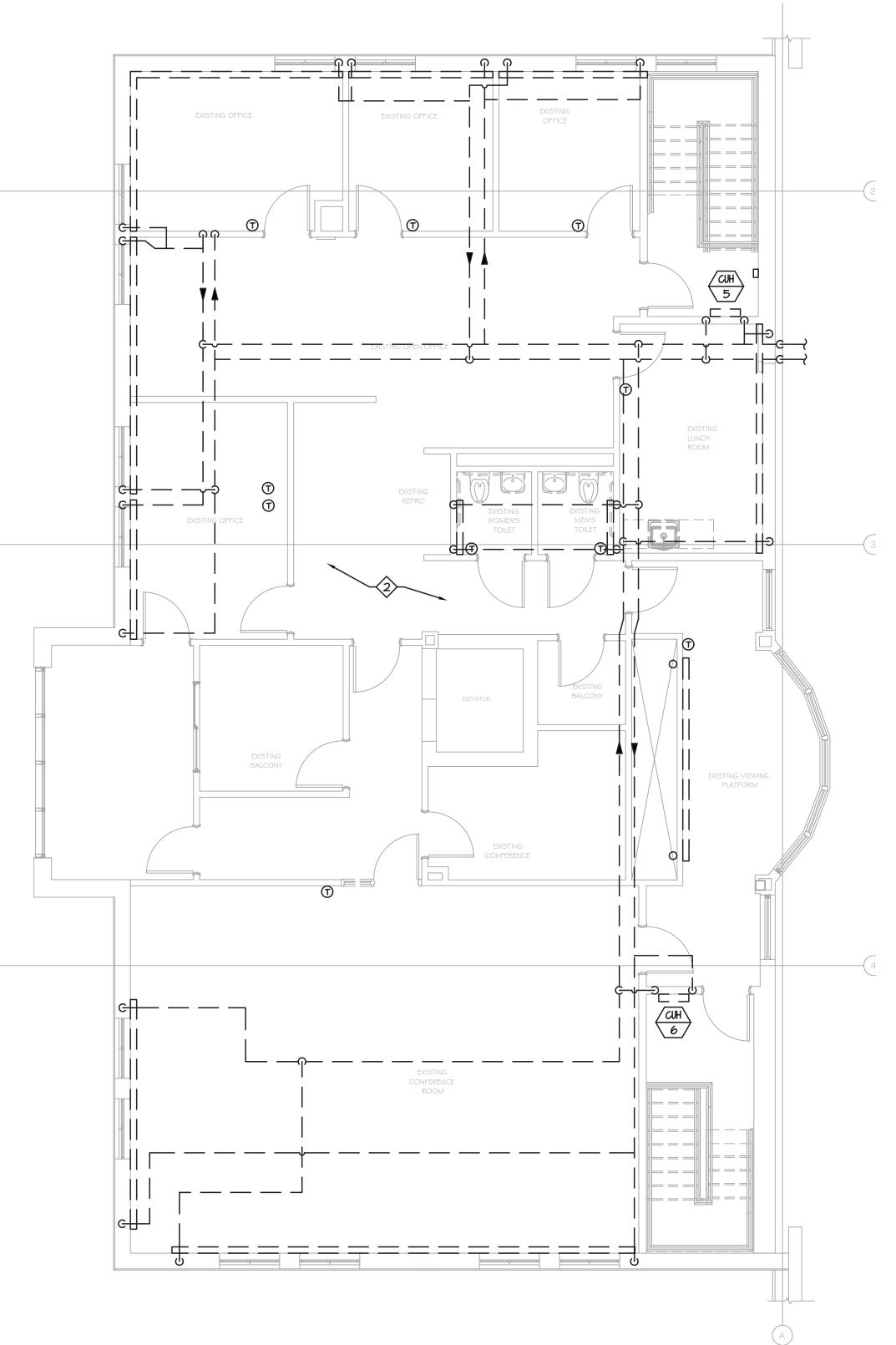
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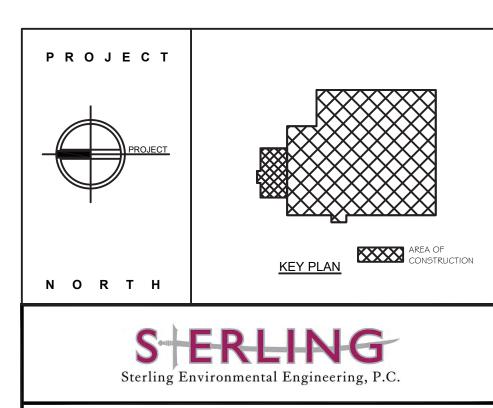


PARTIAL SECOND FLOOR PLAN - MECHANICAL DEMOLITION

NOT FOR CONSTRUCTION

DEMOLITION NOTES:

- REMOVE EXISTING BOILER, HOT WATER PUMP, EXPANSION TANK, AND ALL RELATED HOT WATER SYSTEM COMPONENTS IN THEIR ENTIRETY. REMOVE EXISTING FUEL PUMPS AND PIPING TO 5'-O" OUTSIDE BUILDING FOOTPRINT.
- REMOVE ALL EXISTING HOT WATER PIPING THROUGHOUT THE FACILITY IN ITS ENTIRETY INCLUDING ALL HOT WATER TERMINAL DEVICES, DUCT COILS, UNIT HEATERS, CABINET HEATERS, RADIATORS, HANGERS, AND RELATED DEVICES. NOTHING SHALL REMAIN FROM EXISTING SYSTEMS AT COMPLETION OF DEMOLITION UNLESS SPECIFICALLY NOTED OTHERWISE.



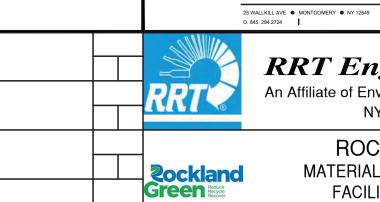
martin rogers

ENGINEERING CONSULTANTS

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ANDERSON

Design Group



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NY COA # 0017967

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ROCKLAND GREEN
MATERIALS RECOVERY FACILITY,
FACILITY IMPROVEMENTS

420 TORNE VALLEY ROAD, HILLBURN, NY 10931

PARTIAL FLOOR PLANS MECHANICAL DEMOLITION

DATE

420 TORNE VALLEY ROAD, HILLBURN, NY 10931

PARTIAL FLOOR PLANS MECHANICAL DEMOLITION

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Melville, N.Y. 11747

PROJ. No: 499-010

SCALE:

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BJZ
7/30/21

DWG.
NO:

M-102

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CAD FILE: N:2021\21033\MEP\21033 M-102.DWG

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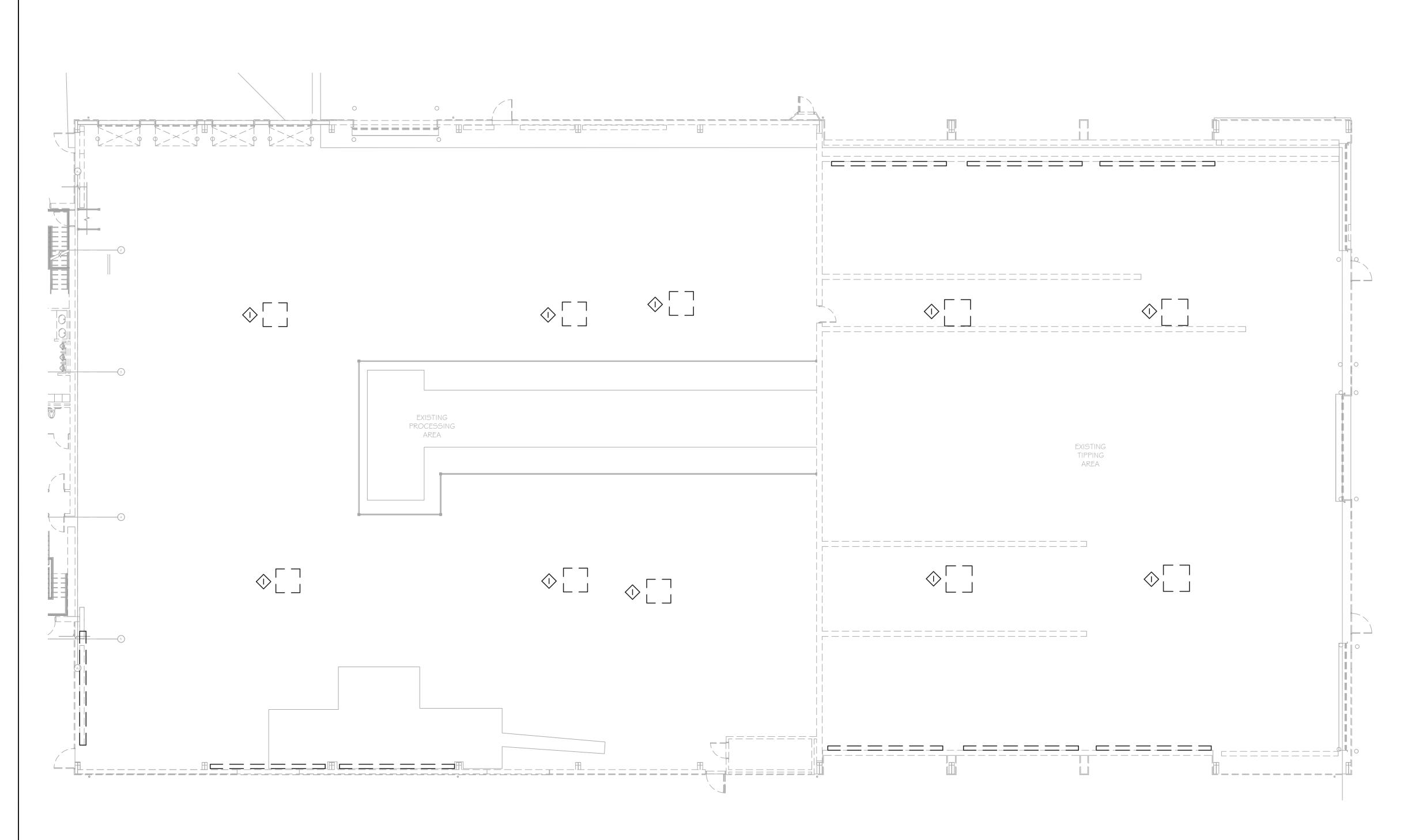
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PARTIAL FIRST FLOOR PLAN MECHANICAL DEMOLITION M-103 SCALE: 3/32"=1'-0"

REMOVE EXISTING ROOF CURB AND ANY RELATED DUCTWORK. EXISTING ROOF OPENING SHALL REMAIN AND BE MODIFIED AS REQUIRED TO ACCOMMODATE NEW HVAC EQUIPMENT. REFER TO M-203 FOR DETAILS.

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DESCRIPTION

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DESIGNED BJZ

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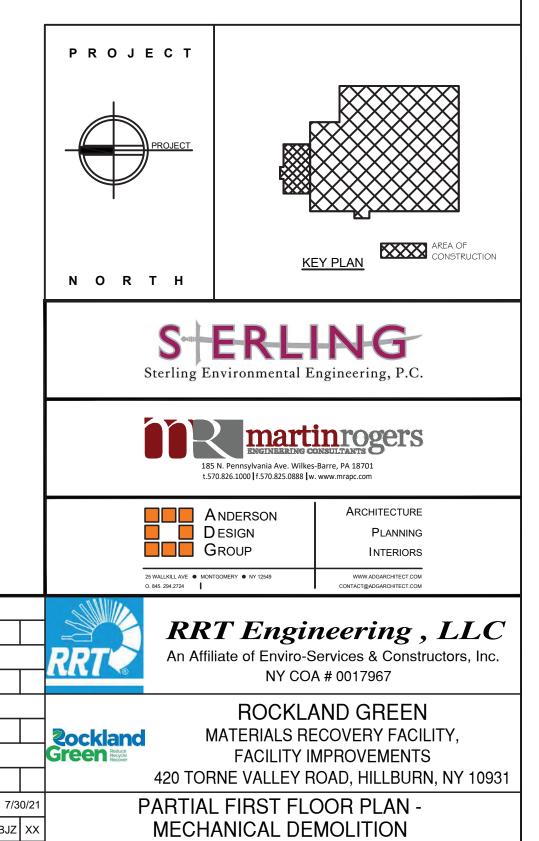
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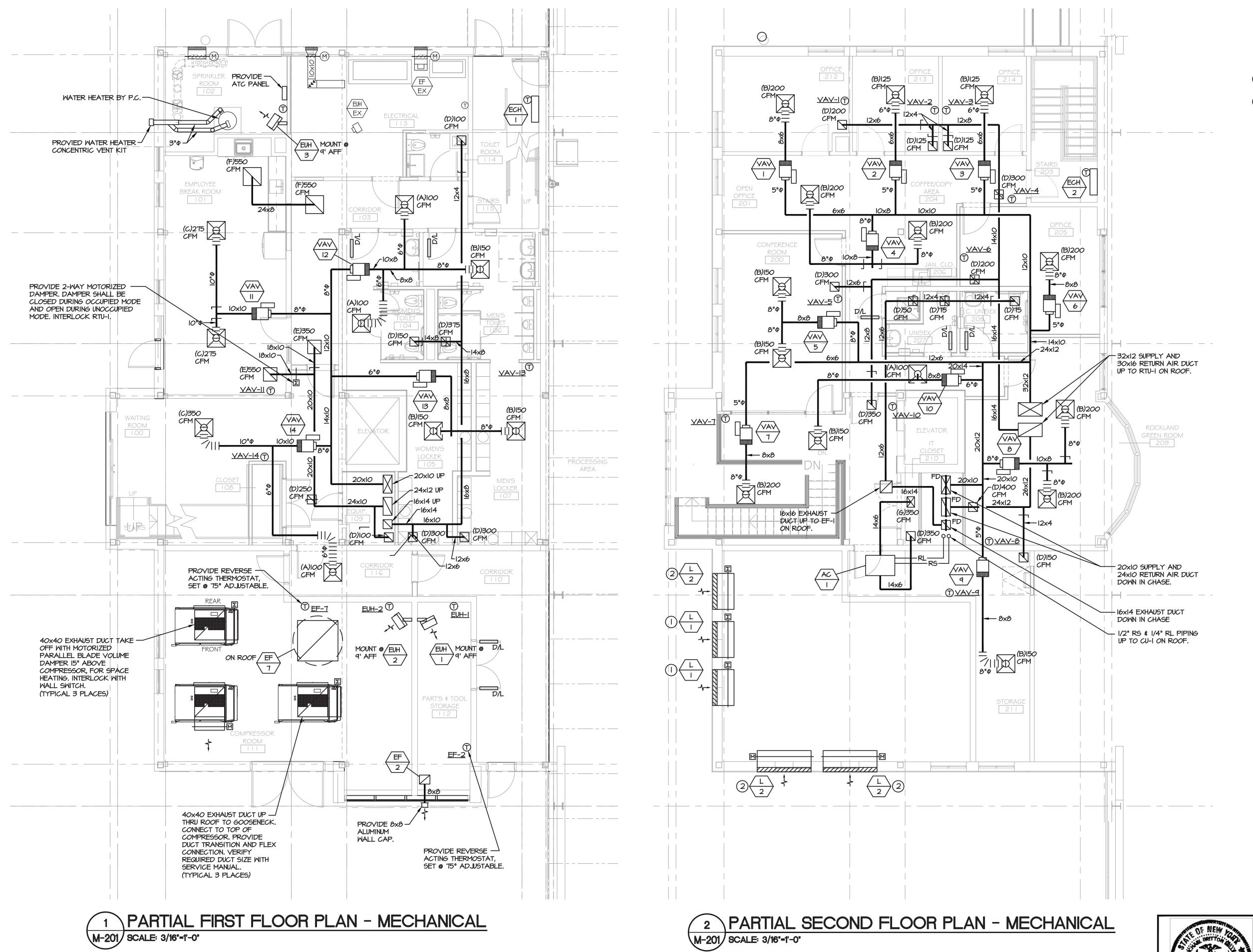
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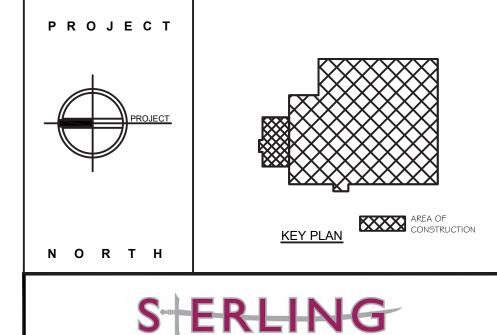
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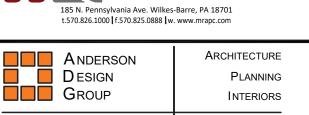


MECHANICAL INSTALLATION NOTES:

- INSTALL LOUVER IN EXISTING WINDOW OPENING. PROVIDE WOOD BLOCKING AS REQUIRED. VERIFY OPENING SIZE IN FIELD PRIOR TO PURCHASING LOUVER.
- 2 INSTALL LOUVER IN EXISTING WALL. LINTEL SHALL BE PROVIDED BY STRUCTURAL CONTRACTOR. ALIGN NEW OPENING WITH EXISTING WINDOW.







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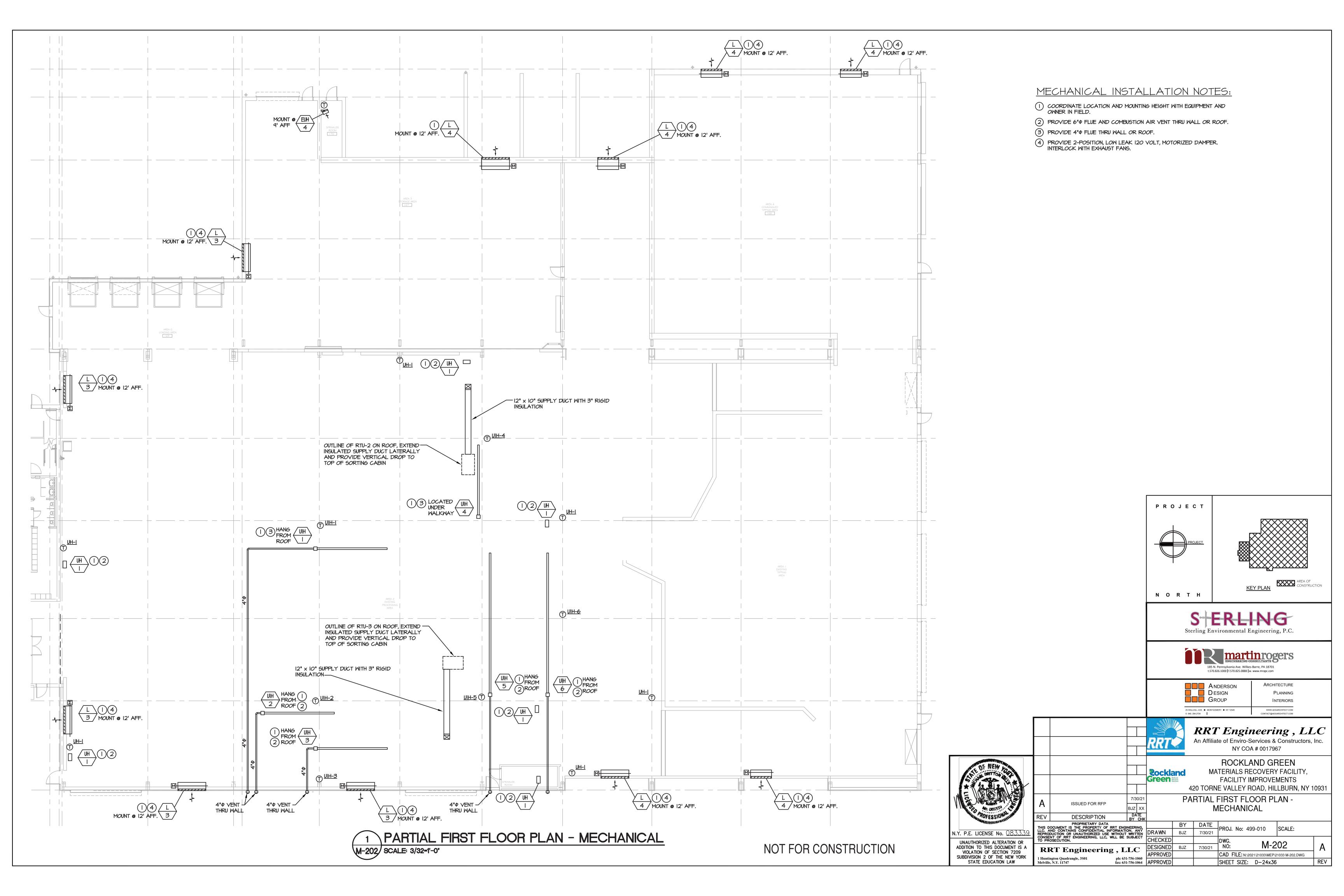
ROCKLAND GREEN MATERIALS RECOVERY FACILITY, FACILITY IMPROVEMENTS

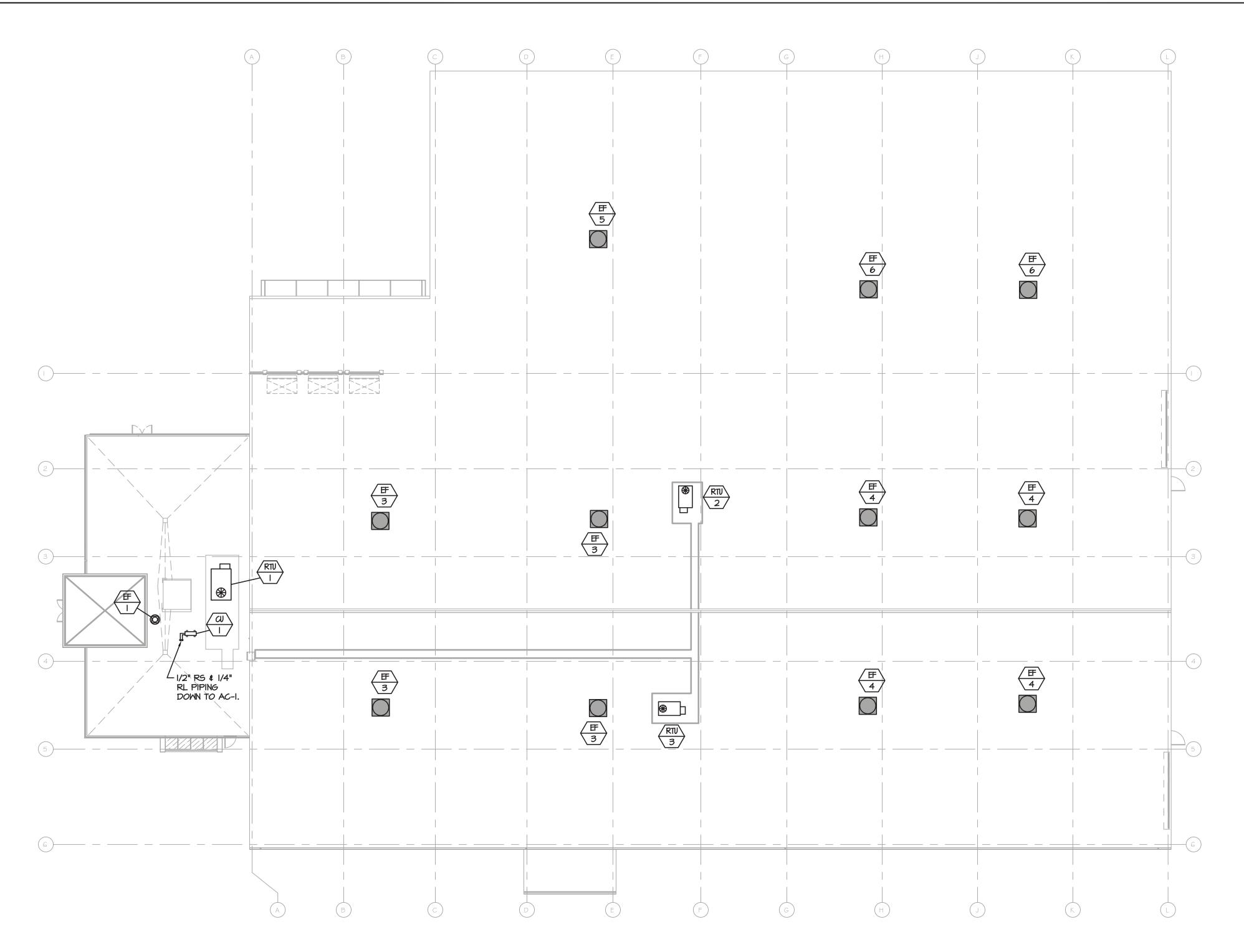
420 TORNE VALLEY ROAD, HILLBURN, NY 10931 PARTIAL FLOOR PLANS -

MECHANICAL

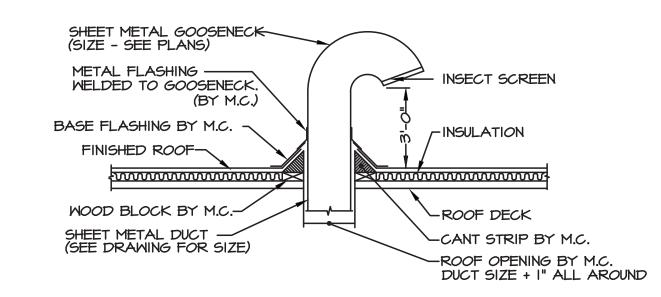
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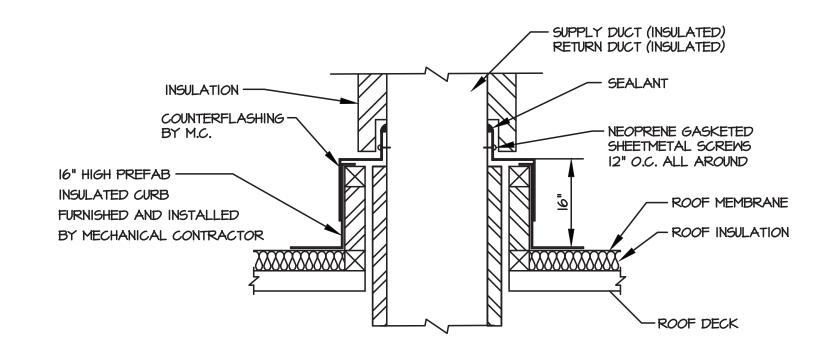




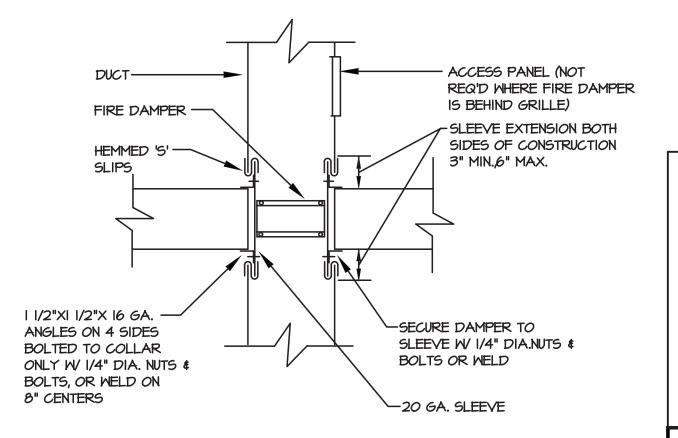




1 TYPICAL GOOSENECK DETAIL M-203 SCALE: NO SCALE



2 DUCT THRU ROOF DETAIL M-203 NOT TO SCALE

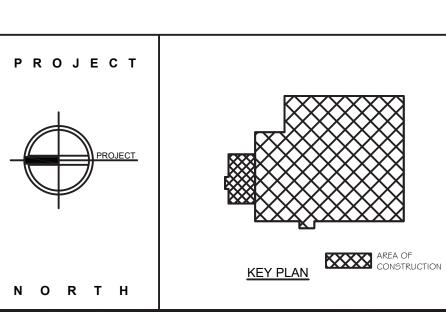




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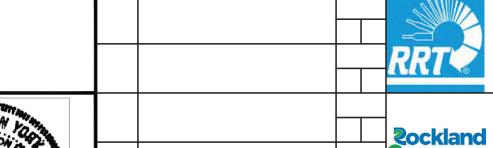
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DESCRIPTION

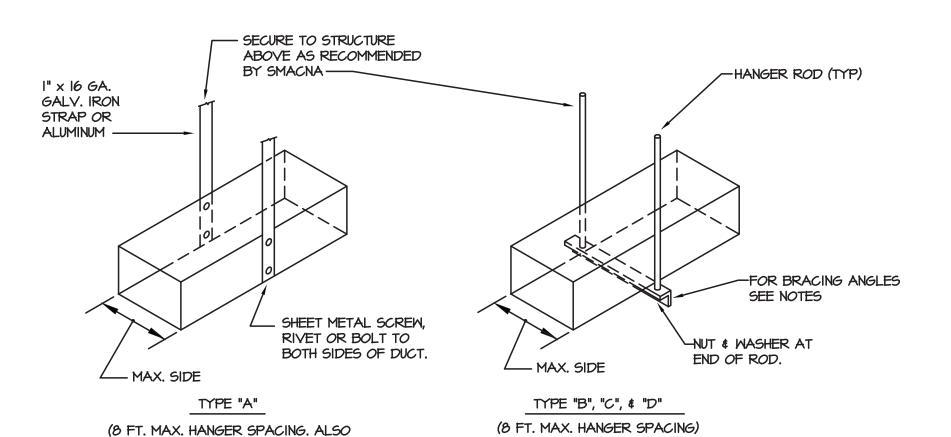
RRT Engineering, LLC An Affiliate of Enviro-Services & Constructors, Inc. NY COA # 0017967

ROCKLAND GREEN MATERIALS RECOVERY FACILITY, FACILITY IMPROVEMENTS 420 TORNE VALLEY ROAD, HILLBURN, NY 10931

ROOF PLAN - MECHANICAL

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(8 FT. MAX. HANGER SPACING. ALSO PROVIDE 3 HANGERS AT EACH TAKE-OFF

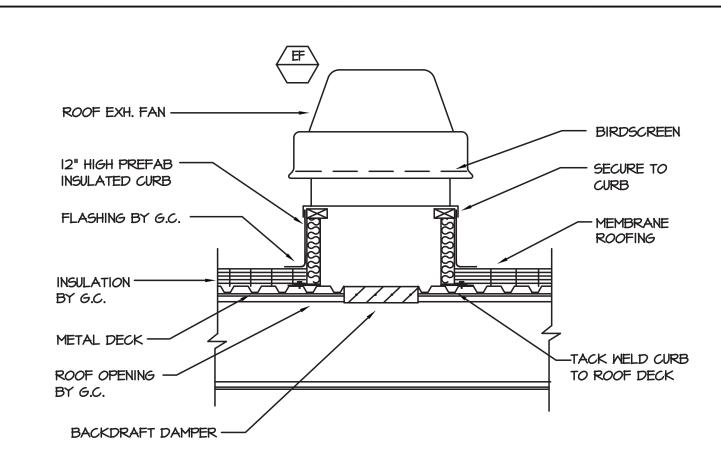
DUCT DIMENSION	HANGER TYPE	ROD DIA.	ANGLE SIZE	MAX SPACING
UP TO 18"	Α	I" STRAP		8'-0"
19" TO 60"	В	5/16"	- /2" x - /2" x /8"	8'-0"
61" TO 96"	C	3/8"	- /2" × - /2" × 3/ 6"	8'-0"
OVER 96"	D	1/2"	2" × 2" × 1/4"	4'-0"

I. FOR SEVERAL DUCTS ON ONE HANGER, TYPE "B", "C", OR "D" MAY BE USED. SIZE OF HANGER WILL BE SELECTED ON SUM OF DUCT WIDTHS EQUAL TO MAX. WIDTH OF DUCT SCHEDULE.

2. DUCTS SHALL BE SUPPORTED FROM STRUCTURAL STEEL NOT FLOOR DECK ABOVE.

HEAVY DENSITY NOISE BARRIER BATT INSULATION ROOF OPENINGS -BY G.C. -ALUMINUM VIBRATION 16" HIGH PREFAB -ISOLATION RAIL INSULATED CURB FLASHING BY G.C. "P" TRAP -EXTEND TO SPLASH BLOCK - MEMBRANE INSULATION -ROOFING BY G.C. METAL -DECK TACK WELD, SECURE CURB TO ROOF DECK

ROOFTOP UNIT DETAIL SCALE: N.T.S.



ROOF MOUNTED EXHAUST FAN DETAIL SCALE: N.T.S.

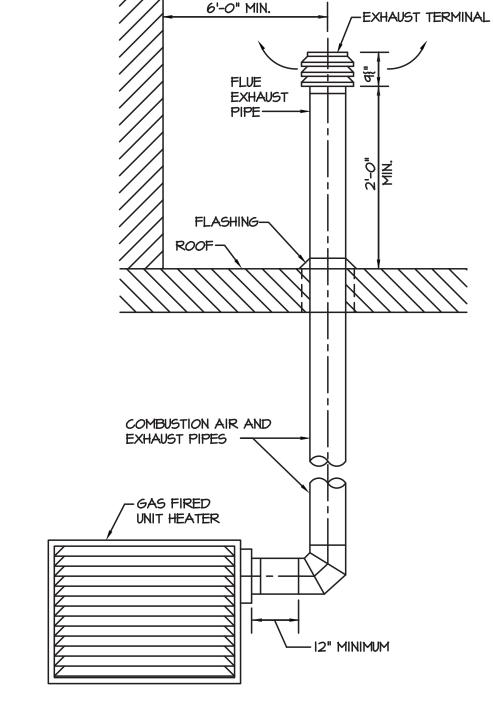
BIRDSCREEN

SECURE TO

ROOFING

EXISTING/NEW METAL

CURB



— WALL OR ADJOINING BUILDING

GAS UNIT HEATER DETAIL M-301 SCALE: N.T.S.

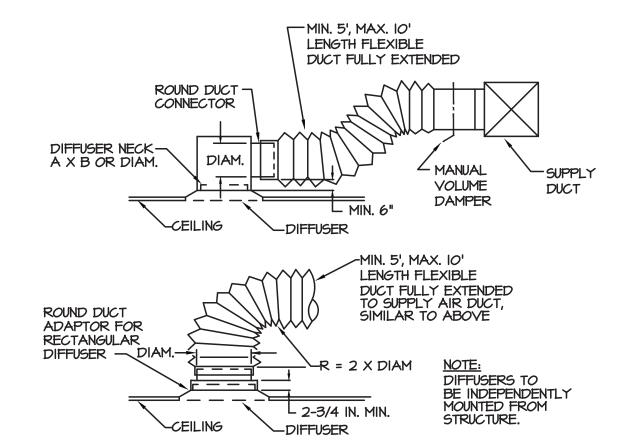
AREA OF CONSTRUCTION

M-301

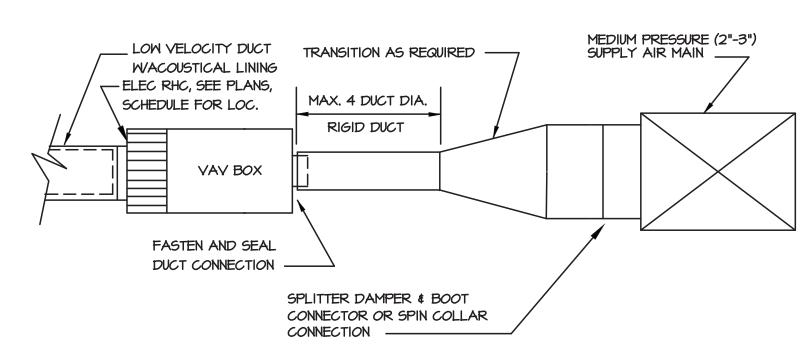
REV

SERLING

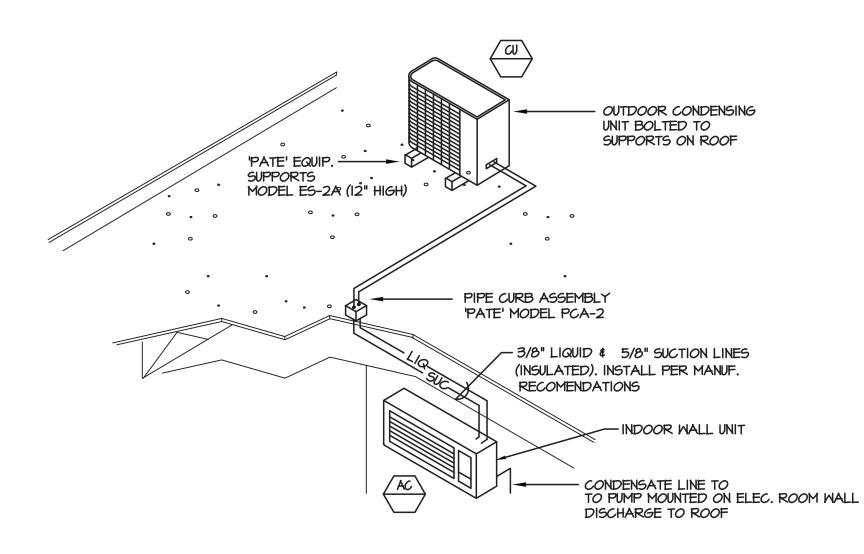
DUCT HANGER DETAILS M-301/ SCALE: N.T.S.



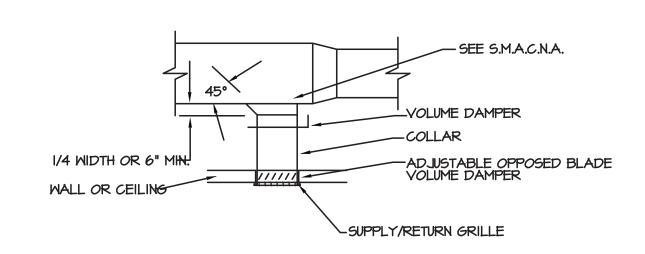
DIFFUSER CONNECTION DETAILS M-301 SCALE: N.T.S.



VAV BOX DETAIL

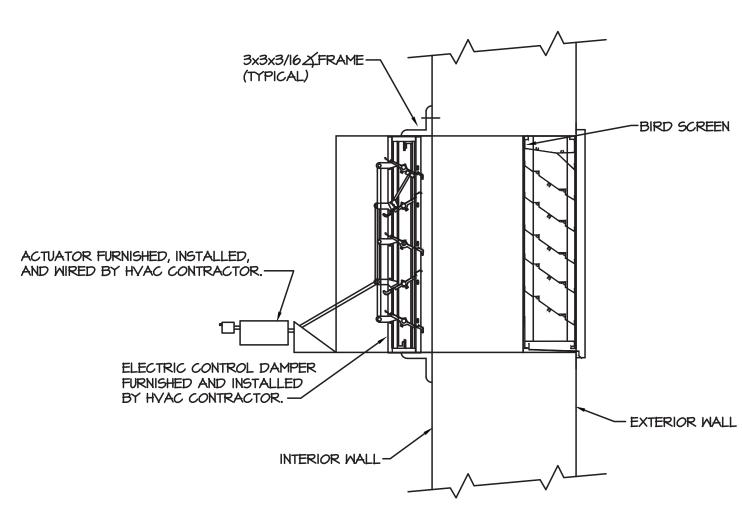


DUCTLESS SPLIT SYSTEM DETAIL M-301 SCALE: N.T.S.



REGISTER & GRILLE CONNECTIONS DETAIL M-301 SCALE: N.T.S.

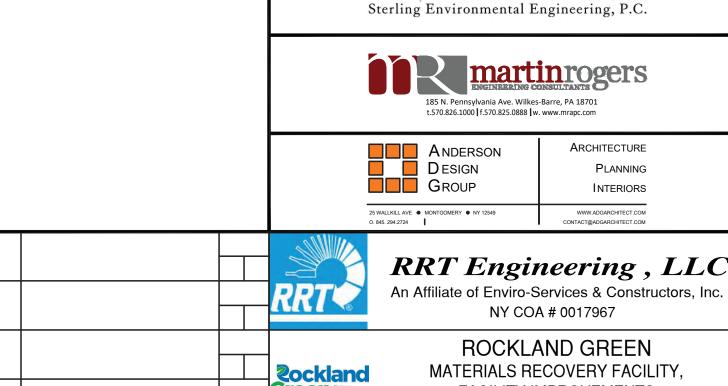




ROOF EXH. FAN -

NEW INSULATED ROOF CURB —





PROJECT

NORTH

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FACILITY IMPROVEMENTS 420 TORNE VALLEY ROAD, HILLBURN, NY 10931 DETAILS ISSUED FOR RFP DESCRIPTION BY DATE ESIGNED BJZ 7/30/21 **RRT Engineering, LLC** APPROVED CAD FILE: ph: 631-756-1060 fax: 631-756-1064 APPROVED SHEET SIZE: D-24x36

	GAS FIRED UNIT HEATER SCHEDULE														
TAG	APPLICATION MANUF. MODEL FUEL INPUT OUTPUT CFM DIA DIA HP V/PH/HZ (LBS) REMARKS/ACCESS														
UH-I	WHAREHOUSE	REZNOR	VBZ	NAT. GAS	400	340	6185	6	6	2.0	115/1/60	507	I THRU 13		

- . PROVIDE FACTORY ELECTRICAL DISCONNECT SWITCH AND INTEGRAL THERMOSTAT.
- 2. PROVIDE FACTORY COMBUSTION AIR/VENT KIT (CONCENTRIC VENTS THROUGH SIDEWALL.) 3. PROVIDE FACTORY BELT AND BLOWER GUARDS.
- 4. PROVIDE ALL NECESSARY MOUNTING BRACKETS AND HARDWARE.
- 5. 3/4" NATURAL GAS CONNECTION.
- 6. ELECTRICAL 27.3 FLA, 60 MOCP, 1835 WATTS... I. PROVIDE UNIT WITH 2 STAGE NATURAL GAS VALVE.
- 8. PROVIDE UNIT WITH 2 STAGE A WALL-MOUNTED HEATING THERMOSTAT WITH SUMMER FAN/BLOWER SWITCH.
- 9. PROVIDE UNIT WITH ALL REQUIRED GAS PRESSURE REGULATORS.
- IO. PROVIDE UNIT WITH HORIZONTAL LOUVERS. MOUNT UNIT AND VENTS AS HIGH AS POSSIBLE FOR MAXIMUM CLEARANCE BELOW.
- II. PROVIDE UNIT WITH II5 VOLT TO 24 VOLT TRANSFORMER AND 24 VOLT REMOTE THERMOSTAT.
- 12. FINISH BAKED ENAMEL, COLOR SHALL BE WHITE. 13. PROVIDE ALL NECESSARY STRUCTURAL STEEL FOR INSTALLATION OF UNIT.

			UNIT	ARY INFI	RARED H	EATER SCHE	DULE		
TAG	MANUFACTURER	MODEL	DESCRIPTION	MAX. INPUT	MIN. LENGTH	ELECTRICAL DATA	TUBE MATERIAL	FUEL	REMARKS/ACCESSORIES
UIH-I	ROBERTS GORDON	CTH3-80	VANTAGE MODULATING	80,000 BTUH	20 FEET STRAIGHT TUBE	I.3A RUN-120/1φ 4.8A START-120/1φ	ALUMINIZED 4"¢	NATURAL GAS	1, 2, 3, 4, 5, 6, 7, 8
UIH-2	ROBERTS GORDON	CTH3-80	VANTAGE MODULATING	80,000 BTUH	20 FEET STRAIGHT TUBE	1.3A RUN-120/1¢ 4.8A START-120/1¢	ALUMINIZED 4"Φ	NATURAL GAS	1, 2, 3, 4, 5, 6, 7, 8
UIH-3	ROBERTS GORDON	CTH3-80	VANTAGE MODULATING	80,000 BTUH	20 FEET STRAIGHT TUBE	1.3A RUN-120/1¢ 4.8A START-120/1¢	ALUMINIZED 4"Φ	NATURAL GAS	1, 2, 3, 4, 5, 6, 7, 8
UIH-4	ROBERTS GORDON	CTH3-80	VANTAGE MODULATING	80,000 BTUH	20 FEET STRAIGHT TUBE	1.3A RUN-120/1¢ 4.8A START-120/1¢	ALUMINIZED 4"Φ	NATURAL GAS	1, 2, 3, 4, 5, 6, 7, 8
UIH-5	ROBERTS GORDON	CTH3-150	VANTAGE MODULATING	150,000 BTUH	40 FEET STRAIGHT TUBE	1.3A RUN-120/1φ 4.8A START-120/1φ	ALUMINIZED 4"Φ	NATURAL GAS	1, 2, 3, 4, 5, 6, 7, 8
UIH-6	ROBERTS GORDON	CTH3-150	VANTAGE MODULATING	150,000 BTUH	40 FEET STRAIGHT TUBE	1.3A RUN-120/1¢ 4.8A START-120/1¢	ALUMINIZED 4"Φ	NATURAL GAS	1, 2, 3, 4, 5, 6, 7, 8

REMARKS/ACCESSORIES:

- I. PROVIDE WITH SIDE REFLECTOR SHIELDS.
- 2. PROVIDE ALL REQUIRED TUBING, REFLECTORS AND HANGERS AS REQUIRED. 3. PROVIDE WITH DOUBLE PORCELAIN COATED CONDENSING HEAT EXCHANGER TAILPIPE.
- 4. PROVIDE STANDARD CONTROL PANEL WITH 24 VOLT THERMOSTATS.
- 5. PROVIDE WITH HOT SURFACE IGNITION SYSTEM.
- 6. PROVIDE 24 VOLT PROGRAMMABLE MODULATING THERMOSTAT WITH METAL COVER.
- 7. PROVIDE WITH 4" PFLUE AND COMBUSTION AIR VENT TERMINAL.
- 8. PROVIDE WITH 3/4" GAS CONNECTION.

		VA	V BOX	< SCH	HEDUL	_E (El	ECT	RIC F	REHEAT)			
TAG	MAKE	MODEL	SIZE DIA.	COOLI MAX	NG CFM MIN	MIN HTG CFM	E.A.T.	L.A.T.	ELECTRIC HEAT (KW)	VOLTAGE/ PHASE	A.P.D.	REMARKS
VAV-I	TRANE	VCEF	5"	200	150	150	55	4 5	2	277/1	.01	1, 2, 3, 4, 5, 6
VAV-2	TRANE	YCEF	5"	125	100	100	55	4 5	1.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-3	TRANE	VCEF	5"	125	100	100	55	4 5	1.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-4	TRANE	VCEF	8"	400	200	200	55	45	2.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-5	TRANE	VCEF	8"	300	200	200	55	4 5	2.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-6	TRANE	YCEF	5"	200	150	150	55	4 5	2.0	277/1	.01	1, 2, 3, 4, 5, 6
VAV-7	TRANE	YCEF	5"	200	150	150	55	4 5	2.0	277/1	.01	1, 2, 3, 4, 5, 6
VAV-8	TRANE	YCEF	8"	400	200	200	55	4 5	2.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-9	TRANE	VCEF	5"	150	100	100	55	45	1.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-IO	TRANE	VCEF	6"	250	150	150	55	4 5	2.0	277/1	.01	1, 2, 3, 4, 5, 6
VAV-II	TRANE	VCEF	8"	550	300	300	55	45	4.0	277/1	.01	1, 2, 3, 4, 5, 6
VAV-I2	TRANE	VCEF	8"	350	200	200	55	4 5	2.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-I3	TRANE	VCEF	6"	300	150	150	55	45	2.0	277/1	.01	1, 2, 3, 4, 5, 6
VAV-I4	TRANE	VCEF	8"	450	250	250	55	45	3.5	277/1	.01	1, 2, 3, 4, 5, 6

REMARKS/ACCESSORIES:

- I. PROVIDE VAY BOX WITH SCR REHEAT CONTROL.
- 2. PROVIDE VAV BOX WITH 277V OR 480V TO 24V TRANSFORMER. 3. THE HEATING MINIMUM IS THE MINIMUM AIRFLOW REQUIRED ACROSS THE ELECTRIC REHEAT COIL FOR PROPER PERFORMANCE.
- 4. PROVIDE FACTORY MOUNTED DISCONNECT SWITCHES.
- 5. PROVIDE WITH FOIL FACED 1/2" THICK ELASTOMERIC INSULATION.
- 6. PROVIDE WITH MOUNTING BRACKETS.

	ROOF TOP UNIT SCHEDULE																											
					E\/A	P. FAN DA	ΔΤΔ				DX COOLING CO	OII	COMP	RESSOR	CONDENS	CONDENSER FAN		NATURAL GAS FURNACE					EYHAIR	T FAN DAT	Δ.	UNIT ELECT	PICAL DATA	
TAG	MAKE	MODEL	TONS									DA GOOLING G		OOMIF I	NL330K	CONDLIN	SER I AN	INPUT	OUTPUT		EER		EXHAUST FAN DATA			UNIT ELECTRICAL DATA		
				CFM	O/A CFM	E.S.P.	. HP	RPM	VOLTAGE	TOTAL MBH	SENS. MBH	E.A.T. DB/WB	L.A.T. DB/MB	aty	RLA	QTY	HP	MBH	MBH	STAGES		CFM	E.S.P.	HP	RPM	VOLTAGE	M.C.A.	M.O.C.P.
RTU-I	TRANE	YHCI20F4RHA	10	4,000	1,475	0.9"	3	1,565	480V/3¢	113.4	95.7	80°/67°	57.8°/56.8°	2	8.2 / 6.0	ı	.75	250	200	2	12.4	4,000	0.1"	ı	1075	208V/IФ	22	25
RTU-2	TRANE	OABDO48E4	3	500	500	1.0	1/2	-	480V/3 	36.0	30.0	95°/78°	55°/44°	I	7.9	I	0.25	60	48	-	13.0	-	-	-	-	-	21	25
RTU-3	TRANE	OABDO48E4	3	500	500	1.0	1/2	-	480V/3¢	36.0	30.0	95°/78°	55°/44°	ı	7.9	ı	0.25	60	48	ı	13.0	-	-	_	-	-	21	25

- BALANCE UNIT TO PROVIDE SUPPLY AIR FLOW RATES SHOWN ON PLANS.
- 2. DX COOLING WITH INDIRECT FIRED NATURAL GAS HEAT.
- 3. VERTICAL DISCHARGE AND VERTICAL RETURN. (VERTICAL RETURN FOR RTU-I ONLY) 4. 2" MERY 8 HIGH EFFICIENCY, THROWAWAY FILTER.
- 5. O-100% OUTSIDE AIR ECONOMIZER CONTROL WITH MODULATING OUTSIDE AND RETURN AIR DAMPERS. (RTU-I ONLY). 2-POSITION MOTORIZED OA DAMPER FOR RTU'S 2 & 3.
- 6. POWERED EXHAUST: DIRECT DRIVE WITH VFD AND GRAVITY DAMPER. (RTU-I ONLY)
- 7. FACTORY FURNISHED SUPPLY FAN VFD WITH BYPASS. (RTU-I ONLY) 8. FACTORY POWERED GROUND FAULT CONVENIENCE OUTLET.
- 9. PROVIDE UNIT WITH FACTORY-MOUNTED DISCONNECT SWITCH.
- IO. PROVIDE UNIT WITH STANDARD SERVICE ACCESS. II. PROVIDE UNIT WITH STAINLESS STEEL DRIP PAN.

- 12. PROVIDE UNIT WITH CONDENSER HAILGUARD.
- 13. PROVIDE UNIT WITH 20:1 TURNDOWN (RTU-1), 5:1 MINIMUM FOR FOR RTU'S 2 & 3. 14. PROVIDE UNIT WITH WIRELESS BACNET COMM INTERFACE (AND MULTI-ZONE VAV CONTROL FOR RTU-I).
- 15. PROVIDE RTU'S 2 AND 3 WITH DIGITAL SCROLL COMPRESSORS, MODULATING HOT GAS REHEAT, AND
- CONDENSER FAN VARIABLE SPEED HEAD PRESSURE CONTROL.
- 16. PROVIDE UNIT WITH SUPPLY DISCHARGE AIR SENSOR.
- 17. PROVIDE UNIT WITH FLAT ROOF CURB. 18. 5-YEAR DIGITAL/VARIABLE SPEED SCROLL COMPRESSOR WARRANTY.
- 19. I-YEAR PARTS ONLY WARRANTY. 20. I-YEAR LABOR DX GAS HEAT OR COOLING ONLY WARRANTY.
- 21. FACTORY STARTUP BY MANUFACTURER REPRESENTATIVE.
- 22. SMOKE DETECTOR SHALL BE PROVIDED AND INSTALLED BY THE E.C.
- 23. PROVIDE RAIN HOODS AT OUTDOOR AIR AND RELIEF AIR OPENINGS. 24. PROVIDE APR VALVE ON EACH COMPRESSOR CIRCUIT FOR RTU-I.

				1	DIFFUSI	ER, RE	GISTE	ER & GR	RILLE	SCHEDI	儿E			
TAG	MANUFACTURER	MODEL	CFM RANGE	SERVICE	NECK SIZE	FACE SIZE	PRESS. DROP	PATTERN	THROW	STYLE	MAX NC	MATERIAL	REMARKS/ACCESSORIES	
Α	ANEMOSTAT	HPX-4I	40-120	SUPPLY	6"x6" 6"¢	24"x24"	0.10"	4-WAY	2'-7'	LAY-IN	20	ALUMINUM	HIGH PERFORMANCE WITH DIFFUSING VANES AND OPPOSED BLADE DAMPER	
В	ANEMOSTAT	HPX-4I	125-225	SUPPLY	9"x9" 8"Ф	24"x24"	0.06"	4-WAY	3'-8'	LAY-IN	20	ALUMINUM	HIGH PERFORMANCE WITH DIFFUSING VANES AND OPPOSED BLADE DAMPER	
C	ANEMOSTAT	HPX-4I	230-325	SUPPLY	2"x 2" <i>Ο</i> "φ	24"x24"	0.06"	4-WAY	3'-9'	LAY-IN	20	ALUMINUM	HIGH PERFORMANCE WITH DIFFUSING VANES AND OPPOSED BLADE DAMPER	
D	ANEMOSTAT	6050	50-495	RETURN/ EXHAUST	l2"xl2"	4"x 4"	0.01"	EGGCRATE	ı	SURFACE	20	ALUMINUM	I/2 x I/2 x I/2 CORE, OPPOSED BLADE DAMPER	
E	ANEMOSTAT	6050	500-950	RETURN	18"x18"	20"x20"	0.01"	EGGCRATE	1	SURFACE	20	ALUMINUM	I/2 x I/2 x I/2 CORE, OPPOSED BLADE DAMPER	
F	ANEMOSTAT	6C50L	955-2000	TRANSFER	24"x24"	24"x24"	0.01"	EGGCRATE	1	LAY-IN	20	ALUMINUM	1/2 x 1/2 x 1/2 CORE	
6	ANEMOSTAT	X2H	350	SUPPLY	16"x10"	16"x10"	0.01"	2-WAY	5'-9'	SURFACE	20	ALUMINUM	3/4" SPACING DOUBLE DEFLECTION	
D/L			50/500	TRANSFER	20"xI8"	22"x20"	0.01"	LOUVER	-	SURFACE		STEEL	DOOR LOUVER PROVIDE BY G.C.	

- I. ALL FRAME STYLES SHALL BE COORDINATED WITH CEILING/WALL TYPES.
- 2. FINISH BAKED ENAMEL. COLOR AS SELECTED BY THE ARCHITECT. 3. COORDINATE EXACT LOCATION WITH ARCHITECTURAL REFLECTED CEILING PLANS.
- 4. PROVIDE SQUARE TO ROUND NECK ADAPTORS FOR DIFFUSERS AS REQUIRED. 5. PAINT INSIDE OF DUCT, VISIBLE AT RETURN AND EXHAUST REGISTERS FLAT BLACK.

OF NEW ORDER OF STREET OF
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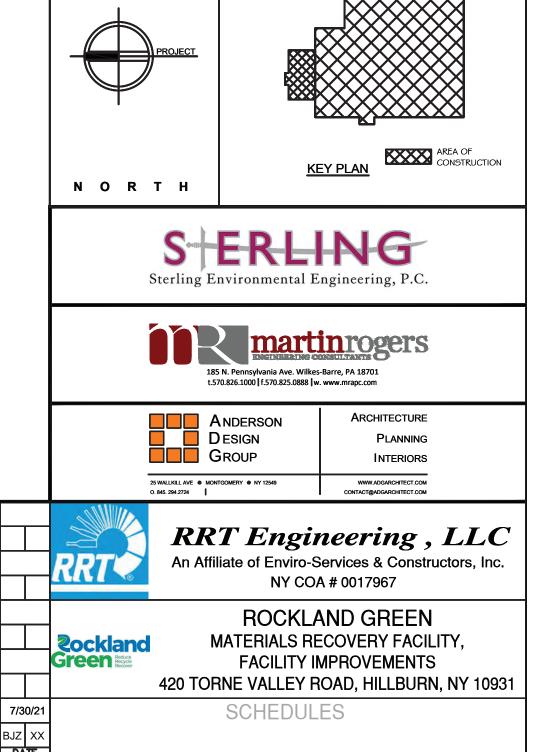
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BY DATE

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NO:

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SHEET SIZE: D-24x36

M-401

REV

DRAWN BJZ

DESIGNED BJZ

APPROVED

ph: 631-756-1060 fax: 631-756-1064 APPROVED

PROJECT

	ELECTRIC CABINET HEATER SCHEDULE													
TAG	MANUFACTURER	MODEL	TYPE	SIZE	KW	MBH	CFM	AMPS	VOLTAGE/PHASE	AREA SERVED	REMARKS			
ECH-I	BERKO	CUH935	WALL MOUNTED	26-3/8"H x 35"L x 9-3/4"D	5	17.0	250	7	480V/3¢	STAIRS II5	1, 2, 3, 4, 5			
ECH-2	BERKO	CUH935	WALL MOUNTED	26-3/8"H x 35"L x 9-3/4"D	5	17.0	250	7	480V/3¢	STAIRS 203	1, 2, 3, 4, 5			

REMARKS:

- I. PROVIDE UNIT WITH BUILT-IN 2 STAGE THERMOSTAT.
- 2. PROVIDE UNIT WITH A THERMAL CUTOUT AND MANUAL RESET. 3. PROVIDE UNIT WITH INTERNAL FACTORY DISCONNECT SWITCH.
- 4. PROVIDE WITH FRONY DISCHARGE AND BOTTOM RETURN.
- 5. COLOR SHALL BE WHITE BAKED ENAMEL.

	ELECTRIC UNIT HEATER SCHEDULE										
TAG	MANUFACTURER	MODEL	TYPE	SIZE	KW	MBH	CFM	AMPS	VOLTAGE/PHASE	AREA SERVED	REMARKS
EUH-I	BERKO	HUHAA-548	WALL MOUNTED	16"Hx14"Mx8-1/2"D	5	17.0	350	6.0	480V/3¢	PARTS & TOOL STORAGE II2	1, 2, 3, 4, 5, 6
EUH-2	BERKO	HUHAA-748	WALL MOUNTED	21-3/4"Hx19"Wx8-1/2"D	7.5	25.5	650	9.0	480V/3¢	COMPRESSOR ROOM III	l, 2, 3, 4, 5, 6
EUH-3	BERKO	HUHAA-548	WALL MOUNTED	16"Hx14"Mx8-1/2"D	5	17.0	350	6.0	480V/3¢	SPRINKLER ROOM 102	1, 2, 3, 4, 5, 6
EUH-4	BERKO	HUHAA-1048	WALL MOUNTED	21-3/4"Hx19"Wx8-1/2"D	10	34.1	650	12.0	480V/3¢	SPRINKLER ROOM 170	1, 2, 3, 4, 5, 6

- I. PROVIDE 24 VOLT WALL MOUNTED THERMOSTAT.
- 4. PROVIDE WITH WALL MOUNTING BRACKET.
- 2. PROVIDE 2-STAGE ELEMENT.
- 5. PROVIDE WITH LOW VOLTAGE CONTROL TRANSFORMER.
- 3. PROVIDE POWER DISCONNECT SWITCH. 6. COLOR SHALL BE BLACK BAKED ENAMEL.

	SPLIT-SYSTEM AIR CONDITIONING SCHEDULE																	
INDOOR UNIT									OUTDOOR CONDENSING UNIT									
TAG	MAKE	MODEL	AREA SERVED	CFM	TOT MBH	COOLING E.A.T. DB/MB	L.A.T. DB/MB	ELEC.	MCA	TAG	MAKE	MODEL	NOM. TONS	MIN. SEER	ELEC.	MCA	МОСР	ACCESSORIES / REMARKS
AC-I	MITSUBISHI	PEA-AI2AA6	IT CLOSET 210	350	12.0	80/67	55/54	208v/l¢	1.0	CU-I	MITSUBISHI	PUY-AI2NHA6	1.0	14.0	208v/lø	13	15	1, 2, 3, 4, 5, 6, 7, 8

ACCESSORIES / REMARKS:

- I. UNITS SHALL BE CAPABLE OF OPERATING AT O°F TO 115°F.
- 2. COOLING CAPACITY BASED ON 115°F OUTDOOR AIR TEMPERATURE.
- 3. PROVIDE WITH WIND BAFFLE. 4. REFRIGERANT SHALL BE R410A.
- 5. PROVIDE A MITSUBISHI #PAR-2IMAA WALL MOUNTED CONTROLLER FOR EACH UNIT.
- 6. PROVIDE REFRIGERANT PIPING SIZES PER MANUFACTURER.
- 7. INSTALL CONDENSING UNITS ON EQUIPMENT SUPPORT CURBS, LOCATED ON ROOF.
- 8. PROVIDE INDOOR UNITS WITH INTEGRAL CONDENSATE PUMPS. 9. PROVIDE WITH FILER BOX AND I" MERY 8 FILTER.

	EXHAUST FAN SCHEDULE												
TAG	AREA SERVED	MANUFACTURER	MODEL	TYPE	DRIVE	CFM	5.P.	RPM	MOTOR HP OR WATTS	ELECTRICAL DATA	SONES	TYPE OF CONTROL	REMARKS/ACCESSORIES
EF-I	ADMIN BUILDING	GREENHECK	<i>G</i> B-141-5	CENTRIF.	BELT	1,475	.75	1,260	1/2	480V/3¢	10	INTERLOCK WITH RTU-I	1, 2, 3
EF-2	STORAGE ROOM	GREENHECK	SP-A390	CEILING	DIRECT	325	.50	1,360	135W	I20V/IΦ	5.0	REVERSE ACTING THERMOSTAT	4, 5, 6
EF-3	AREA I (TIPPING)	GREENHECK	RBU-3L 36-60	ROOF	BELT	16,500	0.5	1,181	3.0	460V/3Φ	ı	ON/OFF VIA WALL CONTROL PANEL	1, 2, 3, 4, 7, 8
EF-4	AREA 2 (PROCESSING)	GREENHECK	RBU-2H 36-60	ROOF	BELT	12,175	0.5	1,181	2.0	460V/3¢	ı	2 SPEED FAN CONTROL VIA WALL MOUNTED CONTROL PANEL	1, 2, 3, 4, 7, 8
EF-5	AREA 4 (STORAGE)	GREENHECK	RBU-3L 36-60	ROOF	BELT	16,500	0.5	1,181	3.0	460V/3¢	1	2 SPEED FAN CONTROL VIA WALL MOUNTED CONTROL PANEL	1, 2, 3, 4, 7, 8
EF-6	AREA 5 (TIPPING)	GREENHECK	RBU-2H 36-60	ROOF	BELT	12,175	0.5	1,181	2.0	460V/3¢	1	ON/OFF VIA WALL CONTROL PANEL	1, 2, 3, 4, 7, 8
EF-7	COMPRESSOR ROOM	GREENHECK	GB-540-50	ROOF	BELT	25,000	0.5	350	5.0	460V/3¢	18.7	REVERSE ACTING THERMOSTAT	I, 2, 3

REMARKS/ACCESSORIES:

- I. PROVIDE WITH 12" ROOF CURB AND BIRD SCREEN.
- 2. PROVIDE WITH DISCONNECT SWITCH AND MOTOR STARTER.
- 3. PROVIDE SPRING LOADED BACKDRAFT DAMPER.
- 4. PROVIDE WITH 1/2" ACCOUSTICALLY INSULATED HOUSING. 5. PROVIDE WITH ALUMINUM GRILLE - WHITE FINISH.
- 6. SUPPORT UNIT FROM STRUCTURE ABOVE WITH STEEL RODS AND NEOPRENE VIBRATION ISOLATORS.
- 7. PROVIDE ROOF CURB ADAPTOR.
- 8. PROVIDE WITH A SPARE SET OF BELTS.

	LOUVER SCHEDULE								
TAG	MAKE	MODEL	CFM	SIZE W x H x D	FREE AREA SQ. FT.	STATIC PRESS.	SERVICE	MATERIAL	REMARKS
L-I	GREENHECK	ESD-603	6,475	48"x48"x6"	<i>8.</i> 53	0.1	INTAKE	ALUMINUM	DRAINABLE STATIONARY BLADE WITH BIRDSCREEN
L-2	GREENHECK	ESD-603	15,000	72"x72"x6"	20.13	0.1	INTAKE	ALUMINUM	DRAINABLE STATIONARY BLADE WITH BIRDSCREEN
L-3	GREENHECK	ESD-603	16,500	96"x60'x6"	22.03	0.1	INTAKE	ALUMINUM	DRAINABLE STATIONARY BLADE WITH BIRDSCREEN
L-4	GREENHECK	ESD-603	12,175	72"x60"x6"	16.54	0.1	INTAKE	ALUMINUM	DRAINABLE STATIONARY BLADE WITH BIRDSCREEN

- I. LOUVERS SHALL BE CAULKED WEATHERTIGHT ALL AROUND. COORDINATE CAULKING WITH G.C. 2. LOUVERS SHALL BE FURNISHED WITH ALUMINUM BIRDSCREEN.
- 3. FINISH AND COLOR OF THE LOUVER SHALL BE AS SELECTED BY THE ARCHITECT. 4. PROVIDE LOUVER FLANGE AS REQUIRED.

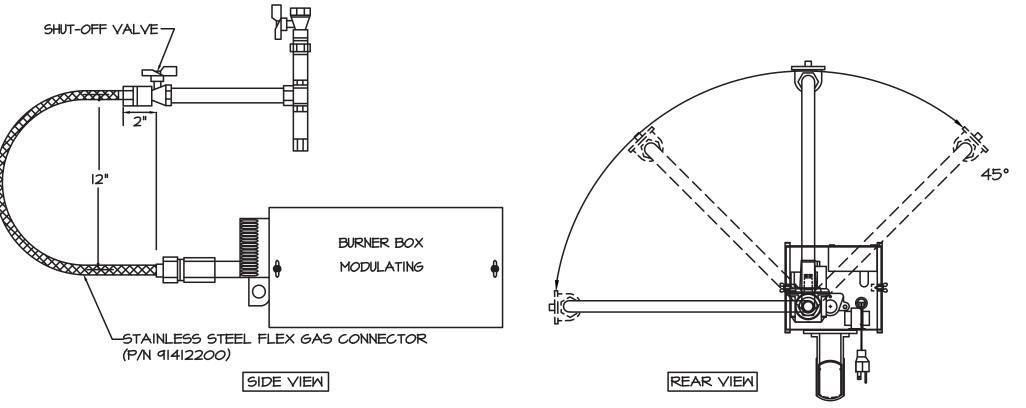
(COMBUSTIBLE OR NON-COMBUSTIBLE WALL) (NON-COMBUSTIBLE WALL ONLY)	
VENT ADAPTOR	4" (IOCM) SINGLE WALL PIPE —	MINIMUM 18" (46 cm) VENT TERMINAL

NOTES:

REFER TO INSTALLATION, OPERATION AND SERVICE MANUAL FOR PROPER DESIGN.

MUST BE PROTECTED FROM DEGRADATION BY VENT GASES.

- 2. 2. IN COMBUSTIBLE OR NONCOMBUSTIBLE WALLS, USE INSULATED VENT TERMINAL. FOLLOW VENT MANUFACTURER'S
- INSTRUCTIONS FOR PROPER INSTALLATION. 3. 4" (IO CM) O.D. VENT PIPE, MAXIMUM 45 FT.(I3.7M) IN LENGTH MAY BE USED AS SHOW ABOVE WITH AN APPROVED VENT CAP. NOTE: CONDENSATE MAY DEVELOP WHEN LONG VENT PIPES ARE USED. IT IS RECOMMENDED THAT THE PIPE LENGTH SHOULD
- 4. 4. WHEN HEATER LENGTHS BEYOND MINIMUM HEATER LENGTHS ARE USED THEY DIRECTLY EFFECT MAXIMUM VENT LENGTH.
- REFER TO INSTALLATION, OPERATION, AND SERVICE MANUAL FOR REQUIREMENTS. 5. 5. VENT TERMINAL MUST BE INSTALLED AT A HEIGHT SUFFICIENT TO PREVENT BLOCKAGE BY SNOW. BUILDING MATERIALS
- HORIZONTAL VENTING CONFIGURATIONS (VANTAGE MOD.) SCALE: NO SCALE



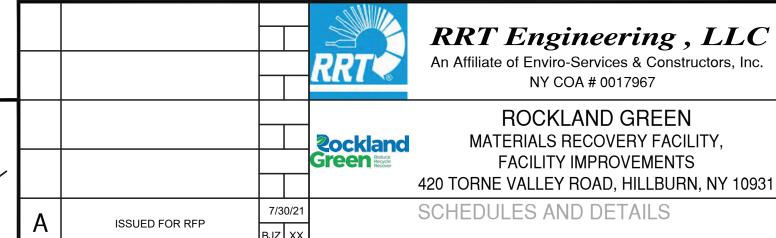
- GAS PIPE WORK MUST BE INSTALLED AND TESTED IN ACCORDANCE WITH UNITED STATES ANSI Z 223.1/NFPA 54 LATEST ADDITION AND CANADA-CSA-BI49.I
- 2. INSTALL THE FLEX GAS CONNECTOR AS SHOWN. THE FLEX GAS CONNECTOR ACCOMMODATES EXPANSION OF THE HEATING SYSTEM AND ALLOWS FOR EASY INSTALLATION AND SERVICE OF THE BURNER.
- 3. SHUT-OFF VALVE MUST BE PARALLEL TO BURNER INLET. THE 2" (5CM) DISPLACEMENT SHOWN IS FOR THE COLD CONDITION. THIS DISPLACEMENT MAY REDUCE WHEN THE SYSTEM IS FIRED.



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