Howard T. Phillips, Jr.
Chairman

Gerard M. Damiani, Jr.
Executive Director

Rockland County Solid Waste Management Authority

RFP 2021-13

REQUEST FOR PROPOSALS

FOR CONTRACT NO. 3-FACILITY IMPROVEMENTS,

MECHANICAL

TO THE MATERIALS RECOVERY FACILITY

IN

HILLBURN, NEW YORK

DATED JULY 30, 2021

TO: **RECIPIENTS OF THE REQUEST FOR PROPOSALS**

FROM: **ROCKLAND COUNTY SOLID WASTE MANAGEMENT AUTHORITY d/b/a ROCKLAND GREEN**

DATE: **SEPTEMBER 1, 2021**

SUBJECT: **ADDENDUM NUMBER 4**

This Addendum Number 4 shall be part of the Request for Proposals No. 2021-13 for Contract No. 3-Facility Improvements, Mechanical at the Materials Recovery Facility (the "MRF") in Hillburn, New York issued by the Rockland County Solid Waste Management Authority d/b/a Rockland Green (hereinafter "Rockland Green") on July 30, 2021, and as amended (the "RFP").

This Addendum Number 4 provides modifications to the following appendices: Appendix B, Specifications, Appendix C, Contract Drawings, Appendix D-1, Division of Responsibility, and Appendix O, Statement of Work; as well as a modified Price Proposal Form.

I. Appendix B, Specifications

a. Sub-section 2.1(B) of Section 074213, Insulated Metal Wall Panels, of the Specifications in Appendix B to the RFP is modified as set forth in Attachment 1 hereto.

b. Sub-sections 1.01 and 1.10 of Section 015000, Temporary Facilities and Controls, of the Specifications in Appendix B to the RFP, are modified as set forth in Attachment 2 hereto.

II. Appendix C, Contract Drawings

Appendix C, Contract Drawings to the RFP has been modified as explained below. The modified Contract Drawings are redlined to reflect the changes and attached hereto as Attachment 3.

Mechanical:

1. Drawing M-001
   A. Updated Mechanical Drawing Schedule.
2. Drawing M-002
   A. Added this drawing.
3. Drawing M-101
   A. Removed combustion and ventilation air louvers in Existing Boiler Room.
   B. Removed exhaust fan, louver and electric unit heater in Existing Electrical Room.
   C. Revised Demolition Notes.
4. Drawing M-102
   A. Added oil tank and piping.
   B. Revised Demolition Notes.
5. Drawing M-103
   A. Revised Demolition Notes.
6. Drawing M-201
   A. Added intake louver, exhaust louver, exhaust fan and electric unit heater to Electrical 113.
   B. Added Section "A" - " A".
   C. Relocated electric unit heater EUH-2 in Compressor Room 111.
   D. Revised exhaust ductwork from compressors and added supply grilles.
   E. Added fire dampers in 2 hour wall.
   F. Added cabinet unit heater CUH-3 in Process Area.
   G. Added door louvers to Parts & Tool Storage 112.
7. Drawing M-202
   A. Revised louvers, added flues for unit heaters and revised Mechanical Installation Notes.
8. Drawing M-203
   A. Added Mechanical Installation Notes.
   B. Added exhaust fan and goosenecks from compressors.
9. Drawing M-401
   A. Added Tag (H) to Diffuser, Register & Grille Schedule.
10. Drawing M-402
   A. Added ECH-3 to Electric Cabinet Heater Schedule.
   B. Revised Electric Unit Heater Schedule EUH-1.
   C. Revised Exhaust Fan Schedule EF-2.
   D. Revised Louver Schedule.

III. Appendix D-1, Division of Responsibility

Appendix D-1, Division of Responsibility is modified as reflected in Attachment 4 hereto.

IV. Appendix O, Statement of Work

Appendix O, Statement of Work is modified as reflected in Attachment 5 hereto.

V. Price Proposal Form 16

Price Proposal Form 16 is hereby replaced with the revised Price Proposal Form 16, attached hereto as Attachment 6.

ATTACHMENT 1

Revisions to Sub-section 2.1(B) of Section 074213, Insulated Metal Wall Panels of the Specifications in Appendix B to the RFP

(*Deleted language is reflected as stricken text and added language is reflected as bold, underscored text*)

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Basis of Design Manufacturer: Metl-Span, a Division of the Cornerstone Building Brands family; Lewisville, Texas Tel: 972.221.6656; Email: info@metlspan.com; Web: metlspan.com.

B. **Provide ~~basis of design product [, or comparable product approved by Architect prior to bid]~~ Basis of Design Manufacturer or Engineer approved equivalent. Include catalogue cuts and details with the Proposal.**

2.2 PERFORMANCE REQUIREMENTS

A. General: Provide metal panel system meeting performance requirements as determined by application of specified tests by a qualified testing facility on manufacturer's standard assemblies.

B. Structural Performance: Provide metal panel assemblies capable of withstanding the effects of indicated loads and stresses within limits and under conditions indicated, as determined by ASTM E 72 or ASTM E 1592 applied in accordance with ICC AC 04, Section 4, Panel Load Test Option or Section 5, Panel Analysis Option:

1. Wind Loads: Determine loads based on applicable building code, wind speed, importance factor, exposure category, and internal pressure coefficient indicated on drawings.
    a. Wind Negative Pressure: Certify capacity of metal panels by testing of proposed assembly.
2. Deflection Limits: Withstand inward and outward wind-load design pressures in accordance with applicable building code with maximum deflection of 1/180 of the span with no evidence of failure.

C. Fire Performance Characteristics: Provide metal panel systems with the following fire-test characteristics determined by indicated test standard as applied by testing and inspection agency acceptable to authorities having jurisdiction.

1. Surface-Burning Characteristics: The insulating core shall have been tested per ASTM E 84. The core shall have:
    a. Flame spread index: 25 or less.
    b. Smoke developed index: 450 or less.
2. Room Test Performance: FM Global 4880: The panel assembly shall not support a self-propagating fire which reaches any limits of the 50’ (15.24m) high corner test structure as evidenced by flaming or material damage of the ceiling of the assembly.
3. Fire Propagation: The fire assembly shall meet the requirements of the standard for NFPA 285
4. Fire Growth: The fire assembly shall meet the requirements of the standard for NFPA 286
5. Potential Heat: Determined in accordance with NFPA 259
    a. Fire Endurance Tests of Building Construction and Materials: The composite panel shall have to be tested per CAN/ULS S101. Meets 15-minute stay in place requirement.
    b. Fire Test of Exterior Wall Assemblies. The composite panel shall have to be tested per CAN/ULS S134. Complies with the fire spread and heat flux limitations required by the National Building Code of Canada.
    c. Fire Growth of Insulated Building Panels in a Full-Scale Room Configuration: The composite panel shall have to be tested per CAN/ULS S138 Met the Criteria of the Standard.

ATTACHMENT 2

Revisions to sub-sections 1.01 and 1.10 of Section 015000, Temporary Facilities and Controls of the Specifications in Appendix B to the RFP

(*Added language is reflected as bold, underscored text*)

SECTION 015000
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary sanitary facilities.

B. Waste removal facilities and services.

C. Project identification sign.

D. **Temporary erosion and sediment controls**

1.02 RELATED REQUIREMENTS

A. Section 015813 - Temporary Project Signage.

1.03 TEMPORARY UTILITIES

A. Owner will provide the following:
   1. Electrical power and metering, consisting of connection to new temporary and permanent service.
   2. Water supply, consisting of new public water connection.

B. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.04 TEMPORARY SANITARY FACILITIES

A. The Contractor for General Construction shall provide and maintain required facilities and enclosures. Provide at time of project mobilization.

B. Maintain daily in clean and sanitary condition and as further required in Section 011000.

1.05 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to allow public access to the Public Park and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

1.06 FENCING

A. Construction: Commercial grade chain link fence.

B. Provide 6 foot (1.8 m) high fence around construction site; equip with vehicular and pedestrian gates with locks.

1.07 VEHICULAR ACCESS AND PARKING

A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.

B. Coordinate access and haul routes with governing authorities and Owner.

C. Provide and maintain access to fire hydrants, free of obstructions.

D. Provide means of removing mud from vehicle wheels before entering streets.

E. Provide temporary parking areas to accommodate construction personnel at the location designated by the Owner. When site space is not adequate, provide additional off-site parking.

1.08 WASTE REMOVAL

A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition. Deliver the waste to the Owner's transfer station.

B. Provide containers with lids or traps. Remove trash and litter from site periodically.

C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

1.09 PROJECT SIGNS - SEE SECTION 015813

1.10 EROSION AND SEDIMENT CONTROLS

A. **Adhere to the applicable best management practices in the "New York State Standards and Specifications for Erosion and Sediment Control", current edition.**

B. **Submit product data for silt fence, compost filter sock, and catch basin inlet protection.**

A. **Implement practices or install additional controls, as necessary to prevent off site sediment transport or tracking.**

B. **Maintain erosion control measures for the duration of the project until final completion.**

C. **Fines and penalties imposed by regulatory agencies due to improper sediment control from Contractor's work are Contractor's responsibility.**

1.11 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection and subject to Engineer.

B. Clean and repair damage caused by installation or use of temporary work.

C. Restore existing facilities used during construction to original condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

ATTACHMENT 3

APPENDIX C, CONTRACT DRAWINGS

ROCKLAND GREEN MRF FACILITY IMPROVEMENTS

CONTRACT NO. 3 - MECHANICAL

420 TORNE VALLEY ROAD HILLBURN NY 10931

OWNER:

OWNER ENGINEER:

RRT Engineering, LLC
1 Huntington Quadrangle, 3S01 ph: 631-756-1060
Melville, N.Y. 11747 fax: 631-756-1064

ARCHITECT:

ANDERSON DESIGN GROUP
25 WALLKILL AVE • MONTGOMERY • NY 12549
O. 845.294.2724 | CONTACT@ADGARCHITECT.COM
WWW.ADGARCHITECT.COM

MECHANICAL, ELECTRICAL AND PLUMBING ENGINEER:

martinrogers ENGINEERING CONSULTANTS
185 N. Pennsylvania Ave. wilkes-Barre, PA 18701
t.570826.1000 | f.570.825.0888 | www.mrapc.com.

CIVIL ENGINEER:

STERLING
Sterling Environmental Engineering, P.C.

LEGEND:

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED
- NEW WALL
- EXISTING DOOR TO REMAIN
- NEW DOOR
- EXISTING DOOR TO BE REMOVED
- DOOR TAG (01)
- DETAIL TAG (SIM / A101)
- ROOM DESIGNATION TAG (Room name 221 150 SF)
- WALL TYPE TAG (A)
- WINDOW TAG (A)
- FINISH TAG (PR-1)
- KEY NOTE (08.000.00)
- ELEVATION TAG (Ref / A101 / Ref / Ref)
- WALL/BUILDING SECTION CUT (SIM / A101)

ABBREVIATIONS:

AB.	ANCHOR BOLT	MAT.	MATERIAL
A.C.T.	ACOUSTICAL CEILING TILE	MAX.	MAXIMUM
A.F.F.	ABOVE FINISH FLOOR	MECH.	MECHANICAL
APPX.	APPROXIMATE	MIN.	MINIMUM
ARCH.	ARCHITECT	MIR.	MIRROR
BSMT.	BASEMENT	MISC.	MISCELLANEOUS
BM	BEAM	MTL	METAL
BD	BOARD	NOM.	NOMINAL
BOT.	BOTTOM	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.	REVISION(S), (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.	EXTERIOR	SIM	SIMILAR
E.I.F.S	EXTERIOR INSULATED FINISH SYSTEM	S.C.	SOLID CORE
		SPEC.	SPECIFICATION
FIN.	FINISH	SQ.	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 CONDITIONING	UNF.	UNFINISHED
		U.O.N.	UNLESS OTHERWISE NOTED
HGT.	HEIGHT	V.B.	VAPOR BARRIER
HORZ.	HORIZONTAL	VERT.	VERTICAL
HB.	HOSE BIBB	V.I.F.	VERIFY
INS.	INSULATE(D), (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	WO	WITHOUT
L.L.	LIVE LOAD	WD.	WOOD
MFR.	MANUFACTURE(R)		
MAS.	MASONRY		

SHEET LIST TABLE			100% CONSTRUCTION DOCUMENT	REVISION HISTORY			CURRENT REVISION			
SHT.	SHEET TITLE	DRAWING DATE		02/05/21	MM/DD/21	MM/DD/21	Rev. #	DATE	DESCRIPTION	ISSUED (Y/N)
MECHANICAL										
M-000	TITLE SHEET_MECHANICAL	07/30/21	100%				B	07-23-21	REVISED FOR RFP ADDENDUM 4	No
M-001	LEGEND, NOTES AND DRAWING SCHEDULE	07/30/21	100%							No
M-002	ENERGY COMPLIANCE FORMS	06/27/21								No
M-101	PARTIAL FLOOR PLANS – MECHANICAL DEMOLITION	07/30/21	100%							No
M-102	PARTIAL FLOOR PLANS – MECHANICAL DEMOLITION	07/30/21	100%							No
M-103	PARTIAL FIRST FLOOR PLAN – MECHANICAL DEMOLITION	07/30/21	100%							No
M-201	PARTIAL FLOOR PLANS – MECHANICAL	07/30/21	100%							No
M-202	PARTIAL FIRST FLOOR PLAN – MECHANICAL	07/30/21	100%							No
M-203	ROOF PLAN - MECHANICAL	07/30/21	100%							No
M-301	DETAILS	07/30/21	100%							No
M-401	SCHEDULES	07/30/21	100%							No
M-402	SCHEDULES AND DETAILS	07/30/21	100%							No

N

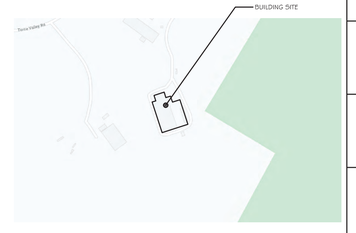
TRUE

BUILDING LOCATION AERIAL

N

TRUE

BUILDING LOCATION



ROCKLAND GREEN FACILITY IMPROVEMENTS PHASING NOTE

1. 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. 1 - Processing Equipment.

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

3. The building has been divided into the following area designations:
   - Area 1 – Existing Tipping Area.
   - Area 2 – Existing Processing 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 & 2 for its Substantial Completion to be achieved prior to the start of delivery and installation of the Dual Stream Recyclables Processing System, which is scheduled to occur early December 2021. It shall include all Work as defined in the Contract Documents, Specifications, and RFP Addenda. 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 startup of processing equipment.

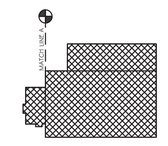
5. Work in Area 3 shall be sequenced to allow for owner access and use of existing space for Contractors on- site as approved by the Engineer and the Contractors for Contract Nos. 2-6 shall achieve Substantial Completion prior to the required date for the Operator to occupy or use and have partial occupancy and use of Area 3. Additionally, any Work by Contract Nos. 1 and 5-6 related to all other Areas 1, 2, 4-6 and the site work/exterior shall progress and be completed to support and not delay the overall Project Schedule.

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. 1 can proceed efficiently. All work to be coordinated between the Contractors.

PROJECT

PROJECT

N O R T H



KEY PLAN

AREA OF CONSTRUCTION

STERLING
Sterling Environmental Engineering, P.C.

martinrogers ENGINEERING CONSULTANT
185 N. Pennsylvania Ave. Wilkes-Barre, PA 18701
t.570.826.1000 | f.570.825.0888 | www.mrapc.com

ANDERSON DESIGN GROUP — ARCHITECTURE PLANNING INTERIORS
25 WALLKILL AVE • MONTGOMERY • NY 12549 | O. 845. 294.2724 | F.888.305.8442 | WWW.ADGARCHITECT.COM | CONTACT@ADGARCHITECT.COM

1	REVISED FOR RFP ADDENDUM 4	07-23-21
0	ISSUED FOR RFP	07-09-21
REV	DESCRIPTION	DATE

STATE OF NEW YORK — MICHAEL BRITTON MARTIN — LICENSED PROFESSIONAL ENGINEER — No. 083339

N.Y. R.A. LICENSE No. 083339

RRT Engineering , LLC
1 Huntington Quadrangle, 3S01 ph: 631-756-1060
Melville, N.Y. 11747 fax: 631-756-1064

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

TITLE SHEET_MECHANICAL

	BY:	DATE		
DRAWN	IDEA	07/09/21	PROJ. No: 499-010	SCALE: AS SHOWN
CHECKED		07/09/21	DWG. NO: M-000	A
DESIGNED		07/09/21		
APPROVED		07/09/21	CAD FILE:	
APPROVED			SHEET SIZE: D-24x36	REV

GENERAL

- POINT OF CONNECTION TO EXISTING
- POINT OF DISCONNECTION
- HC 1 — EQUIPMENT IDENTIFICATION TAG
- 1 / M1 — DETAIL #/DRAWING NUMBER
- 3 — KEY DEMOLITION NOTE
- 3 — REVISION TAG

DUCT SYMBOLS

GENERAL

- 12x20 / 12x20 — DUCT, FIRST FIGURE IS PLAN DIMENSION
- ACOUSTICALLY LINED DUCT
- FLEXIBLE DUCT (INSULATED)
- 12x20(EX) / 12x20(EX) — EXISTING DUCT
- 12x20 / 12x20 — DUCT TO BE REMOVED
- RECTANGULAR DUCT RISER, UP & DN, SUPPLY OR OUTDOOR AIR
- RECTANGULAR DUCT RISER, UP & DN, RETURN OR EXHAUST AIR
- RECTANGULAR DUCT ELBOW UP, SUPPLY OR OUTDOOR AIR
- RECTANGULAR DUCT ELBOW UP, RETURN OR EXHAUST AIR
- RECTANGULAR DUCT ELBOW DN, SUPPLY OR OUTDOOR AIR
- RECTANGULAR DUCT ELBOW DN, RETURN OR EXHAUST AIR
- RECTANGULAR DUCT TEE UP, SUPPLY OR OUTDOOR AIR
- RECTANGULAR DUCT TEE UP, RETURN OR EXHAUST AIR
- RECTANGULAR DUCT TEE DN, SUPPLY OR OUTDOOR AIR
- RECTANGULAR DUCT TEE DN, RETURN OR EXHAUST AIR
- R — INCLINED RISE, IN DIRECTION OF AIR FLOW
- D — INCLINED DROP, IN DIRECTION OF AIR FLOW
- ROUND DUCT RISER, UP & DN
- ROUND DUCT ELBOW UP
- ROUND DUCT ELBOW DN
- ROUND DUCT TEE UP
- ROUND DUCT TEE DN
- AD — AD - ACCESS DOOR; AP - ACCESS PANEL
- FLEXIBLE CONNECTION

DAMPERS

- VOLUME DAMPER
- M — MOTORIZED DAMPER
- BDD — BACKDRAFT DAMPER
- FD — FIRE DAMPER
- FSD — COMBINATION FIRE AND SMOKE DAMPER
- SD — SMOKE DAMPER

DUCT SYMBOLS

DIFFUSERS/GRILLES/REGISTERS

- (A)240 — DIFFUSER/GRILLE/REGISTER DESIGNATION AND FLOW RATE IN CFM
- (EX)240 — EXISTING DIFFUSER/GRILLE/REGISTER DESIGNATION AND FLOW RATE IN CFM
- CEILING SUPPLY DIFFUSER/GRILLE/REGISTER
- BLANKOFF INDICATING NO AIR THROW TO THIS SIDE
- EXISTING CEILING SUPPLY DIFFUSER/GRILLE/REGISTER
- WALL SUPPLY DIFFUSER/GRILLE/REGISTER
- LINEAR CEILING SUPPLY DIFFUSER/GRILLE/REGISTER WITH PLENUM
- LINEAR WALL SUPPLY DIFFUSER/GRILLE/REGISTER WITH PLENUM
- CEILING RETURN/EXHAUST GRILLE/REGISTER
- CEILING RETURN/EXHAUST GRILLE/REGISTER
- WALL RETURN/EXHAUST GRILLE/REGISTER
- LINEAR CEILING RETURN/EXHAUST GRILLE/REGISTER WITH PLENUM
- LINEAR WALL RETURN/EXHAUST GRILLE/REGISTER WITH PLENUM
- WALL TRANSFER GRILLE
- OUTDOOR AIR LOUVER
- EXHAUST AIR LOUVER

EQUIPMENT

- VAV TERMINAL BOX
- FILTER
- H — HUMIDIFIER

SENSORS

- T — ROOM THERMOSTAT
- T — TEMPERATURE SENSOR
- H — ROOM HUMIDISTAT
- P — ROOM PRESSURE SENSOR/TRANSMITTER
- CO2 / CO2 — CARBON DIOXIDE SENSOR (ROOM & DUCT MOUNTED)
- APS — AIRFLOW MEASURING STATION
- S — DUCT SMOKE DETECTOR
- H — HUMIDITY SENSOR

PIPING SYMBOLS

GENERAL

- ARROW INDICATING FLUID FLOW DIRECTION
- NAME(EX) — EXISTING PIPING
- NAME — PIPE TO BE REMOVED

HEATING

- HPS — HIGH-PRESSURE STEAM
- MPS — MEDIUM-PRESSURE STEAM
- LPS — LOW-PRESSURE STEAM
- HPC — HIGH-PRESSURE CONDENSATE
- MPC — MEDIUM-PRESSURE CONDENSATE
- LPC — LOW-PRESSURE CONDENSATE
- BBD — BOILER BLOWDOWN
- PC — PUMPED CONDENSATE
- VPD — VACUUM PUMP DISCHARGE
- MU — MAKEUP WATER
- ATV — ATMOSPHERIC VENT
- FOD — FUEL OIL DISCHARGE
- FOG — FUEL OIL GAGE
- FOS — FUEL OIL SUCTION
- FOR — FUEL OIL RETURN
- FOV — FUEL OIL TANK VENT
- HWS — HOT WATER SUPPLY
- HWR — HOT WATER RETURN
- A — COMPRESSED AIR
- VAC — VACUUM AIR

AIR CONDITIONING AND REFRIGERATION

- RS — REFRIGERANT SUCTION
- RL — REFRIGERANT LIQUID
- CS — CONDENSER WATER SUPPLY
- CR — CONDENSER WATER RETURN
- CHS — CHILLED WATER SUPPLY
- CHR — CHILLED WATER RETURN
- FILL — FILL
- H — HUMIDIFICATION LINE
- D — DRAIN
- CD — CONDENSATE DRAIN
- HPS — HEAT PUMP WATER SUPPLY
- HPR — HEAT PUMP WATER RETURN

FITTINGS

- PIPE RISER, UP & DN
- PIPE ELBOW UP
- PIPE TEE UP
- PIPE ELBOW DOWN
- PIPE TEE DOWN
- REDUCER, CONCENTRIC
- REDUCER, ECCENTRIC STRAIGHT INVERT
- REDUCER, ECCENTRIC STRAIGHT CROWN
- UNION
- FLANGE
- CAP

SPECIALTIES

- AV — AIR VENT, AUTOMATIC
- MV — AIR VENT, MANUAL
- ALIGNMENT GUIDE
- ANCHOR
- E-J — EXPANSION JOINT
- EL-I — EXPANSION LOOP
- FLEXIBLE CONNECTOR

PIPING SYMBOLS

SPECIALTIES (CONT)

- OFM-I — FLOWMETER, ORIFICE
- VFM-I — FLOWMETER, VENTURI
- UFM-I — FLOWMETER, ULTRASONIC STRAP-ON
- FS — FLOW SWITCH
- TEST PLUG
- P — PRESSURE GAUGE, WITH COCK
- P — PRESSURE GAUGE, COMPOUND
- PS — PRESSURE SWITCH
- STEAM TRAP, FLOAT AND THERMOSTATIC
- STRAINER
- STRAINER, BLOW OFF
- THERMOMETER
- THERMOMETER WELL

VALVES FOR SELECTIVE ACTUATORS

- BALL
- BUTTERFLY
- GATE
- GATE, ANGLE
- GLOBE
- GLOBE, ANGLE
- PLUG
- THREE WAY

VALVE ACTUATORS

- LEVER
- NON-RISING STEM
- OUTSIDE STEM & YOKE
- GEAR
- S — ELECTRIC, SOLENOID
- M — PNEUMATIC, MOTOR

SPECIAL DUTY VALVES

- BALANCING VALVE
- CHECK
- HOSE END DRAIN VALVE
- NEEDLE
- PRESSURE REDUCING
- QUICK OPENING
- QUICK CLOSING, FUSIBLE LINK
- R — RELIEF (R) OR SAFETY (S)
- S — TRIPLE DUTY

TAGS

- HC 1 — HEATING COIL
- RTU 1 — ROOFTOP UNIT
- AH 1 — AIR HANDLING UNIT
- FC 1 — FAN COIL UNIT
- RCP 1 — RADIANT CEILING PANEL
- ERU 1 — ENERGY RECOVERY UNIT
- EF 1 — EXHAUST FAN
- CU 1 — CONDENSING UNIT
- CUH 1 — CABINET UNIT HEATER
- P 1 — PUMP
- ET 1 — EXPANSION TANK

Mechanical Drawing Schedule

M-001	LEGEND, NOTES AND DRAWING SCHEDULE
M-002	ENERGY COMPLIANCE FORMS
M-101	PARTIAL FLOOR PLANS - MECHANICAL DEMOLITION
M-102	PARTIAL FLOOR PLANS - MECHANICAL DEMOLITION
M-103	PARTIAL FLOOR PLANS - MECHANICAL DEMOLITION
M-201	PARTIAL FLOOR PLANS - MECHANICAL
M-202	PARTIAL FIRST FLOOR PLAN - MECHANICAL
M-203	ROOF PLAN - MECHANICAL
M-301	DETAILS
M-401	SCHEDULES
M-402	SCHEDULES AND DETAILS

B

NOTE : THIS IS A GENERAL MECHANICAL LEGEND. ALL SYMBOLS MAY NOT APPEAR ON THE PLANS. SEE PLANS FOR ACTUAL SYMBOLS USED.

ABBREVIATIONS

A	COMPRESSED AIR
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
ADP	APPARATUS DEW POINT
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AIR COND	AIR CONDITION(-ING, -ED)
ALT	ALTITUDE
AMB	AMBIENT
AMP, AMPS	AMPERE(S)
APPROX	APPROXIMATE
ATC	AUTOMATIC TEMPERATURE CONTROLS
ATM	ATMOSPHERE
ATV	ATMOSPHERIC VENT
AVG	AVERAGE
BBD	BOILER BLOWDOWN
BDD	BACKDRAFT DAMPER
BHP	BRAKE HORSEPOWER
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
C	CONDENSER WATER SUPPLY
CCW	COUNTERCLOCKWISE
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
CO	COMPRESSOR
CO2	CARBON MONOXIDE
COND	CARBON DIOXIDE
CONT	CONDENS(-ER, -ING, -ATION)
CR	CONTINU(-ED, -ATION)
CU FT	CUBIC FEET PER MINUTE
CU IN	CUBIC INCH
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
D	DRAIN
dB	DECIBEL
DB	DRY-BULB TEMPERATURE
DEG OR	DEGREE
DIA OR	DIAMETER
DN	DOWN
DPT	DEW-POINT TEMPERATURE
DWG	DRAWING
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
EFF	EFFICIENCY
EL	ELEVATION
ENT	ENTERING AIR TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE
EVAP	EVAPORAT(-E, -ING, -ED, -OR)
ENT	ENTERING WATER TEMPERATURE
EX, EXIST	EXISTING
F	FAHRENHEIT
FA	FACE AREA
FD	FIRE DAMPER
FOD	FUEL OIL DISCHARGE
FOF	FUEL OIL FILL
FOG	FUEL OIL GAGE
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUCTION
FOV	FUEL OIL TANK VENT
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FOOT OR FEET
FVEL	FACE VELOCITY
G	GRAINS
GA	GAGE OR GUAGE
GAL	GALLONS
GC	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
H	HUMIDIFICATION LINE
HD	HEAD
HG	MERCURY
HGT	HEIGHT
HP	HORSEPOWER
HPC	HIGH PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM
HPWR	HEAT PUMP WATER RETURN
HPWS	HEAT PUMP WATER SUPPLY
HW	HOUR(S)
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HZ	HERTZ

ID	INSIDE DIAMETER
IN	INCH(ES)
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LF	LINEAR FEET
LG	LENGTH
LPC	LOW-PRESSURE CONDENSATE
LPS	LOW-PRESSURE STEAM
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BTUH
MC	MECHANICAL CONTRACTOR
MIN	MINIMUM
MIN	MINUTE
MPC	MEDIUM-PRESSURE CONDENSATE
MPS	MEDIUM-PRESSURE STEAM
MU	MAKEUP WATER
N/A	NOT APPLICABLE
NC	NOISE CRITERIA
N C	NORMALLY CLOSED
N I C	NOT IN CONTRACT
NO	NUMBER
N O	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
PC	PUMPED CONDENSATE
PD	PRESSURE DROP
PH	PHASE
PPM	PARTS PER MILLION
PRESS	PRESSURE
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAGE
RA	RETURN AIR
RAD	RADIAT(-E, -OR)
RB	RETURN BEND
RD	ROOF DRAIN
RECIRC	RECIRCULATE
RH	RELATIVE HUMIDITY
RL	REFRIGERANT LIQUID
RO	ROOF OPENING
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
S	SECOND
SA	SUPPLY AIR
SAN	SANITARY
SH	SENSIBLE HEAT
SHG	SENSIBLE HEAT GAIN
SHR	SENSIBLE HEAT RATIO
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SQ	SQUARE
STD	STANDARD
SUCT	SUCTION
TS	TEMPERATURE DIFFERENCE
TEMP	TEMPERATURE
TH	TOTAL HEAT
THKNS	THICKNESS
TSTAT	THERMOSTAT
TV	TURNING VANES
TYP	TYPICAL
V	VOLT
VAC	VACUUM, VACUUM AIR
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VEL	VELOCITY
VENT	VENTILATION, VENT
VOL	VOLUME DAMPER
VPD	VACUUM PUMP DISCHARGE
W	HUMIDITY RATIO
W	WATT
W/	WITH
WB	WET BULB TEMPERATURE
WD	WIDTH
WG	WATER GAGE
WMS	WIRE MESH SCREEN
WT	WEIGHT

GENERAL NOTES:

1. COORDINATE ALL EQUIPMENT AND DEVICE LOCATIONS WITH ARCHITECTURAL DRAWINGS.
2. COORDINATE ALL PENETRATIONS THROUGH EXTERIOR WALLS WITH ARCHITECTURAL DRAWINGS.
3. THE CONTRACTOR SHALL CHECK AND VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE BEFORE PROCEEDING WITH THE WORK. THEY SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT/ENGINEER FOR CORRECTION PRIOR TO BEGINNING ANY WORK. DISCOVERY OF ANY DISCREPANCIES AFTER WORK HAS COMMENCED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. DO NOT SCALE THESE DRAWING FOR EXACT DIMENSIONS, VERIFY ALL FIGURES, CONDITIONS, DIMENSIONS, ETC. AT THE JOB SITE.
5. THE HVAC CONTRACTOR SHALL CENTER AND/OR ALIGN REGISTERS, DIFFUSERS, AND EQUIPMENT WITH ADJACENT ARCHITECTURAL FEATURES. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS.
6. DUCT DIMENSIONS INDICATED ARE CLEAR INSIDE DIMENSIONS.
7. ALL ROOF CURBS FOR MECHANICAL EQUIPMENT SHALL BE FURNISHED, INSTALLED AND FLASHED BY THE HVAC CONTRACTOR. THE HVAC CONTRACTOR IS RESPONSIBLE FOR ALL HVAC RELATED ROOF WORK, INCLUDING CUTTING AND PATCHING. THE HVAC CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE ROOF WARRANTY.
8. HVAC CONTRACTOR SHALL REVIEW THE EQUIPMENT SCHEDULES, SPECIFICATIONS, AND DRAWINGS IN ALL CONTRACT DOCUMENTS AND SUBSEQUENT SHOP DRAWINGS AND PROVIDE ALL LABOR AND MATERIAL FOR A COMPLETE AND OPERABLE SYSTEM. FAILURE TO REVIEW THESE DOCUMENTS DOES NOT RELIEVE THE CONTRACTOR OF FULFILLING THEIR CONTRACTUAL OBLIGATIONS.
9. REFER TO ARCHITECTURAL DRAWINGS AND SHOP DRAWINGS FOR FINAL CONNECTIONS AND EXACT LOCATIONS FOR ALL WORK REQUIRED FOR EQUIPMENT NOT FURNISHED UNDER THIS CONTRACT.
10. COORDINATE INSTALLATION OF NEW WORK WITH ARCHITECTURAL, STRUCTURAL, PLUMBING, POWER AND LIGHTING PLANS. CONTRACTOR SHALL TAKE ALL INTERFERENCE INTO CONSIDERATION. PROVIDE ALL NECESSARY OFFSETS OR TRANSITIONS WITH EQUIVALENT AREAS TO MATCH DUCT SIZES AS INDICATED ON DRAWINGS.
11. DO NOT INSTALL ANY MECHANICAL WORK ABOVE ELECTRICAL PANELS.
12. DO NOT INSTALL ANY MECHANICAL WORK ABOVE OR THROUGH ELEVATOR EQUIPMENT ROOM UNLESS SPECIFICALLY SERVING EQUIPMENT ROOM.
13. THE MOUNTING HEIGHT OF ALL THERMOSTATS, ROOM TEMPERATURE SENSORS, AND/OR HUMIDITY SENSORS, SHALL MATCH THE MOUNTING HEIGHT OF ELECTRICAL LIGHT SWITCHES OR, IN THE ABSENCE OF NEARBY SWITCHES, BE MOUNTED 44" ABOVE FINISHED FLOOR.
14. FOR ALL BRANCH DUCT CONNECTIONS TO MAIN TRUNK, PROVIDE 45° TRANSITION FITTING OR CONICAL TAP FOR ROUND DUCT. BUTT FITTINGS ARE NOT PERMITTED. PROVIDE MANUAL VOLUME DAMPER WITH LOCKING QUADRANT AN ALL BRANCH RUNOUTS TO GRILLES AND DIFFUSERS.
15. PROVIDE TURNING VANES IN ALL MITERED ELBOWS OR PROVIDE ELBOWS WITH CENTERLINE RADIUS EQUAL TO 1.5 TIMES DUCT WIDTH.
16. INSTALL ALL FIRE DAMPERS AND CEILING RADIATION DAMPERS IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. PROVIDE UL FIRE DAMPERS WITH BLADES OUT OF AIR STREAM AND ACCESS DOORS. FIRE DAMPERS IN TRANSFER DUCTS ONLY MAY HAVE BLADES IN AIR STREAM.
17. SLEEVE AND SEAL ALL PIPE OR DUCT PENETRATIONS OF WALL AND FLOORS. PACK VOID BETWEEN PIPE OR DUCT AND SLEEVE WITH INSULATION IN NON-RATED WALLS AND FLOORS. PACK VOID BETWEEN PIPE OR DUCT AND SLEEVE WITH INSULATION IN FIRE-RATED WALLS AND FLOORS, APPLY INTUMESCENT FIRE SAFING COMPOUND AT PENETRATION, MAINTAINING INTEGRITY AND RATING OF FIRE SEPARATION. SLEEVES THROUGH FLOORS SHALL EXTEND 2" ABOVE FLOOR AND BE GROUTED INTO PLACE AND WATERPROOFED. PIPING THROUGH EXTERIOR WALLS SHALL BE SLEEVED AND SEALED WEATHER TIGHT.
18. THE OWNER SHALL HAVE THE OPTION TO RETAIN ANY EQUIPMENT, CONTROLS, PIPING, DUCTWORK, AND ACCESSORIES SCHEDULED TO BE REMOVED.
19. SHUTDOWN OF SERVICES SHALL BE COORDINATED AND SCHEDULED WITH THE OWNER.
20. DUCTWORK AND PIPING THAT REMAIN AFTER DEMOLITION IS COMPLETE, SHALL BE CAPPED AT THE MAIN (IF THEY ARE TO BE TAKEN OUT OF SERVICE), OR PREPARED FOR RECONNECTION (IF THEY ARE TO BE REUSED).
21. CEILINGS THAT NEED TO BE TEMPORARILY REMOVED TO ALLOW FOR THE INSTALLATION OF DUCTWORK, PIPING, OR EQUIPMENT SHALL BE REMOVED AND REPLACED BY HVAC CONTRACTOR. ALL FIRE PROTECTION, ELECTRICAL, MEDICAL GAS, AND SERVICES SHALL ALSO BE INCLUDED.
22. THE HVAC CONTRACTOR SHALL DISCONNECT AND CAP ALL SUPPLY, RETURN, AND EXHAUST AIR OUTLETS THAT ARE STILL ACTIVE IN THE PROJECT AREA DURING CONSTRUCTION.
23. THE HVAC CONTRACTOR SHALL REFER TO THE PHASING PLAN TO DETERMINE THE EXTENT OF WORK AND TEMPORARY SYSTEM CONNECTIONS NECESSARY FOR EACH PHASE.
24. ALL DUCT AND UNIT MOUNTED SMOKE DETECTORS FOR MECHANICAL EQUIPMENT AND DAMPERS SHALL BE FURNISHED BY ELECTRICAL CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR, WIRED TO FIRE ALARM SYSTEM BY ELECTRICAL CONTRACTOR, WITH UNIT SHUTDOWN CONTROL WIRING BY THE MECHANICAL CONTRACTOR.
25. HVAC CONTRACTOR SHALL PROVIDE ALL TRANSFORMERS AS REQUIRED FOR DUCT-MOUNTED DAMPER ACTUATORS OR THE DDC CONTROLS SYSTEM.
26. ALL WORK SHALL BE SCHEDULED AND COORDINATED WITH THE OWNER SO THAT DISRUPTION OF AREAS INVOLVED IS KEPT TO A MINIMUM. ANY ACCIDENTAL INTERRUPTIONS TO SERVICES SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR WITH OUT ANY ADDITIONAL COST TO THE OWNER.
27. PRIOR TO SUBMITTING BIDS AND DURING CONSTRUCTION, THE CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL TRADES AND COORDINATE THE INSTALLATION WITH ALL TRADES AND EXISTING CONDITIONS. COORDINATION OF WORK IF NECESSARY SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
28. THE DRAWINGS ARE DIAGRAMMATIC AND DO NOT INDICATE ALL OFFSETS, BENDS, ACCESS PANELS, AND SIMILAR PARTS WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING HIS WORK AND PROVIDE ALL FITTINGS, ACCESS PANELS, AND SIMILAR ACCESSORIES THAT MAYBE REQUIRED TO PROVIDE A COMPLETE AND OPERATING INSTALLATION AT NO ADDITIONAL COST TO THE OWNER.
29. PROVIDE ALL DAMPERS, SHEAVES, AND BELTS AS REQUIRED FOR BALANCING.
30. THIS CONTRACTOR IS RESPONSIBLE FOR THE CUTTING AND PATCHING OF ALL OPENINGS RELATED TO THEIR WORK. PATCHES SHALL MATCH SURROUNDING WALL AND CEILING SURFACES AND SHALL BE SEALED AND FIRESTOPPED AS REQUIRED.
31. INSTALL FIRE DAMPERS AS REQUIRED PER NFPA 101 AND NFPA 90A, (2012 EDITION).
32. ALL HVAC INSTALLATIONS SHALL COMPLY WITH NFPA 101.

NOT FOR CONSTRUCTION

STERLING
Sterling Environmental Engineering, P.C.

martinrogers ENGINEERING CONSULTANTS
185 N. Pennsylvania Ave. Wilkes-Barre, PA 18701
t.570.826.1000 | f.570.825.0888 | w. www.mrapc.com

ANDERSON DESIGN GROUP — ARCHITECTURE, PLANNING, INTERIORS
25 WALLKILL AVE ● MONTGOMERY ● NY 12549
O. 845.394.2724 | WWW.ADGARCHITECT.COM | CONTACT@ADGARCHITECT.COM

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

LEGEND, NOTES AND DRAWING SCHEDULE

REV	DESCRIPTION	DATE	BY	CHK
B	REVISED FOR RFP ADDENDUM 4	8/27/21		
A	ISSUED FOR RFP	7/30/21	BJZ	XX

STATE OF NEW YORK — JASON M. DRITTON — 083339 — LICENSED PROFESSIONAL ENGINEER

N.Y. P.E. LICENSE No. 083339

RRT Engineering , LLC
1 Huntington Quadrangle, 3S01 Melville, N.Y. 11747
ph: 631-756-1060 fax: 631-756-1064

	BY	DATE
DRAWN	BJZ	7/30/21
CHECKED		
DESIGNED	BJZ	7/30/21
APPROVED		
APPROVED		

PROJ. No: 499-010 SCALE:

DWG. NO: M-001 B

CAD FILE: N:\2021\21033\MEP\21033 M-001.DWG

SHEET SIZE: D-24x36 REV

COMcheck Software Version 4.1.5.3
Mechanical Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	Rockland Green Facility Improvements
Location:	West Nyack, New York
Climate Zone:	5a
Project Type:	New Construction

Construction Site:
420 Torne Valley Road
Hillburn, NY 10931

Owner/Agent:

Designer/Contractor:

Additional Efficiency Package(s)

Credits: 1.0 Required 0.0 Proposed

Mechanical Systems List

Quantity	System Type & Description
1	HVAC System 1 (Single Zone): Heating: 1 each - Other, Gas, Capacity = 250 kBtu/h No minimum efficiency requirement applies Cooling: 1 each - Single Package DX Unit, Capacity = 113 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 12.40 EER, Required Efficiency: 11.00 EER + 12.6 IEER Fan System: RTU-1 | ADMIN BUILDING -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 6 Supply, Constant Volume, 4000 CFM, 3.0 motor nameplate hp, 0.0 fan efficiency grade
1	HVAC System 2 (Single Zone): Heating: 1 each - Other, Gas, Capacity = 60 kBtu/h No minimum efficiency requirement applies Cooling: 1 each - Single Package DX Unit, Capacity = 48 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 14.00 SEER, Required Efficiency: 14.00 SEER Fan System: RTU-2 | SORTING ROOM -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 3 Supply, Constant Volume, 500 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade
1	HVAC System 3 (Single Zone): Heating: 1 each - Other, Gas, Capacity = 60 kBtu/h No minimum efficiency requirement applies Cooling: 1 each - Single Package DX Unit, Capacity = 48 kBtu/h, Air-Cooled Condenser, Air Economizer Proposed Efficiency = 14.00 SEER, Required Efficiency: 14.00 SEER Fan System: RTU-3 | SORTING ROOM -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 4 Supply, Constant Volume, 500 CFM, 0.5 motor nameplate hp, 0.0 fan efficiency grade
1	HVAC System 4 (Single Zone): Cooling: 1 each - Split System, Capacity = 12 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: None Proposed Efficiency = 14.00 SEER, Required Efficiency: 13.00 SEER Fan System: AC-1 | IT CLOSET -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 5 Supply, Constant Volume, 350 CFM, 0.1 motor nameplate hp, 0.0 fan efficiency grade
1	HVAC System 5 (Single Zone): Heating: 4 each - Radiant Heater, Gas, Capacity = 80 kBtu/h

Quantity	System Type & Description
	No minimum efficiency requirement applies Fan System: None
1	HVAC System 6 (Single Zone): Heating: 2 each - Radiant Heater, Gas, Capacity = 150 kBtu/h No minimum efficiency requirement applies Fan System: None
1	HVAC System 7 (Single Zone): Heating: 8 each - Unit Heater, Gas, Capacity = 400 kBtu/h Proposed Efficiency = 80.00% Ec, Required Efficiency: 80.00 % Ec Fan System: None
1	HVAC System 8 (Single Zone): Heating: 4 each - Unit Heater, Electric, Capacity = 17 kBtu/h No minimum efficiency requirement applies Fan System: None
1	HVAC System 9 (Single Zone): Heating: 1 each - Unit Heater, Electric, Capacity = 26 kBtu/h No minimum efficiency requirement applies Fan System: None
1	HVAC System 10 (Single Zone): Heating: 1 each - Unit Heater, Electric, Capacity = 34 kBtu/h No minimum efficiency requirement applies Fan System: None
1	Water Heater 1: Gas Storage Water Heater, Capacity: 60 gallons, Input Rating: 120 kBtu/h w/ Circulation Pump Proposed Efficiency: 80.00 % Et, Required Efficiency: 80.00 % Et

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.3 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Robert Zukasky — MECHANICAL DESIGNER (Name - Title) | Robert Zukasky (Signature) | 8-27-21 (Date)

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PROJECT

PROJECT

NORTH

KEY PLAN

AREA OF CONSTRUCTION

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Sterling Environmental Engineering, P.C.

martinrogers ENGINEERING CONSULTANTS
185 N. Pennsylvania Ave. Wilkes-Barre, PA 18701
t:570.826.1000 | f:570.825.0888 | w: www.mrapc.com

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REV	DESCRIPTION	DATE	BY	CHK
B	REVISED FOR RFP ADDENDUM 4	8/27/21		
A	ISSUED FOR RFP	7/30/21	RER	RER

STATE OF NEW YORK — MICHAEL BRITTON GALLO — LICENSED PROFESSIONAL ENGINEER — NO. 083339

N.Y. P.E. LICENSE No. 083339

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RRT Engineering , LLC
1 Huntington Quadrangle, 3S01 ph: 631-756-1060
Melville, N.Y. 11747 fax: 631-756-1064

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

ENERGY COMPLIANCE FORMS

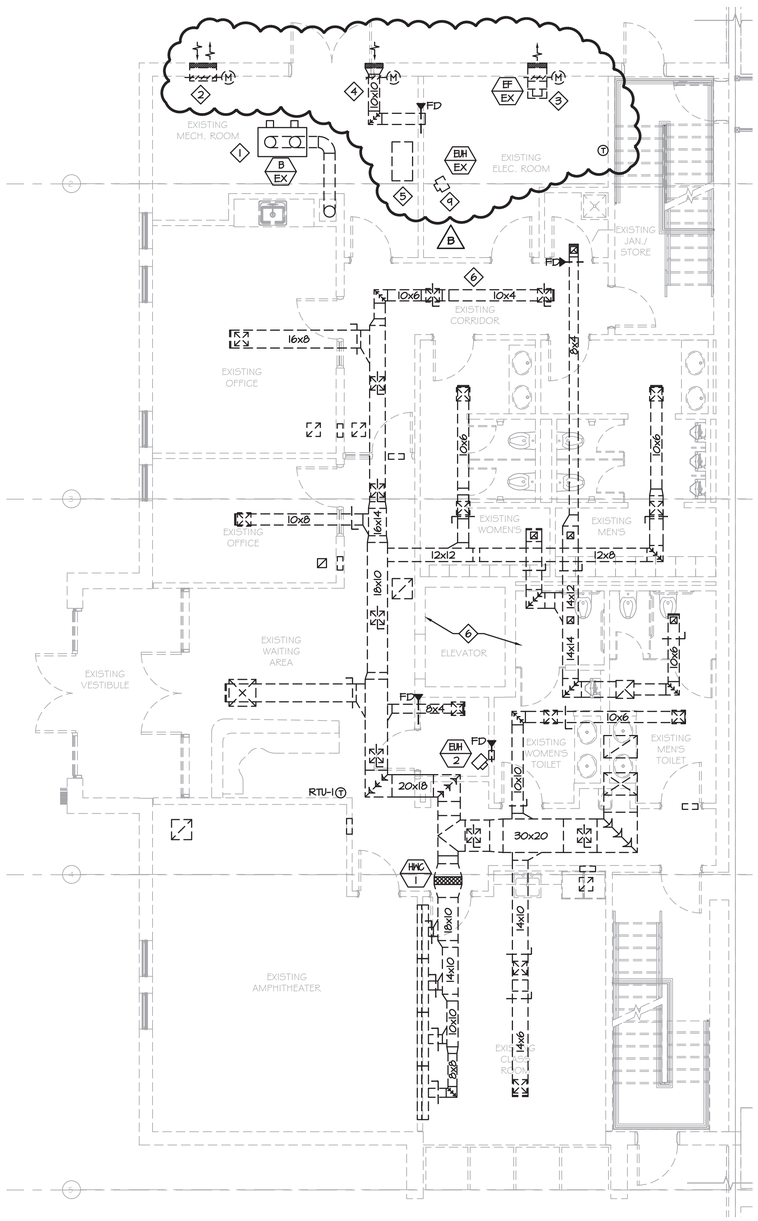
	BY	DATE
DRAWN	BJZ	7/30/21
CHECKED	BJZ	7/9/21
DESIGNED	BJZ	7/9/21
APPROVED		
APPROVED		

PROJ. No: 499-010 SCALE:

DWG. NO: M-002 B

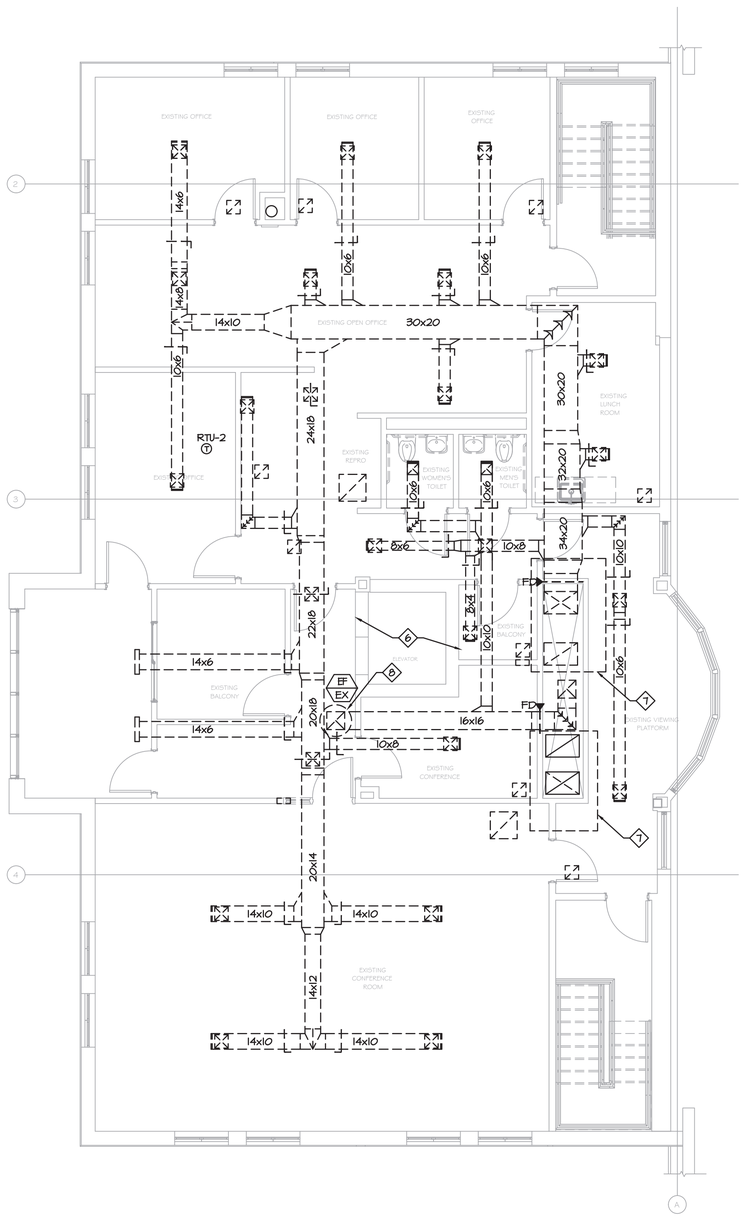
CAD FILE: N:\2021\21033\MEP\21033 M-002.DWG

SHEET SIZE: D–24x36 REV



1 M-101 PARTIAL FIRST FLOOR PLAN - MECHANICAL DEMOLITION

SCALE: 3/16"=1'-0"



2 M-101 PARTIAL SECOND FLOOR PLAN - MECHANICAL DEMOLITION

SCALE: 3/16"=1'-0"

B DEMOLITION NOTES:

1. REMOVE EXISTING BOILER, HOT WATER PUMP, EXPANSION TANK, AND ALL RELATED HOT WATER SYSTEM COMPONENTS IN THEIR ENTIRETY.
2. REMOVE EXISTING INTAKE AIR LOUVER 12" AFF AND VENTILATION AIR LOUVER 12" BELOW SECOND FLOOR SLAB. PATCH OPENINGS AT REMOVALS TO MATCH EXISTING.
3. REMOVE EXISTING EXHAUST LOUVER, EXHAUST FAN, DUCTWORK ASSOCIATED CONTROLS, 9' AFF.
4. REMOVE EXISTING INTAKE LOUVER, DUCTWORK AND ASSOCIATED CONTROLS, 9' AFF..
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.
7. REMOVE EXISTING ROOFTOP UNIT IN ITS ENTIRETY.
8. REMOVE EXISTING ROOFTOP FAN IN ITS ENTIRETY.
9. REMOVE EXISTING ELECTRIC UNIT HEATER, MOUNTING BRACKET AND ASSOCIATED CONTROLS.

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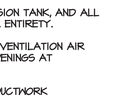
PROJECT



KEY PLAN

STERLING
Sterling Environmental Engineering, P.C.

martinrogers
ENGINEERING CONSULTANTS
185 N. Pennsylvania Ave. Wilkes-Barre, PA 18701
t.570.826.1000 | f.570.825.0888 | w. www.mrapc.com

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STATE OF NEW YORK · JEROME BRITTON ZELLE · No. 083339 · LICENSED PROFESSIONAL ENGINEER

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Rockland Green

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

PARTIAL FLOOR PLANS - MECHANICAL DEMOLITION

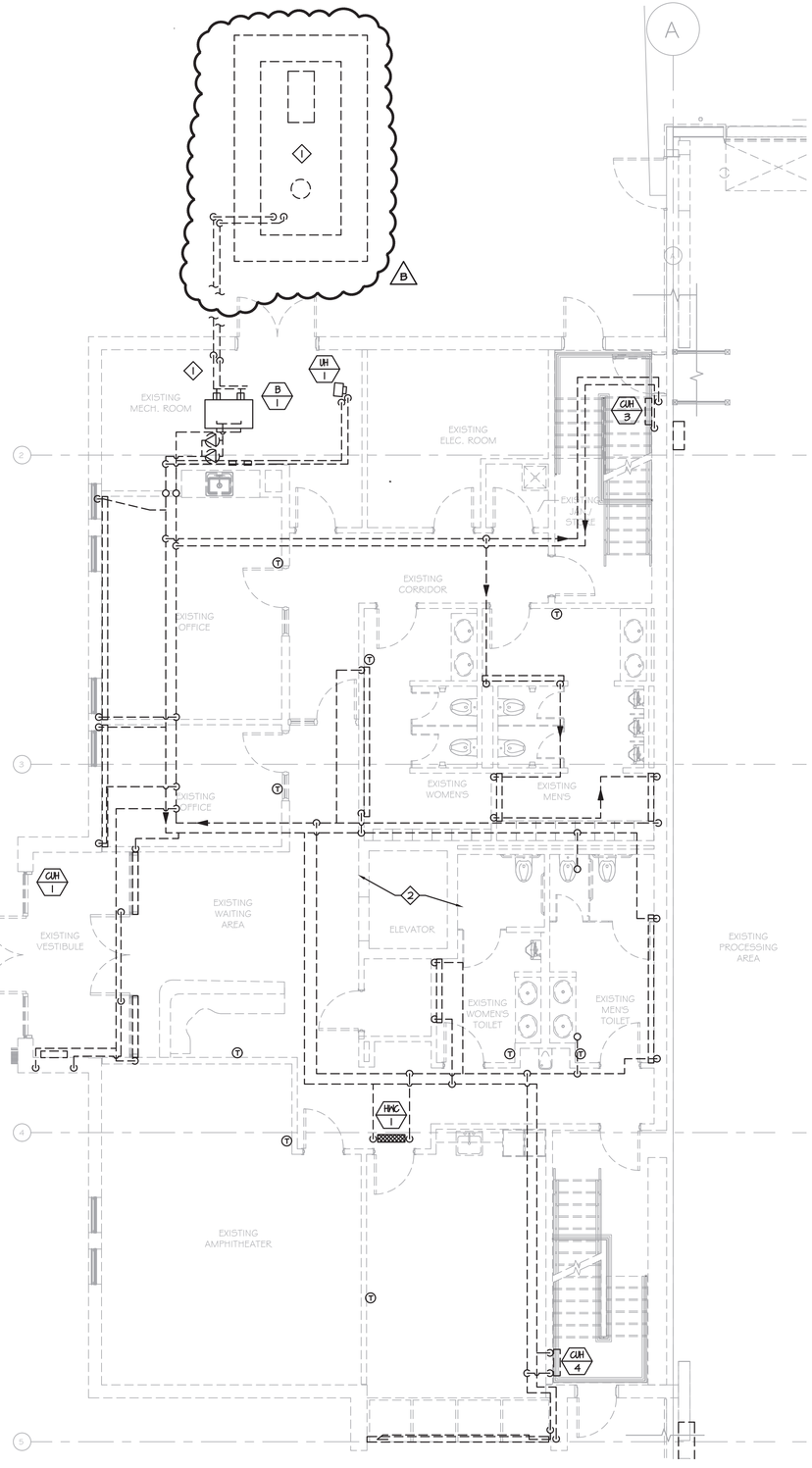
	BY	DATE
DRAWN	BJZ	7/30/21
CHECKED		
DESIGNED	BJZ	7/30/21
APPROVED		
APPROVED		

PROJ. No: 499-010 SCALE:

DWG. NO: M-101 B

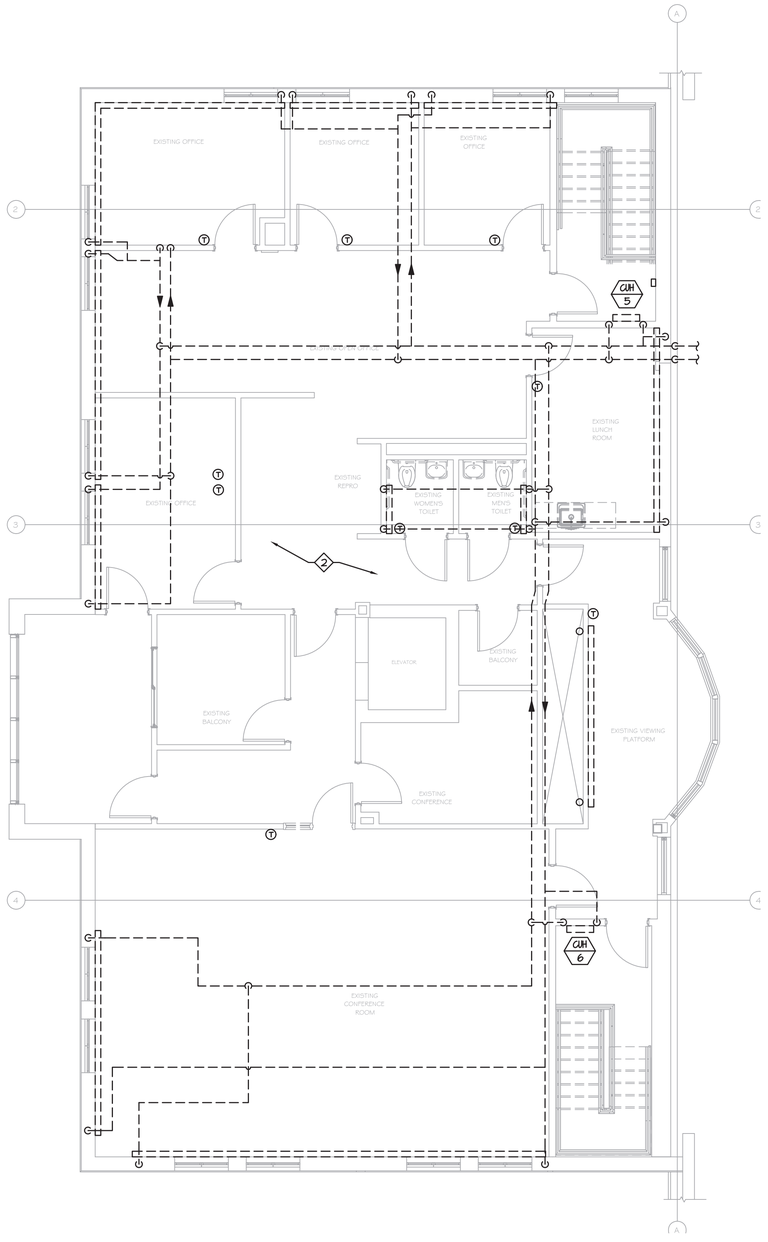
CAD FILE: N:\2021\21033\MEP\21033 M-101.DWG

SHEET SIZE: D-24x36 REV



1 M-102 PARTIAL FIRST FLOOR PLAN - MECHANICAL DEMOLITION

SCALE: 3/16"=1'-0"



2 M-102 PARTIAL SECOND FLOOR PLAN - MECHANICAL DEMOLITION

SCALE: 3/16"=1'-0"

NOT FOR CONSTRUCTION

DEMOLITION NOTES:

1. REMOVE EXISTING BOILER, HOT WATER PUMP, EXPANSION TANK, AND ALL RELATED HOT WATER SYSTEM COMPONENTS IN THEIR ENTIRETY. REMOVE EXISTING FUEL PUMPS, PIPING, OIL TANK, CONCRETE PAD AND ALL RELATED FUEL OIL SUPPLY SYSTEM COMPONENTS IN THEIR ENTIRETY.
2. 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.

B

PROJECT NORTH

KEY PLAN

AREA OF CONSTRUCTION

STERLING
Sterling Environmental Engineering, P.C.

martinrogers ENGINEERING CONSULTANTS
185 N. Pennsylvania Ave. Wilkes-Barre, PA 18701
t.570.825.1000 f.570.825.0886 | w. www.mrcpc.com

ANDERSON DESIGN GROUP
ARCHITECTURE PLANNING INTERIORS
25 WALLKILL AVE. ● MONTGOMERY ● NY 12549
O. 845.394.2729
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REV	DESCRIPTION	DATE	BY	CHK
B	REVISED FOR RFP ADDENDUM 4	8/27/21		
A	ISSUED FOR RFP	7/30/21	BJZ	XX

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N.Y. P.E. LICENSE No. 083339

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RRT Engineering , LLC
1 Huntington Quadrangle, 3S01
Melville, N.Y. 11747
ph: 631-756-1060
fax: 631-756-1064

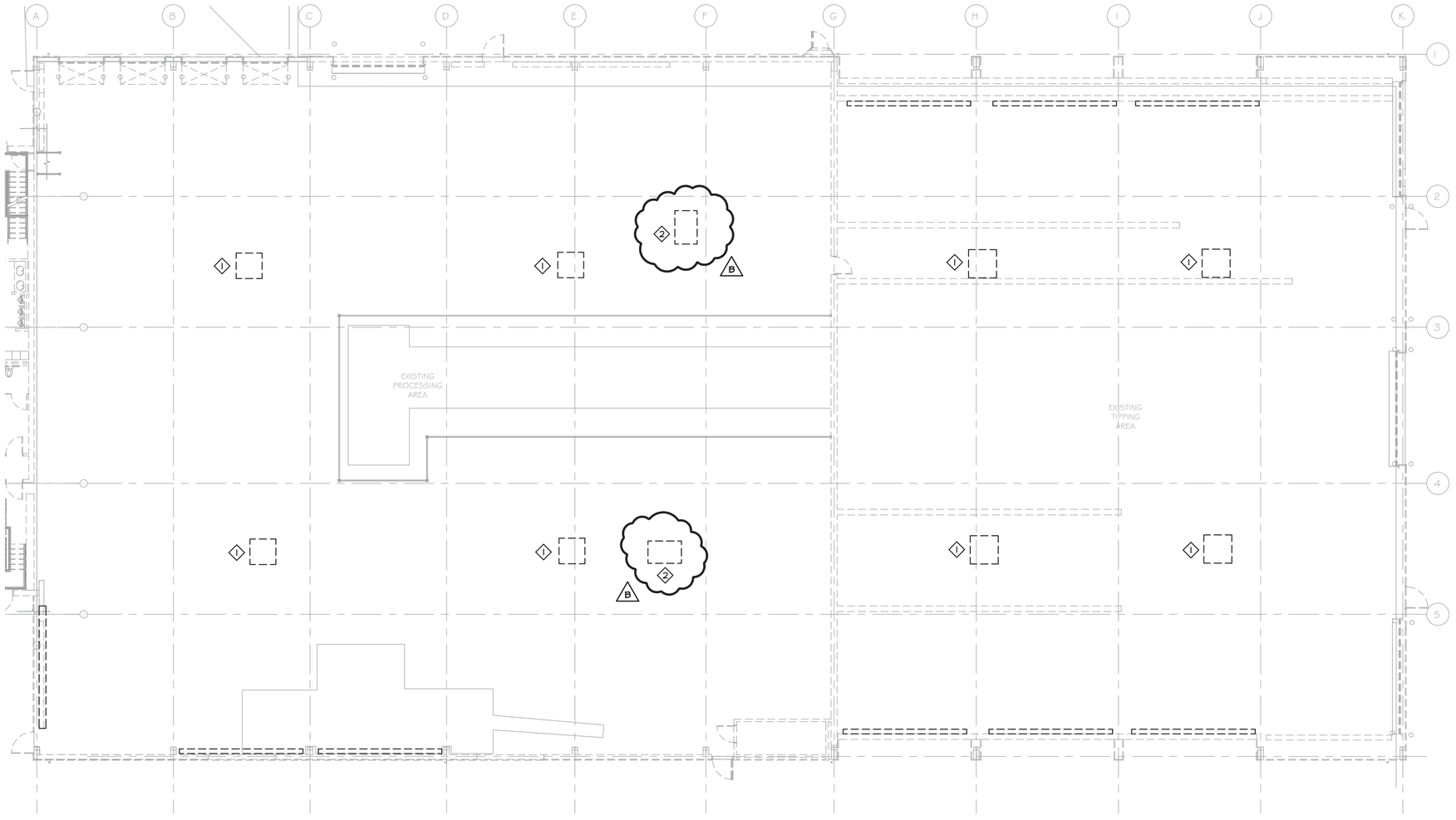
RRT Engineering , LLC
An Affiliate of Enviro-Services & Constructors, Inc.
NY COA # 0017967

Rockland Green

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

PARTIAL FLOOR PLANS - MECHANICAL DEMOLITION

	BY	DATE		
DRAWN	BJZ	7/30/21	PROJ. No: 499-010	SCALE:
CHECKED			DWG. NO: M-102	B
DESIGNED	BJZ	7/30/21	CAD FILE: N:\2021\21033\MEP\21033 M-102.DWG	
APPROVED			SHEET SIZE: D-24x36	REV
APPROVED				



DEMOLITION NOTES:

1. REMOVE EXISTING EXHAUST FAN, ASSOCIATED CONTROLS, ROOF CURB AND ANY RELATED DUCTWORK. EXISTING ROOF OPENING SHALL REMAIN AND BE MODIFIED AS REQUIRED TO ACCOMMODATE NEW EXHAUST FAN. REFER TO M-203 FOR DETAILS.
2. REMOVE EXISTING AIR HANDLING UNIT, ASSOCIATED CONTROLS, ROOF CURB AND ANY RELATED DUCTWORK. EXISTING ROOF OPENING SHALL REMAIN AND BE MODIFIED AS REQUIRED TO ACCOMMODATE NEW AIR HANDLING UNIT. REFER TO M-203 FOR DETAILS.

B

1 / M-103 PARTIAL FIRST FLOOR PLAN MECHANICAL DEMOLITION

SCALE: 3/32"=1'-0"

NOT FOR CONSTRUCTION

PROJECT

PROJECT

N O R T H

KEY PLAN

AREA OF CONSTRUCTION

STERLING
Sterling Environmental Engineering, P.C.

martinrogers
CIVIL/GEOTECHNICAL CONSULTANTS
185 N. Pennsylvania Ave. Wilkes-Barre, PA 18701
t.570.826.1000 | f.570.825.0888 | w. www.mrapc.com

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ARCHITECTURE
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25 WALLKILL AVE ● MONTGOMERY ● NY 12549
O. 845.294.2724
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Rockland Green

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

PARTIAL FIRST FLOOR PLAN - MECHANICAL DEMOLITION

	BY	DATE
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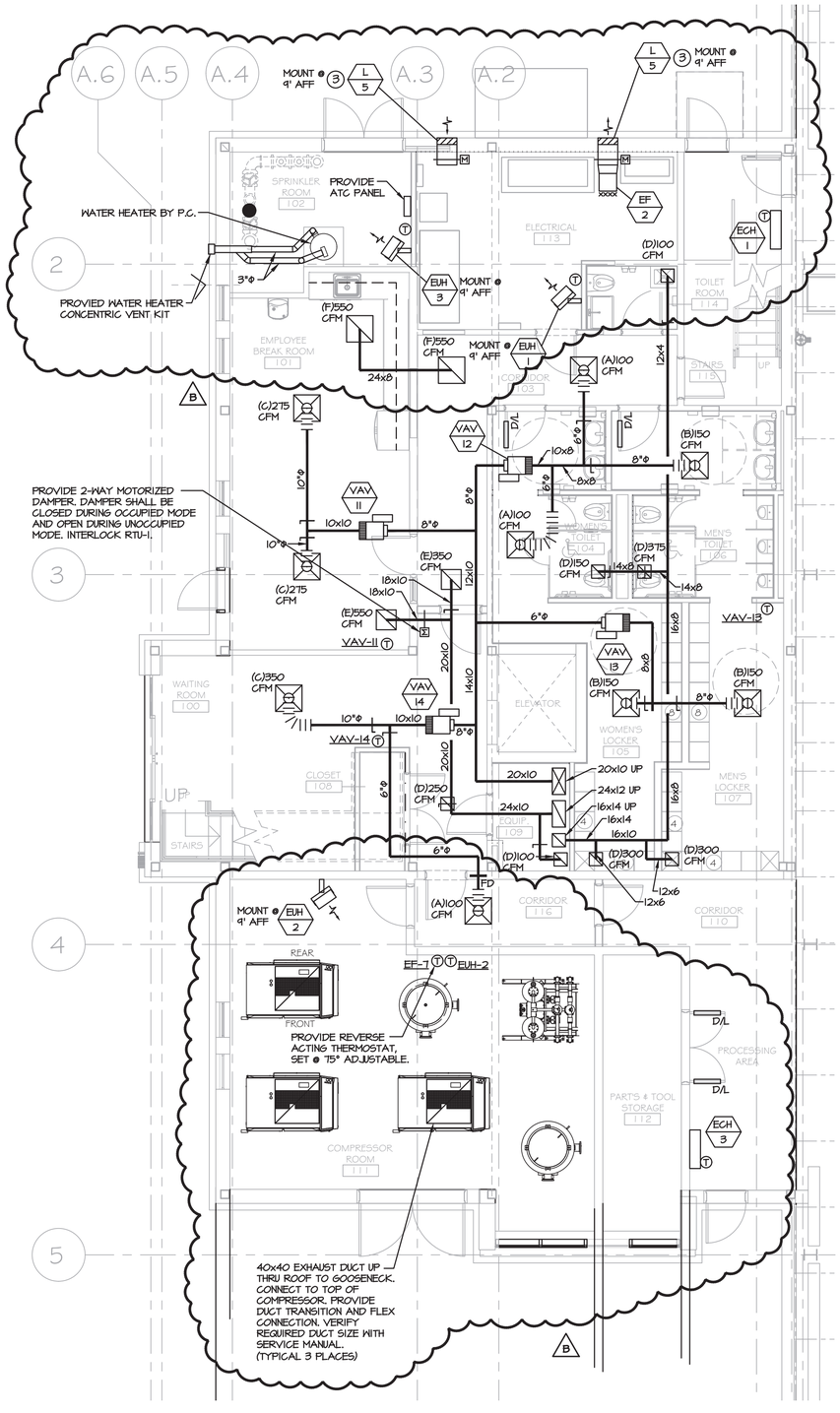
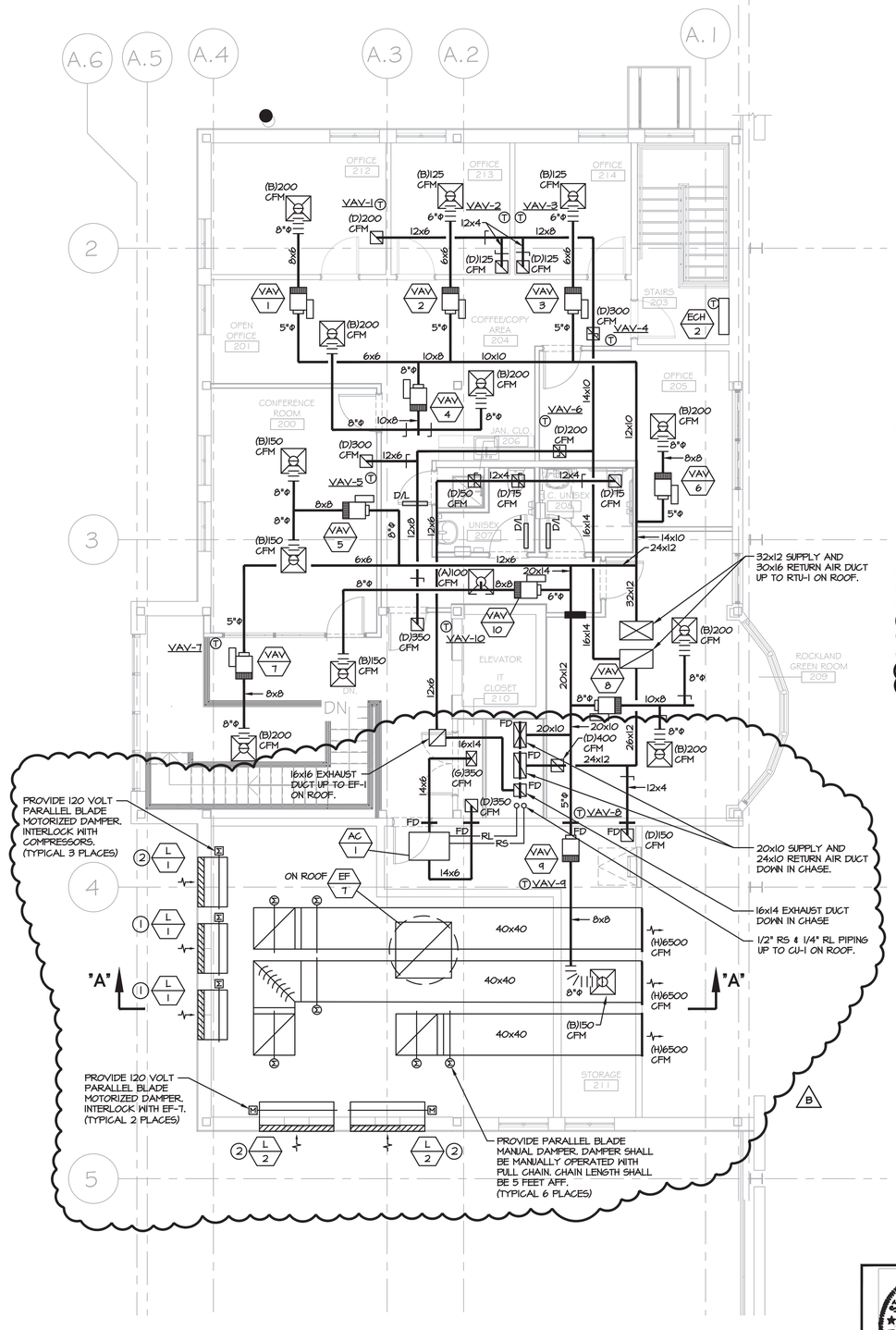
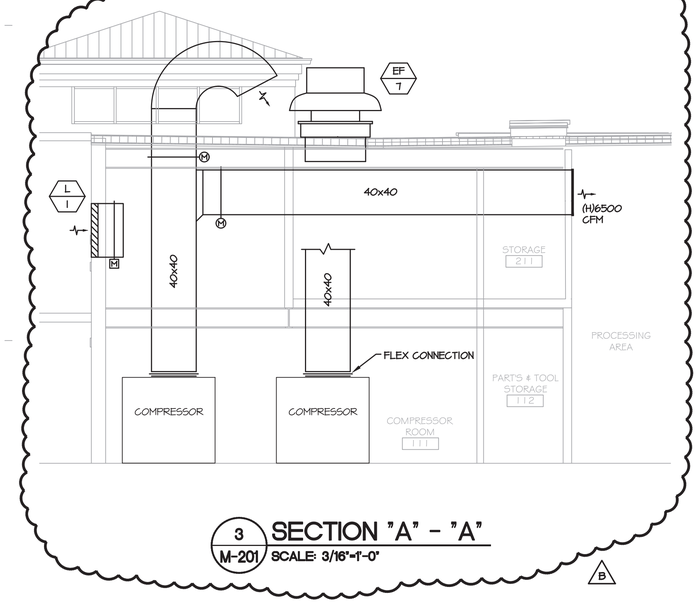
PROJ. No: 499-010
SCALE:
DWG. NO: M-103
B
CAD FILE: N:\2021\21033\MEP\21033 M-103.DWG
SHEET SIZE: D–24x36
REV

MECHANICAL INSTALLATION NOTES:

1. 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.
3. INSTALL LOUVER IN EXISTING WALL. LINTEL SHALL BE PROVIDED BY STRUCTURAL CONTRACTOR. COORDINATE EXACT LOCATION IN FIELD WITH ELECTRICAL EQUIPMENT AND ASSOCIATED CONDUIT.







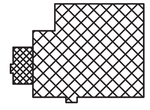
3 SECTION "A" - "A"
M-201 SCALE: 3/16"=1'-0"

1 PARTIAL FIRST FLOOR PLAN - MECHANICAL
M-201 SCALE: 3/16"=1'-0"

2 PARTIAL SECOND FLOOR PLAN - MECHANICAL
M-201 SCALE: 3/16"=1'-0"

NOT FOR CONSTRUCTION

PROJECT



KEY PLAN

AREA OF CONSTRUCTION

STERLING
Sterling Environmental Engineering, P.C.

martinrogers
ENGINEERING CONSULTANTS
185 N. Pennsylvania Ave. Wilkes-Barre, PA 18701
t.570.826.1000 | f.570.825.0888 | w. www.mrapc.com

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ARCHITECTURE PLANNING INTERIORS
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MATERIALS RECOVERY FACILITY, FACILITY IMPROVEMENTS
420 TORNE VALLEY ROAD, HILLBURN, NY 10931

PARTIAL FLOOR PLANS - MECHANICAL

STATE OF NEW YORK — MICHAEL BRITTON BELL — No. 083339 — LICENSED PROFESSIONAL ENGINEER

N.Y. P.E. LICENSE No. 083339

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1 Huntington Quadrangle, 3S01
Melville, N.Y. 11747
ph: 631-756-1060
fax: 631-756-1064

	BY	DATE
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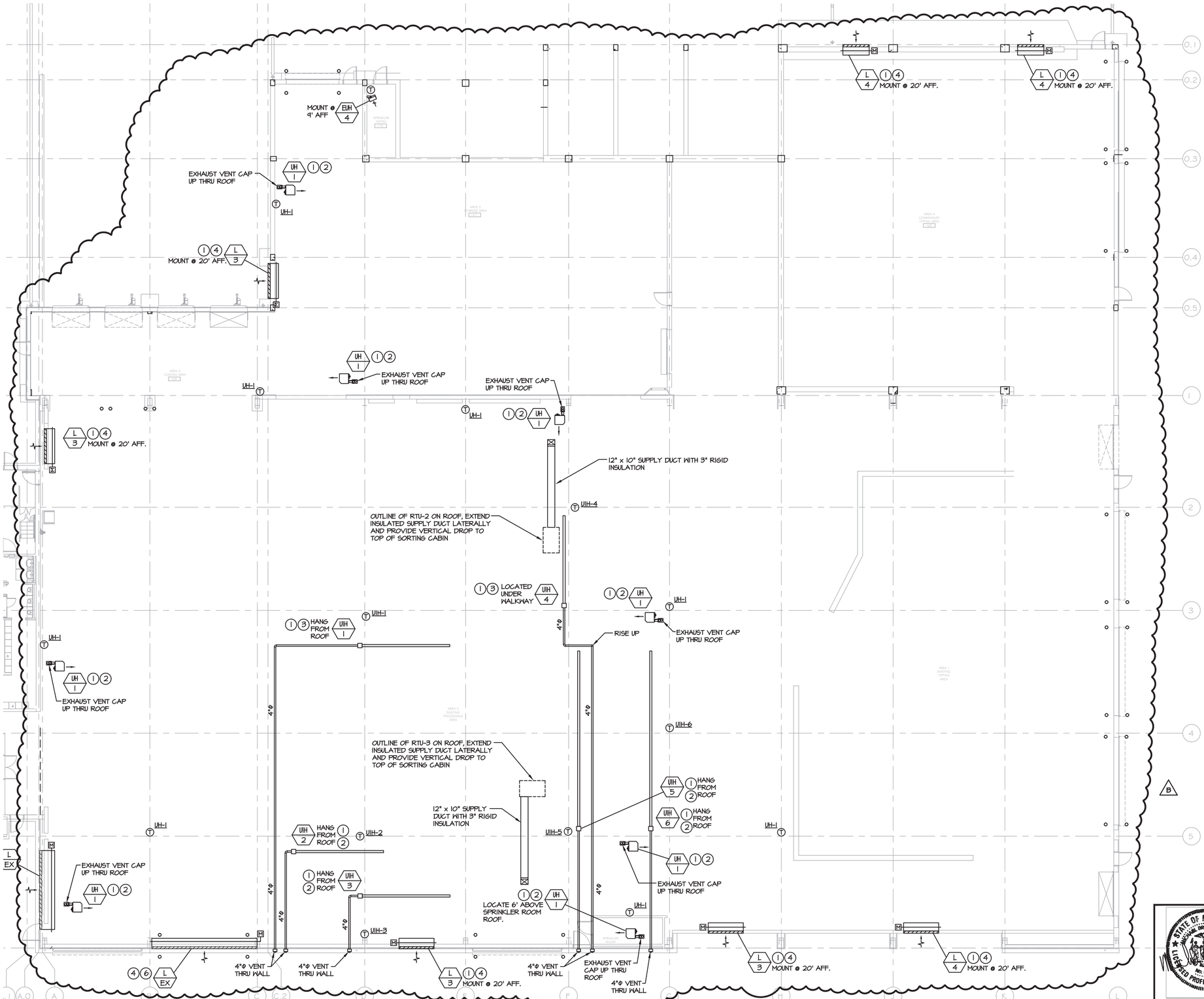
CHECKED		
DESIGNED	BJZ	7/30/21
APPROVED		
APPROVED		

PROJ. No: 499-010 SCALE:
DWG. NO: M-201 B
CAD FILE: N:\2021\21033\MEP\21033 M-201.DWG
SHEET SIZE: D-24x36 REV



1 M-202 **PARTIAL FIRST FLOOR PLAN - MECHANICAL**
SCALE: 3/32"=1'-0"

NOT FOR CONSTRUCTION

MECHANICAL INSTALLATION NOTES:

1. ALL LOCATION AND MOUNTING HEIGHTS SHOWN ARE PRELIMINARY AND SUBJECT TO CHANGE AND APPROVAL OF OWNER'S ENGINEER. COORDINATE WITH EQUIPMENT CONTRACTOR AND OWNER'S ENGINEER'S REPRESENTATIVE IN FIELD.
2. PROVIDE 6"Φ FLUE AND COMBUSTION AIR VENT THRU WALL OR ROOF.
3. PROVIDE 4"Φ FLUE THRU WALL OR ROOF.
4. PROVIDE 2-POSITION, LOW LEAK 120 VOLT, MOTORIZED DAMPER. INTERLOCK WITH EXHAUST FANS.
5. EXISTING 18' LONG x 3' HIGH LOUVER, 12' AFF. SHALL REMAIN AND BE REUSED. LOUVER SHALL BE CLEANED AND BIRD SCREEN SHALL BE REPLACED. PROVIDE DUCT COLLAR AND MOTORIZED DAMPER.
6. EXISTING 24' LONG x 3' HIGH LOUVER, 12' AFF. SHALL REMAIN AND BE REUSED. LOUVER SHALL BE CLEANED AND BIRD SCREEN SHALL BE REPLACED. PROVIDE DUCT COLLAR AND MOTORIZED DAMPER.

B

PROJECT NORTH

KEY PLAN — AREA OF CONSTRUCTION

STERLING
Sterling Environmental Engineering, P.C.

martinrogers ENGINEERING CONSULTANTS
185 N. Pennsylvania Ave. Wilkes-Barre, PA 18701
t.570.826.1000 | f.570.825.0886 | w. www.mrcpc.com

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O. 845.394.2729 | WWW.ADGARCHITECT.COM | CONTACT@ADGARCHITECT.COM

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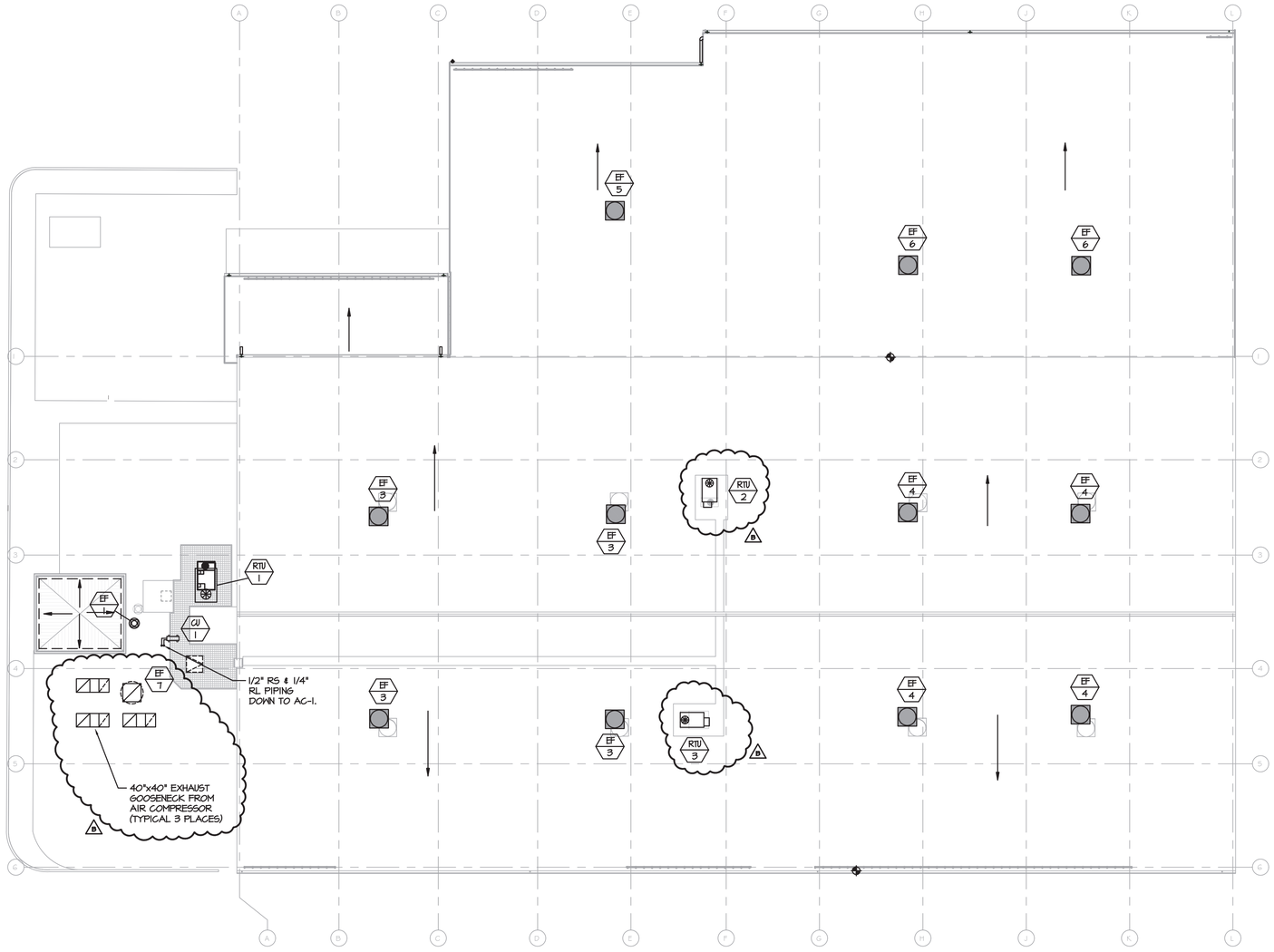
1 Huntington Quadrangle, 3S01
Melville, N.Y. 11747
ph: 631-756-1060
fax: 631-756-1064

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

PARTIAL FIRST FLOOR PLAN - MECHANICAL

	BY	DATE
DRAWN	BJZ	7/30/21
CHECKED		
DESIGNED	BJZ	7/30/21
APPROVED		
APPROVED		

PROJ. No: 499-010 SCALE:
DWG. NO: M-202 B
CAD FILE: N:\2021\21033\MEP\21033 M-202.DWG
SHEET SIZE: D-24x36 REV

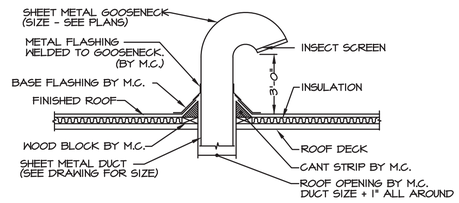


1 M-203 **ROOF PLAN - MECHANICAL**
SCALE: 1/16"=1'-0"

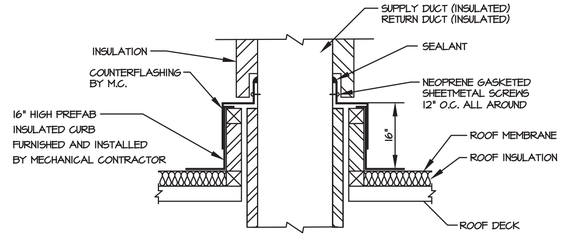
MECHANICAL INSTALLATION NOTES:

1. A PROPOSED ALTERNATE FOR RTU-2 AND RTU-3 IS TO PROVIDE A HEATING AND VENTILATING UNIT. IF ALTERNATE IS ACCEPTED COORDINATE NEW POWER AND GAS REQUIREMENTS WITH ELECTRICAL AND PLUMBING CONTRACTORS.

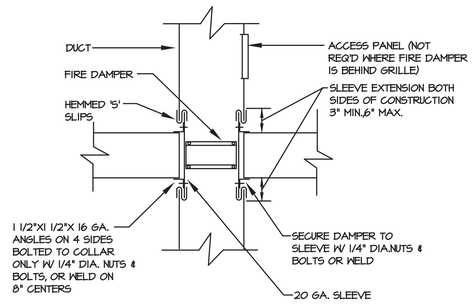
B



1 M-203 **TYPICAL GOOSENECK DETAIL**
SCALE: NO SCALE



2 M-203 **DUCT THRU ROOF DETAIL**
NOT TO SCALE



3 M-203 **FIRE DAMPER DETAIL**
SCALE: NO SCALE
(THRU WALL OR FLOOR)

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PROJECT
NORTH

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t.570.826.1000 | f.570.825.0888 | w. www.mrapc.com

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STATE OF NEW YORK — BRIONE BRITTON ORLEY — No. 085339 — LICENSED PROFESSIONAL ENGINEER

N.Y. P.E. LICENSE No. 085339

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1 Huntington Quadrangle, 3S01
Melville, N.Y. 11747
ph: 631-756-1060
fax: 631-756-1064

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

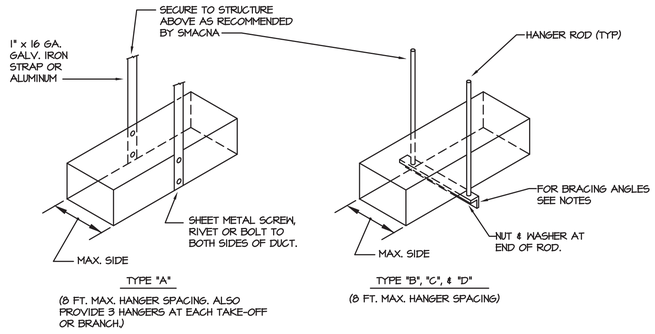
Rockland Green
ROCKLAND GREEN
MATERIALS RECOVERY FACILITY,
FACILITY IMPROVEMENTS
420 TORNE VALLEY ROAD, HILLBURN, NY 10931

ROOF PLAN - MECHANICAL

	BY	DATE
DRAWN	BJZ	7/30/21
CHECKED		
DESIGNED	BJZ	7/30/21
APPROVED		
APPROVED		

PROJ. No: 499-010
SCALE:
DWG. NO: M-203 B
CAD FILE: N:\2021\21033\MEP\21033 M-203.DWG
SHEET SIZE: D-24x36 REV

NOT FOR CONSTRUCTION



TYPE "A"

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

TYPE "B", "C", & "D"

(8 FT. MAX. HANGER SPACING)

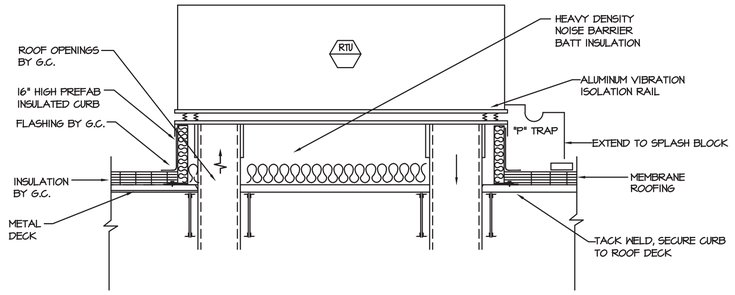
DUCT DIMENSION	HANGER TYPE	ROD DIA.	ANGLE SIZE	MAX SPACING
UP TO 18"	A	1" STRAP	———	8'-0"
19" TO 60"	B	5/16"	1-1/2" x 1-1/2" x 1/8"	8'-0"
61" TO 96"	C	3/8"	1-1/2" X 1-1/2" x 3/16"	8'-0"
OVER 96"	D	1/2"	2" x 2" x 1/4"	4'-0"

NOTES:

1. 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.

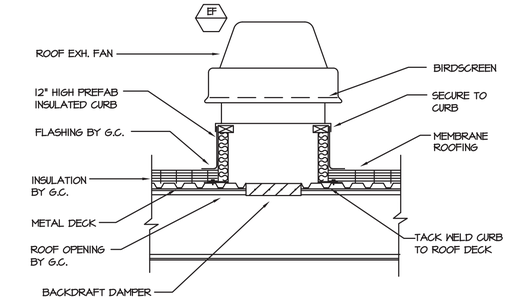
1 M-301 DUCT HANGER DETAILS

SCALE: N.T.S.



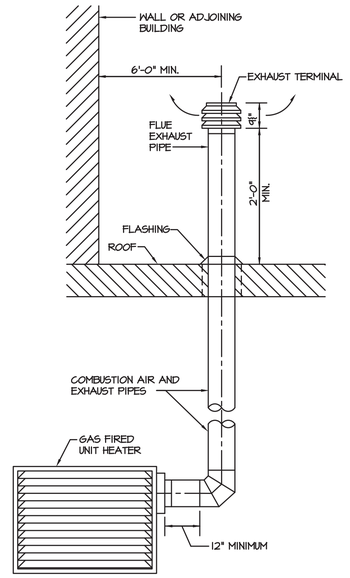
2 M-301 ROOFTOP UNIT DETAIL

SCALE: N.T.S.



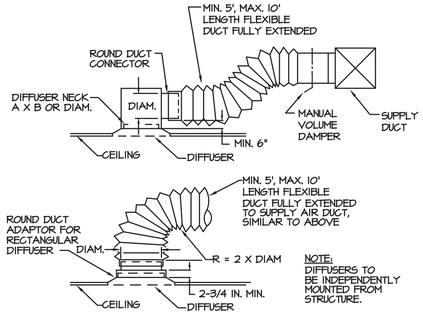
3 M-301 ROOF MOUNTED EXHAUST FAN DETAIL

SCALE: N.T.S.



4 M-301 GAS UNIT HEATER DETAIL

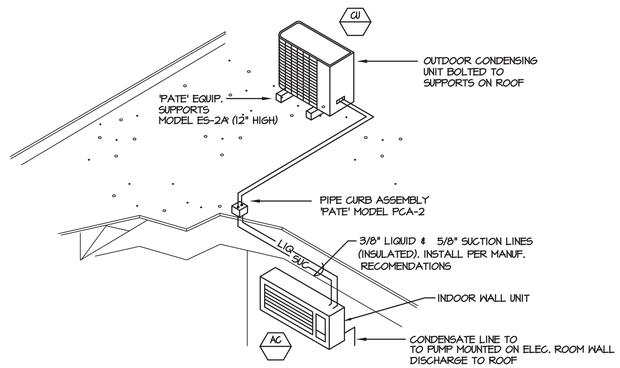
SCALE: N.T.S.



NOTE: DIFFUSERS TO BE INDEPENDENTLY MOUNTED FROM STRUCTURE.

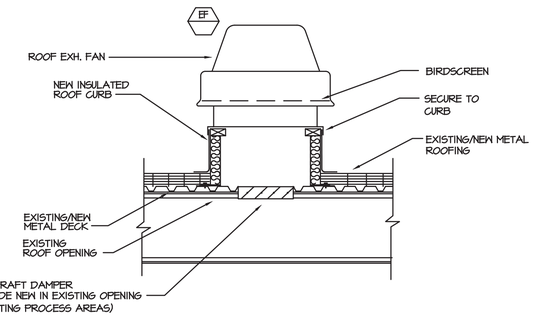
5 M-301 DIFFUSER CONNECTION DETAILS

SCALE: N.T.S.



6 M-301 DUCTLESS SPLIT SYSTEM DETAIL

SCALE: N.T.S.

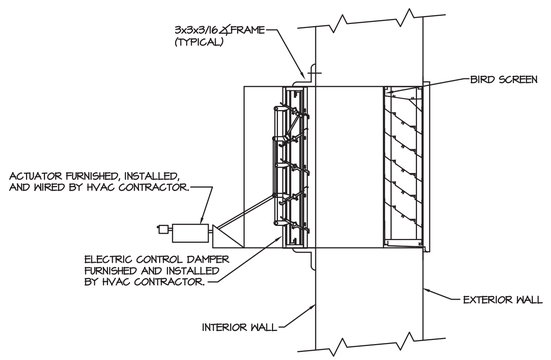


PROCESS AREA

7 M-301 ROOF MOUNTED EXHAUST FAN DETAIL

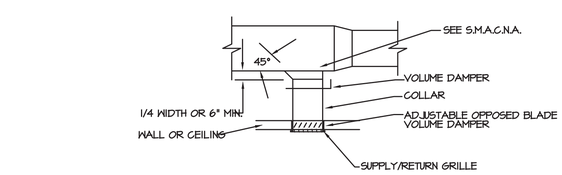
SCALE: N.T.S.

NOTE: FOLLOW PEMB SPECS FOR INSTALLING ROOF CURBS IN NEW AND EXISTING METAL ROOFS



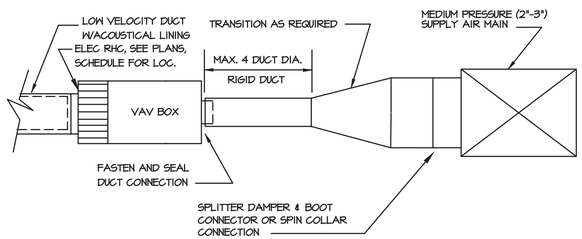
10 M-301 LOUVER DETAIL

SCALE: N.T.S.



9 M-301 REGISTER & GRILLE CONNECTIONS DETAIL

SCALE: N.T.S.



8 M-301 VAV BOX DETAIL

SCALE: N.T.S.

NOT FOR CONSTRUCTION

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N.Y. P.E. LICENSE No. 083339

RRT Engineering , LLC
1 Huntington Quadrangle, 3S01 Melville, N.Y. 11747
ph: 631-756-1060 fax: 631-756-1064

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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

DETAILS

PROJ. No: 499-010 SCALE:

DWG. NO: M-301 B

CAD FILE: N:\2021\21033\MEP\21033 M-301.DWG

SHEET SIZE: D-24x36 REV

GAS FIRED UNIT HEATER SCHEDULE

TAG	APPLICATION	MANUF.	MODEL	FUEL	INPUT	OUTPUT	CFM	FLUE DIA	COMB DIA	MOTOR HP	ELECTRIC V/PH/HZ	WEIGHT (LBS)	REMARKS/ACCESS
UH-1	WHAREHOUSE	REZNOR	UBZ	NAT. GAS	400	340	6185	6	6	2.0	115/1/60	507	1 THRU 13

REMARKS:
1. 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..
7. 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.
10. PROVIDE UNIT WITH HORIZONTAL LOUVERS. MOUNT UNIT AND VENTS AS HIGH AS POSSIBLE FOR MAXIMUM CLEARANCE BELOW.
11. PROVIDE UNIT WITH 115 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.

UNITARY INFRARED HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	DESCRIPTION	MAX. INPUT	MIN. LENGTH	ELECTRICAL DATA	TUBE MATERIAL	FUEL	REMARKS/ACCESSORIES
UIH-1	ROBERTS GORDON	GTH3-80	VANTAGE MODULATING	80,000 BTUH	20 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-2	ROBERTS GORDON	GTH3-80	VANTAGE MODULATING	80,000 BTUH	20 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-3	ROBERTS GORDON	GTH3-80	VANTAGE MODULATING	80,000 BTUH	20 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-4	ROBERTS GORDON	GTH3-80	VANTAGE MODULATING	80,000 BTUH	20 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-5	ROBERTS GORDON	GTH3-150	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	GTH3-150	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

REMARKS/ACCESSORIES:
1. 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"Φ FLUE AND COMBUSTION AIR VENT TERMINAL.
8. PROVIDE WITH 3/4" GAS CONNECTION.

VAV BOX SCHEDULE (ELECTRIC REHEAT)

TAG	MAKE	MODEL	SIZE DIA.	COOLING CFM MAX	COOLING CFM MIN	MIN HTG CFM	E.A.T.	L.A.T.	ELECTRIC HEAT (KW)	VOLTAGE/ PHASE	A.P.D.	REMARKS
VAV-1	TRANE	VCEF	5"	200	150	150	55	95	2	277/1	.01	1, 2, 3, 4, 5, 6
VAV-2	TRANE	VCEF	5"	125	100	100	55	95	1.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-3	TRANE	VCEF	5"	125	100	100	55	95	1.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-4	TRANE	VCEF	8"	400	200	200	55	95	2.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-5	TRANE	VCEF	8"	300	200	200	55	95	2.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-6	TRANE	VCEF	5"	200	150	150	55	95	2.0	277/1	.01	1, 2, 3, 4, 5, 6
VAV-7	TRANE	VCEF	5"	200	150	150	55	95	2.0	277/1	.01	1, 2, 3, 4, 5, 6
VAV-8	TRANE	VCEF	8"	400	200	200	55	95	2.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-9	TRANE	VCEF	5"	150	100	100	55	95	1.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-10	TRANE	VCEF	6"	250	150	150	55	95	2.0	277/1	.01	1, 2, 3, 4, 5, 6
VAV-11	TRANE	VCEF	8"	550	300	300	55	95	4.0	277/1	.01	1, 2, 3, 4, 5, 6
VAV-12	TRANE	VCEF	8"	350	200	200	55	95	2.5	277/1	.01	1, 2, 3, 4, 5, 6
VAV-13	TRANE	VCEF	6"	300	150	150	55	95	2.0	277/1	.01	1, 2, 3, 4, 5, 6
VAV-14	TRANE	VCEF	8"	450	250	250	55	95	3.5	277/1	.01	1, 2, 3, 4, 5, 6

REMARKS/ACCESSORIES:
1. PROVIDE VAV 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

TAG	MAKE	MODEL	TONS	EVAP. FAN DATA CFM	EVAP. FAN DATA O/A CFM	EVAP. FAN DATA E.S.P.	EVAP. FAN DATA HP	EVAP. FAN DATA RPM	EVAP. FAN DATA VOLTAGE	DX COOLING COIL TOTAL MBH	DX COOLING COIL SENS. MBH	DX COOLING COIL E.A.T. DB/WB	DX COOLING COIL L.A.T. DB/WB	COMPRESSOR QTY	COMPRESSOR RLA	CONDENSER FAN QTY	CONDENSER FAN HP	NATURAL GAS FURNACE INPUT MBH	NATURAL GAS FURNACE OUTPUT MBH	NATURAL GAS FURNACE STAGES	EER	EXHAUST FAN DATA CFM	EXHAUST FAN DATA E.S.P.	EXHAUST FAN DATA HP	EXHAUST FAN DATA RPM	EXHAUST FAN DATA VOLTAGE	UNIT ELECTRICAL DATA M.C.A.	UNIT ELECTRICAL DATA M.O.C.P.
RTU-1	TRANE	YHC120F4RHA	10	4,000	1,475	0.9"	3	1,565	480V/3Φ	113.4	85.7	80°/67°	57.8°/56.8°	2	8.2 / 6.0	1	.75	250	200	2	12.4	4,000	0.1"	1	1075	208V/1Φ	22	25
RTU-2	TRANE	OABD048E4	3	500	500	1.0	1/2	-	480V/3Φ	36.0	30.0	95°/78°	55°/44°	1	7.9	1	0.25	60	48	1	14.0	-	-	-	-	-	21	25
RTU-3	TRANE	OABD048E4	3	500	500	1.0	1/2	-	480V/3Φ	36.0	30.0	95°/78°	55°/44°	1	7.9	1	0.25	60	48	1	14.0	-	-	-	-	-	21	25

NOTES:
1. 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-1 ONLY)
4. 2" MERV 8 HIGH EFFICIENCY, THROWAWAY FILTER.
5. 0-100% OUTSIDE AIR ECONOMIZER CONTROL WITH MODULATING OUTSIDE AND RETURN AIR DAMPERS. (RTU-1 ONLY). 2-POSITION MOTORIZED OA DAMPER FOR RTU'S 2 & 3.
6. POWERED EXHAUST: DIRECT DRIVE WITH VFD AND GRAVITY DAMPER. (RTU-1 ONLY)
7. FACTORY FURNISHED SUPPLY FAN VFD WITH BYPASS. (RTU-1 ONLY)
8. FACTORY POWERED GROUND FAULT CONVENIENCE OUTLET.
9. PROVIDE UNIT WITH FACTORY-MOUNTED DISCONNECT SWITCH.
10. PROVIDE UNIT WITH STANDARD SERVICE ACCESS.
11. 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-1).
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. 1-YEAR PARTS ONLY WARRANTY.
20. 1-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-1.

DIFFUSER, REGISTER & GRILLE SCHEDULE

TAG	MANUFACTURER	MODEL	CFM RANGE	SERVICE	NECK SIZE	FACE SIZE	PRESS. DROP	PATTERN	THROW	STYLE	MAX NC	MATERIAL	REMARKS/ACCESSORIES
A	ANEMOSTAT	HPX-4I	40-120	SUPPLY	6"x6" 6"Φ	24"x24"	0.10"	4-WAY	2'-7'	LAY-IN	20	ALUMINUM	HIGH PERFORMANCE WITH DIFFUSING VANES AND OPPOSED BLADE DAMPER
B	ANEMOSTAT	HPX-4I	125-225	SUPPLY	9"x9" 8"Φ	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	12"x12" 10"Φ	24"x24"	0.06"	4-WAY	3'-9'	LAY-IN	20	ALUMINUM	HIGH PERFORMANCE WITH DIFFUSING VANES AND OPPOSED BLADE DAMPER
D	ANEMOSTAT	6C50	50-495	RETURN/ EXHAUST	12"x12"	14"x14"	0.01"	EGGCRATE	-	SURFACE	20	ALUMINUM	1/2 x 1/2 x 1/2 CORE, OPPOSED BLADE DAMPER
E	ANEMOSTAT	6C50	500-950	RETURN	18"x18"	20"x20"	0.01"	EGGCRATE	-	SURFACE	20	ALUMINUM	1/2 x 1/2 x 1/2 CORE, OPPOSED BLADE DAMPER
F	ANEMOSTAT	6C50L	955-2000	TRANSFER	24"x24"	24"x24"	0.01"	EGGCRATE	-	LAY-IN	20	ALUMINUM	1/2 x 1/2 x 1/2 CORE
G	ANEMOSTAT	X2H	350	SUPPLY	16"x10"	16"x10"	0.01"	2-WAY	5'-9'	SURFACE	20	ALUMINUM	3/4" SPACING DOUBLE DEFLECTION
H	ANEMOSTAT	115L	6500	SUPPLY	40"x48"	40"x48"	0.1"	1-WAY	50'	SURFACE	20	STEEL	1-1/2" SPACING SINGLE DEFLECTION
D/L	--	--	50/500	TRANSFER	20"x18"	22"x20"	0.01"	LOUVER	-	SURFACE	--	STEEL	DOOR LOUVER PROVIDE BY G.C.

NOTES:
1. 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.

B

NOT FOR CONSTRUCTION

PROJECT

PROJECT

N O R T H

KEY PLAN

AREA OF CONSTRUCTION

STERLING
Sterling Environmental Engineering, P.C.

martinrogers
CONSULTING ENGINEERS AND ARCHITECTS
185 N. Pennsylvania Ave, Wilkes-Barre, PA 18701
t.570.826.1000 | f.570.825.0888 | w. www.mrapc.com

ANDERSON DESIGN GROUP
ARCHITECTURE PLANNING INTERIORS
25 WALLKILL AVE ★ MONTGOMERY ★ NY 12549
O. 845. 394-2724 | WWW.ADGARCHITECT.COM CONTACT@ADGARCHITECT.COM

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SCHEDULES

REV	DESCRIPTION	DATE	BY	CK
B	REVISED FOR RFP ADDENDUM 4	8/27/21		
A	ISSUED FOR RFP	7/30/21	BJZ	XX

STATE OF NEW YORK — BRIAN JOSEPH ZEIS — No. 083339 — LICENSED PROFESSIONAL ENGINEER

N.Y. P.E. LICENSE No. 083339

RRT Engineering , LLC
1 Huntington Quadrangle, 3S01 Melville, N.Y. 11747
ph: 631-756-1060 fax: 631-756-1064

	BY	DATE
DRAWN	BJZ	7/30/21
CHECKED		
DESIGNED	BJZ	7/30/21
APPROVED		
APPROVED		

PROJ. No: 499-010 SCALE:

DWG. NO: M-401 B

CAD FILE: N:\2021\21033\MEP\21033 M-401.DWG

SHEET SIZE: D-24x36 REV

ELECTRIC CABINET HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	TYPE	SIZE	KW	MBH	CFM	AMPS	VOLTAGE/PHASE	AREA SERVED	REMARKS
ECH-1	BERKO	CUH135	WALL MOUNTED	26-3/8"H x 35"L x 9-3/4"D	5	17.0	250	7	480V/3Φ	STAIRS 115	1, 2, 3, 4, 5
ECH-2	BERKO	CUH135	WALL MOUNTED	26-3/8"H x 35"L x 9-3/4"D	5	17.0	250	7	480V/3Φ	STAIRS 203	1, 2, 3, 4, 5
ECH-3	BERKO	CUH135	WALL MOUNTED	26-3/8"H x 35"L x 9-3/4"D	5	17.0	250	7	480V/3Φ	AREA 2	1, 2, 3, 4, 5

REMARKS:
1. 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.

B

ELECTRIC UNIT HEATER SCHEDULE

TAG	MANUFACTURER	MODEL	TYPE	SIZE	KW	MBH	CFM	AMPS	VOLTAGE/PHASE	AREA SERVED	REMARKS
EUH-1	BERKO	HUHAA-548	WALL MOUNTED	16"Hx14"Wx8-1/2"D	5	17.0	350	6.0	480V/3Φ	ELECTRICAL 113	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/3Φ	COMPRESSOR ROOM 111	1, 2, 3, 4, 5, 6
EUH-3	BERKO	HUHAA-548	WALL MOUNTED	16"Hx14"Wx8-1/2"D	5	17.0	350	6.0	480V/3Φ	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/3Φ	SPRINKLER ROOM 170	1, 2, 3, 4, 5, 6

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

B

SPLIT-SYSTEM AIR CONDITIONING SCHEDULE

INDOOR UNIT										OUTDOOR CONDENSING UNIT							MOCP	ACCESSORIES / REMARKS
TAG	MAKE	MODEL	AREA SERVED	CFM	COOLING TOT MBH	COOLING E.A.T. DB/WB	COOLING L.A.T. DB/WB	ELEC.	MCA	TAG	MAKE	MODEL	NOM. TONS	MIN. SEER	ELEC.	MCA		
AC-1	MITSUBISHI	PEA-A12AA6	IT CLOSET 210	350	12.0	80/67	55/54	208v/1Φ	1.0	CU-1	MITSUBISHI	PUY-A12NHA6	1.0	14.0	208v/1Φ	13	15	1, 2, 3, 4, 5, 6, 7, 8

ACCESSORIES / REMARKS:
1. UNITS SHALL BE CAPABLE OF OPERATING AT 0°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-21MAA 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 1" MERV 8 FILTER.

EXHAUST FAN SCHEDULE

TAG	AREA SERVED	MANUFACTURER	MODEL	TYPE	DRIVE	CFM	S.P.	RPM	MOTOR HP OR WATTS	ELECTRICAL DATA	SONES	TYPE OF CONTROL	REMARKS/ACCESSORIES
EF-1	ADMIN BUILDING	GREENHECK	GB-141-5	CENTRIF.	BELT	1,475	.75	1,260	1/2	480V/3Φ	10	INTERLOCK WITH RTU-1	1, 2, 3
EF-2	ELECTRIC ROOM	GREENHECK	SQ-90	INLINE	DIRECT	500	.375	1,625	1/6	120V/1Φ	8.0	REVERSE ACTING THERMOSTAT	4, 5, 6, 9, 10, 11, 12, 13
EF-3	AREA 1 (TIPPING)	GREENHECK	RBU-3L 36-60	ROOF	BELT	16,500	0.5	1,181	3.0	460V/3Φ	-	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/3Φ	-	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/3Φ	-	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/3Φ	-	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/3Φ	18.7	REVERSE ACTING THERMOSTAT	1, 2, 3

REMARKS/ACCESSORIES:
1. 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 VARIABLE SPEED VARI-GREEN MOTOR. OPERATES ON AC POWER THAT'S CONVERTED TO DC.
6. SUPPORT UNIT FROM STRUCTURE ABOVE WITH STEEL RODS AND SPRING VIBRATION ISOLATORS.
7. PROVIDE ROOF CURB ADAPTOR.
8. PROVIDE WITH A SPARE SET OF BELTS.
9. PROVIDE WITH INLET AND OUTLET DUCT COLLARS.
10. PROVIDE WITH FACTORY MOUNTED DISCONNECT SWITCH.
11. PROVIDE WITH GRAVITY BACKDRAFT DAMPER.
12. PROVIDE WITH DIAL ON MOTOR CONTROL AND CONTROL WIRE INPUTS.
13. PROVIDE WITH INLET GUARD.

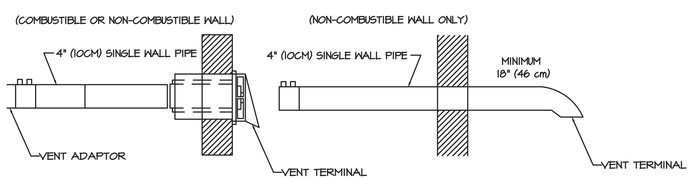
B

LOUVER SCHEDULE

TAG	MAKE	MODEL	CFM	SIZE W x H x D	FREE AREA SQ. FT.	STATIC PRESS.	SERVICE	MATERIAL	REMARKS
L-1	GREENHECK	ESD-603	6,475	48"x48"x6"	8.53	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	108"x60"x6"	24.94	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
L-5	GREENHECK	ESD-603	500	18"x18"x6"	.86	0.1	INTAKE/ EXHAUST	ALUMINUM	DRAINABLE STATIONARY BLADE WITH BIRDSCREEN

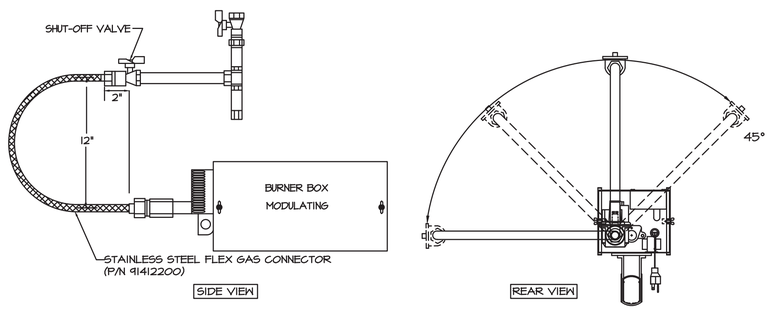
NOTES:
1. LOUVERS SHALL BE CAULKED WEATHERTIGHT ALL AROUND. COORDINATE CAULKING WITH G.C.
2. LOUVERS SHALL BE FURNISHED WITH ALUMINUM BIRDSCREEN.
3. FINISH AND COLOR OF THE LOUVER SHALL BE AS SELECTED BY THE ARCHITECT.
4. PROVIDE LOUVER FLANGE AS REQUIRED.

B



NOTES:
1. REFER TO INSTALLATION, OPERATION AND SERVICE MANUAL FOR PROPER DESIGN.
2. 2. IN COMBUSTIBLE OR NONCOMBUSTIBLE WALLS, USE INSULATED VENT TERMINAL. FOLLOW VENT MANUFACTURER'S INSTRUCTIONS FOR PROPER INSTALLATION.
3. 4" (10 CM) O.D. VENT PIPE, MAXIMUM 45 FT.(13.7M) 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 BE LESS THAN 20' (6M).
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 MUST BE PROTECTED FROM DEGRADATION BY VENT GASES.

1 HORIZONTAL VENTING CONFIGURATIONS (VANTAGE MOD.)
M-402 SCALE: NO SCALE

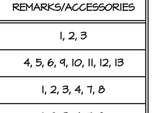


NOTES:
1. GAS PIPE WORK MUST BE INSTALLED AND TESTED IN ACCORDANCE WITH UNITED STATES ANSI Z 223.1/NFPA 54 LATEST ADDITION AND CANADA-CSA-B149.1
2. INSTALL THE FLEX GAS CONNECTOR AS SHOWN. THE FLEX GAS CONNECTOR ACCOMMODATES EXPANSION OF THE HEATING SYSTEM AND ALLOWS FOR EASY INSTALLATION AND SERVICE 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.

2 GAS CONNECTION DETAIL (VANTAGE MOD.)
M-402 SCALE: NO SCALE

NOT FOR CONSTRUCTION

PROJECT



KEY PLAN — AREA OF CONSTRUCTION

STERLING
Sterling Environmental Engineering, P.C.

martinrogers ENGINEERING CONSULTANTS
185 N. Pennsylvania Ave. Wilkes-Barre, PA 18701
t.570.826.1000 | f.570.825.0886 | w. www.mrapc.com

ANDERSON DESIGN GROUP
ARCHITECTURE PLANNING INTERIORS
25 WALLKILL AVE ● MONTGOMERY ● NY 12549
O. 845.394.2724
WWW.ADGARCHITECT.COM
CONTACT@ADGARCHITECT.COM

REV	DESCRIPTION	DATE	BY	CHK
B	REVISED FOR RFP ADDENDUM 4	8/27/21		
A	ISSUED FOR RFP	7/30/21	BJZ	XX

STATE OF NEW YORK — MICHAEL BRITTON SMITH — No. 083339 — LICENSED PROFESSIONAL ENGINEER

N.Y. P.E. LICENSE No. 083339

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RRT Engineering , LLC
1 Huntington Quadrangle, 3S01 Melville, N.Y. 11747
ph: 631-756-1060 fax: 631-756-1064

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

SCHEDULES AND DETAILS

	BY	DATE
DRAWN	BJZ	7/30/21
CHECKED		
DESIGNED	BJZ	7/30/21
APPROVED		
APPROVED		

PROJ. No: 499-010 SCALE:
DWG. NO: M-402 B
CAD FILE: N:\2021\21033\MEP\21033 M-402.DWG
SHEET SIZE: D-24x36 REV

ATTACHMENT 4

APPENDIX D-1, DIVISION OF RESPONSIBILITY

(*Changes are highlighted in yellow*)

DIVISION OF RESPONSIBILITY

Rockland Green MRF Equipment & Facility Improvements
8/30/2021
Rev 8

ID	ITEMS OF WORK	Contract No. 1 Processing Equipment	Contract No. 2 General Construction	Contract No. 3 Mechanical/HVAC	Contract No. 4 Plumbing	Contract No. 5 Electrical	Contract No. 6 Fire Protection Systems	Contract No. 7 Fire Rover	Rockland Green	Operator	Remarks
	Process Equipment System										
	Processing Equipment Supply & Installation	X									
	Compressors & Piping w/ Accessories	X									Ventilation & power drops by Contract No. 4
	Maintenance & Access Platforms & Stairs w/ Guardrails	X									
	Control Panels for Equipment	X									Power drops by Contract No. 3
	Interconnect Wirings from Control Panels to Motors & Devices	X									
	Sort Room Enclosures	X									HVAC and power drops by Contract No. 4
	Coordination with Equipment Fire Sprinkler Contractor	X									
	Start-up, Commissioning & Training	X								X	
	Sitework/Civil										
	Clear, Strip, Soil Erosion Control		X								
	Rough Grade		X								
	Exterior Demolition		**X**								
	Excavation		X								
	Re-grading & Drainage		**X**								
	Paving		X								
	Fencing		X								
	Stormwater Improvements		X								
	Water Line Relocation & Branch Pipe Connection to Area 5		X								
	Gas Service Line & Connection before the Meter								X		With utility company
	Traffic Signage and Stripping		**X**								
	Removal of Existing Oil Tank								X		
	Removal of Existing Fabric Shed & Propane Tank on South Side								X		
	Removal of Existing Diesel Tank								**X**		
	Rework of Existing Landscaped Area		X								
	East Side Retaining Wall		**X**								
	Others/Mics. (NW concrete curb revision, sidewalk, aprons, etc.)		**X**								
	Structural										
	Building Interior Demolition (concrete pushwall, guardrails, etc.)		X								
	Filling Existing Pits		X								
	Building Panels and/or Steel Demolition		X								
	PEMB Column Frame footings - Area 4, 5 & 6		X								
	PEMB Grade Beams - Area 4, 5 & 6		X								
	Concrete Push Wall footings including Glass Bunkers - Area 4 & 5		X								
	Concrete Push Walls including Glass Bunkers - Area 4 & 5		X								
	Pits - Area 1 & 2		X								
	Dock Levelor Pits - Area 6		X								
	Demolition of Existing Docks and Retaining Wall - Area 6		X								
	Demolition of Existing Wall Separating Areas 2 & 6		X								
	Opening for Drum Feeder - Area 1 & 4		X								
	Concrete Pad for Baler - Area 2		X								
	O.H Doors Framing		X								
	Column & Building Reinforcement and Brace Relocations - Areas 1 & 2		X								
	Structural Modifications - Area 3		X								
	Concrete Pad for Proposed Switchboard - Exterior to Area 3		X								
	Concrete Pads for Fire Rover - Exterior		X								
	Trench Drains, Piping & Holding Tank Area 4		**X**								
	Sump for Baler - Area 2		**X**								
	Baler Pad with Steel Embeds		**X**								
	Pre-Engineered Metal Building (PEMB)										
	PEMB Structure - Area 4, 5 & 6		X								
	Anchor Bolts - Area 4, 5 & 6		X								
	Roof/Building Penetrations - Area 4, 5 & 6		X								Framing
	Gutters and Leaders - Area 4, 5 & 6		X								
	Overhead Door Framing - Area 4, 5 & 6		X								
	Personnel Exterior doors - Area 4, 5 & 6		X								
	Rooftop HVAC Units Framing - Area 4 & 5		X								
	Building Structure Grounding - Area 4, 5 & 6		**X**								
	Fire Service Room (Complete) - Area 5		**X**								

DIVISION OF RESPONSIBILITY

Rockland Green MRF Equipment & Facility Improvements
8/30/2021
Rev 8

ID	ITEMS OF WORK	Contract No. 1 Processing Equipment	Contract No. 2 General Construction	Contract No. 3 Mechanical/HVAC	Contract No. 4 Plumbing	Contract No. 5 Electrical	Contract No. 6 Fire Protection Systems	Contract No. 7 Fire Rover	Rockland Green	Operator	Remarks
	Misc. Construction										
	Floor Damage Repair		X								
	Dock Levelors w/ Accessories Supply & Install - Area 6		X								
	O.H. Doors Supply & Install - All Areas		X								
	Demolition of Existing Enviro. Wall & Concrete Pushwall - Area 1 & 2		X								
	Enviro. Wall & Concrete Pushwall - Area 1 & 2		X								
	Enviro. Wall & Concrete Pushwall - Area 4 & 5		X								
	Electrical Disconnect (Make Safe) - All Areas		**X**								
	Bollards - All Areas		**X**								
	Blowdown and Clean - Areas 1 & 2		X								
	Architectural										
	Roof Work - Areas 1 & 2		**X**								
	Roof Work - Area 3		**X**								
	Roof Interface Work between All Adjacent Building		**X**								
	Roof & Building Penetrations - All Areas		X								
	Furniture - Area 3								X	X	
	Office and Vending Equipment - Area 3									X	
	Office Structure and Layout Modifications - Area 3		X								
	Carpentry & Drywall - Area 3		**X**								
	Ceilings - Area 3		**X**								
	Millwork - Area 3		X								
	Doors & Hardware - Area 3		X								Remove & Replace existing doors where applicable
	Finishes (Complete) - Area 3		**X**								
	Restroom Accessories - Area 3		**X**								
	Overhead Doors - All Areas		X								
	Windows - Area 3		X								
	Solarium Windows Modifications As Required next to Compressor Room - Area 3		X								
	Doors & Hardware - Areas 1, 2, 4, 5 & 6		X								Remove & Replace existing doors where applicable
	Facility Safety & Exit Paths (Painting on the Floor)		X								
	Mechanical										
	Replace Existing Fans & Reuse Existing Openings - Area 1 & 2			X							
	MUA & Duct Work to Two Sort Rooms - Area 1 & 2			X							
	Unit Heaters - Area 1 & 2			X							Dependent of equpment layout
	Infrared Heaters - Area 1 & 2			X							Dependent of equpment layout
	Exhaust Fans - Area 3			X							
	Rooftop Unit w/ VAV and Ductwork - Area 3			X							
	Dedicated Cooling for IT Closet - Area 3			**X**							
	Heating & Ventilation (incl. Louvers) for Compressor Room - Area 3			**X**							
	Air Intake & Venting for Water Heater in Mechanical Room - Area 3			**X**							
	Supplement Heaters - Area 3			X							
	Exhaust Fans - Area 4 & 5			X							
	Controls & Balancing - All Areas			**X**							
	Plumbing										
	Sump Discharge System for Baler - Area 2				**X**						
	Water, Sanitary and Vent Piping for Emergency Showers and Eyewash Station Area 2				**X**						
	Water, Sanitary and Vent Piping for all Plumbing Fixtures - Area 3				**X**						
	Floor Drain for Compressor Room - Area 3				**X**						
	Water Heater - Area 3				**X**						
	Gas Distribution Piping & Connections - All Areas				**X**						
	Electrical										
	Interconnect Assessment								X		With utility company
	Electric Service Upgrade					X					
	Transformer - Area 3					X					
	Proposed Switchboard - Exterior to Area 3					X					
	Distribution Switchboards					X					
	Metering								X		
	Power Drops to Processing Equipment					X					Could be by County Electrician; TBD
	Power Drops to Fire Rover Systems					X					30 Amp dedicated single pahse circuit
	Interconnect Wiring for Processing Equipment	X									
	Interconnect Wiring for Mechanical Equipment					X					
	Interior Building Lighting - Areas 1, 2, 4, 5 & 6					**X**					
	Exterior Lighting					**X**					
	Lightning Arrestors/Grounding System - Balance					X					
	Electrical - Area 3					**X**					
	Exit Lights					X					
	Emergency Lights					X					
	Office Electrical (Receptacles, etc)					X					
	IT/Communications & CCTV					X					
	Electrical Connections for Diesel/Oil Tank					X					
	Fire Rover IT Requirements					X					Static IP address and 4G backup router w. fail over

DIVISION OF RESPONSIBILITY

Rockland Green MRF Equipment & Facility Improvements
8/30/2021
Rev 8

ID	ITEMS OF WORK	Contract No. 1 Processing Equipment	Contract No. 2 General Construction	Contract No. 3 Mechanical/HVAC	Contract No. 4 Plumbing	Contract No. 5 Electrical	Contract No. 6 Fire Protection Systems	Contract No. 7 Fire Rover	Rockland Green	Operator	Remarks
	Fire Protection										
	Relocation of Existing Fire Riser Pipes						X				
	Fire Alarm System - All Areas						X				Subject to code review
	Installation of Dry Pipe System under Processing Equipment - Area 1 & 2						X				
	Replacement of Existing Piping Sprinkler Heads under Roof as Required - Area 1 & 2						X				
	Modifications to Existing Wet Pipe System - Area 3						X				
	Dry Pipe System - Area 4, 5, & 6						X				
	Backflow Prevention						X				
	Fire Extinguishers						X				Subject to code review
	Fire Riser Room Equipment & Accessories - Area 5						X				
	Fire Rover										
	Supply and Installation of FireRover Systems							X			
	Anchorage of FireRover Systems							X			
	Electrical Connections of FireRover Systems							X			
	Miscellaneous General Construction										
	Safety Program & Procedures (Construction Period)	X	X	X	X	X	X	X			
	Project Sign								X		Existing signage on-site
	Building Sign										
	Job Site Trailers	X	X	X	X	X	X	X			
	Mirrors									X	
	Spare Parts Storage Shelving									X	
	Lubricants (Oils/Gases)									X	
	Diesel Tank								**X**	**X**	**Relocation TBD by Operator**
	Oil Tank								**X**	**X**	**To be discussed if removing or relocating**
	General										
	System Operations & Maintenance Manuals	X								X	
	Facility Environmental Compliance									X	
	Facility Operations Manuals & Procedures								X		
	Temporary Services Use (Utility, Bathrooms, etc.)								X		
	Temporary Fencing During Construction		X								
	Site Cleanup During Construction	X	X	X	X	X	X	X			
	Supply Roll-off Boxes for Construction Waste								X		
	Hauling & Disposal of Construction Waste								X		
	Safety Program (Operations)									X	

ATTACHMENT 5

APPENDIX O, STATEMENT OF WORK

(*Added language is reflected as bold, underscored text*)

APPENDIX O

STATEMENT OF WORK

Area Designations

Area 1	Existing Tipping Area
Area 2	Existing Processing Area
Area 3	Existing Administration Area
Area 4	New Commingled Tipping Area
Area 5	New Storage & Glass Processing Area
Area 6	New Truck Dock Area

Contract No. 2: Facility Improvements – General Construction (Not In Contract)

Scope of Work will include, but is not limited to:

- Civil/Site work associated with the entire site, including but not limited to:
  - Clear, strip and soil erosion control
  - Rough grade
  - Site demolition
  - Excavation
  - Grading and drainage
  - Northwest concrete curb revisions to allow for additional paved turning area
  - Water line relocation
  - Fire water service connection to Area 5
  - Paving and fencing
  - Retaining wall
  - Landscaping/Hardscaping
  - Stormwater improvements
  - Traffic signage and stripping
- Architectural work associated with all areas, including but not limited to:
  - Interior demolition and buildout in Area 3, including office structure/layout modifications, mill work, doors & hardware, finishes and modifications of one (1) window
  - Pre-Engineered Metal Building (Areas 4-6)
  - Loading dock equipment with accessories in Area 6
  - Overhead doors and personnel doors
  - Roof interface work
  - Roof and insulation repair for Areas 1 and 2
  - Roof replacement for Area 3
  - Cleaning associated with Area 1 and 2
  - Fire service room in Area 5
  - Building grounding for Areas 4-6
- Structural work associated with all areas, including but not limited to:

  - Interior demolition and buildout in Areas 1 and 2, including demolition and modifications of concrete pushwalls, environmental wall, guardrails, building wall panel and/or steel framing
  - Fill existing pits
  - Excavate and construct pits associated with the processing equipment
  - Loading dock pits
  - Overhead and personnel doors framing for all areas
  - Foundations
  - Concrete Bunkers
  - Concrete pads for Fire Rover system and proposed switchboard
  - Pushwall and environmental wall
  - Column and building reinforcing and brace relocations in Area 1 and 2
  - MEP/F roof reinforcements
- Miscellaneous work associated with all areas, including but not limited to:
  - Floor damage repair
  - Bollards
  - Area 3 structural modifications required for the installation of an air compressor system.

Contract No. 3: Facility Improvements – Mechanical/HVAC

Scope of Work will include, but is not limited to:

- Mechanical/HVAC work associated with all areas, including but not limited to:
  - Exhaust fans in all areas.
  - Gas fired and infrared heating for Area 2 and 5
  - Gas fired rooftop unit and associated ductwork to equipment sort rooms in Area 2
  - Gas fired rooftop unit and vav system for Area 3.
  - Dedicated cooling for Area 3 IT closet
  - Heating, and ventilation associated with the air compressor system
  - Louvers associated with the air compressor system
  - Controls associated with all mechanical equipment
  - Combustion air intake and venting for gas fired water heater.

Contract No. 4: Facility Improvements – Plumbing (Not In Contract)

Scope of Work will include, but is not limited to:

- Plumbing work associated with all Areas, including but not limited to:
  - Sump drain for baler in Area 2
  - Floor drain for the compressor room in Area 3
  - Water, sanitary, and vent piping to Area 2 emergency shower and eye wash.
  - Water, sanitary, and vent piping to all Area 3 plumbing fixtures
  - Water heater for Area 3
- Gas distribution piping and connections after the gas meter in all areas

Contract No. 5: Facility Improvements – Electrical (Not In Contract)

Scope of Work will include, but not limited to:

- Electrical service upgrade, transformer and distribution equipment

- Electrical work associated with all Areas, including but not limited to:
    - Grounding
    - All overhead power drops in Areas 1, 2 and 5 to processing equipment
    - Area 3 electrical
    - Power and wiring associated with all OH doors, mechanical equipment, dock equipment, exit lights, emergency lights, fire protection equipment
    - IT/Communications wiring
    - Processing Equipment IT requirements
    - Fire Rover electrical and IT requirements
    - Security Camera system IT requirements
    - Sleeves for operator phone and internet.

Contract No. 6: Facility Improvements – Fire Protection Systems (Not In Contract)

Scope of Work will include, but is not limited to:

- Fire alarm system for all areas.
- Fire alarm control panel located in Area 3
- Fire sprinkler work associated with all areas, including fire sprinklers under equipment platforms
- Backflow prevention application for Area 5 fire water service

Work by Others / N.I.C (Not In Contract)

- Processing equipment supply and installation
- Furnitures, office and vending equipment in Area 3
- Gas service line, meter and connections before the gas meter
- Removal of existing oil tank on-site
- Removal of existing fabric shed and propane tank on-site
- **Removal of existing diesel tank on-site**

ATTACHMENT 6

PRICE PROPOSAL FORM 16

(*Added language is reflected as bold, underscored text*)

CONTRACTOR'S NAME:_____

PROPOSAL FORM 16
PRICE PROPOSAL FORM
REVISION 1 DATED AUGUST 30, 2021

Proposer Name: _____
Address: _____
_____
_____
_____
Contract Person: _____
Email: _____
Phone: _____
Fax: _____
Cell: _____

THE CONTRACTOR SHALL STATE BELOW ITS PROPOSAL PRICE FOR THE CONTRACT SERVICES. ADDITIONALLY, THE CONTRACTOR SHALL STATE THE PROPOSED VALUE, WHICH IS INCLUDED IN THE PROPOSED PRICE, BUT CAN BE ATTRIBUTED TO EACH OF THE FOLLOWING WORK ITEMS. THE WORK ITEM BREAKOUT SHALL BE USED FOR INFORMATIONAL REVIEW OF THE PROPOSALS IN ORDER TO VERIFY COMPLETENESS AND AS THE BASIS FOR SCHEDULE OF VALUES PAYMENT.

BASE PRICING	
WORK ITEM	**$ VALUE**
1. **Civil/Sitework**	
1.1. Clear, Strip and Soil Erosion Control	**N.I.C.**
1.2. Exterior Demolition	**N.I.C.**
1.3. Rough Grade, Excavation and Regrade	**N.I.C.**
1.4. Water Line Modifications and Stormwater Improvements	**N.I.C.**
1.5. Loading Dock Ramp, Retaining Walls and Trench Drain	**N.I.C.**
1.6. Fencing	**N.I.C.**
1.7. Paving	**N.I.C.**
1.8. Landscaping/Hardscaping	**N.I.C.**
1.9. East Side Retaining Wall (along the east fence line)	**N.I.C.**

CONTRACTOR'S NAME:_____

1.10. Signage, Striping	**N.I.C.**
1.11. Others/Misc.	**N.I.C.**
2. **Concrete Work**	
2.1. Foundations Areas 4-6 & Loading Dock	**N.I.C.**
2.2. Slab-on-Grade Areas 4-6	**N.I.C.**
2.3. Pit P1 Construction	**N.I.C.**
2.4. Pit P2 Construction	**N.I.C.**
2.5. Pit P3 Construction	**N.I.C.**
2.6. Pit P4 Construction	**N.I.C.**
2.7. Dock Pits Area 6	**N.I.C.**
2.8. Concrete Bunkers/Pushwall including Footings	**N.I.C.**
2.9. Four (4) Existing Pits Fill / Partial Fill & Integration with New Pits	**N.I.C.**
2.10. Exterior Concrete Pads for Fire Rover Containers and Switchboard	**N.I.C.**
2.11. Trench Drains, Piping & Holding Tank Area 4	**N.I.C.**
2.12. Sump & Piping Area 2	**N.I.C.**
2.13. Others/Misc.	**N.I.C.**
3. **Demolition and Buildout Areas 1 and 2**	
3.1. Demolition of Concrete Pushwalls and Environmental Wall	**N.I.C.**
3.2. Demolition of Guardrails, Building Wall Panel and/or Steel Framing and Canopies	**N.I.C.**
3.3. Overhead Doors and Personnel Doors Framing	**N.I.C.**
3.4. Column and Building Reinforcing and Brace Relocations	**N.I.C.**
4. **Demolition, Buildout & Reconstruct Area 3**	
4.1. Demolition of Interior Walls, Ceilings, Finishes & Fixtures	**N.I.C.**
4.2. Structural Modifications & Wall Openings	**N.I.C.**
4.3. Carpentry & Drywall	**N.I.C.**
4.4. Ceilings	**N.I.C.**

CONTRACTOR'S NAME:_____

4.5. Millwork	**N.I.C.**
4.6. Interior Doors & Windows	**N.I.C.**
4.7. Finishes (complete)	**N.I.C.**
4.8. Restroom Accessories	**N.I.C.**
4.9. Misc/Other (including entrance canopy)	**N.I.C.**
5. **PEMB and Associated Work Areas 4 – 6** **5.1. PEMB Addition** (Proposer to choose its proposed method approach and insert the pricing for the method chosen. Proposer to indicate "N/A" for the method not chosen.)	
Method 1: PEMB Addition Framed into the Existing Column Line 1	
a. Engineering, Design, Fabrication and Delivery of PEMB	**N.I.C.**
b. Erection of PEMB	**N.I.C.**
Method 2: Stand-alone PEMB addition Self-Supported	
a. Engineering, Design, Fabrication and Delivery of PEMB	**N.I.C.**
b. Erection of PEMB	**N.I.C.**
5.2. Building Structure Grounding	**N.I.C.**
5.3. Fire Service Room in Area 5 (complete)	**N.I.C.**
5.4. Gutters & Leaders	**N.I.C.**
6. **Roof Work**	
6.1. Metal Roof Recoat/Repair and Repair/Replacement of Damaged Roof Insulation Areas 1 and 2	**N.I.C.**
6.2. Roof and Insulation Full Replacement Area 3	**N.I.C.**
6.3. Roof Reinforcement for MEP/F as needed	**N.I.C.**
6.4. Roof Interface Work between Area 2 &3 and between Areas 1 &2 and the new PEMB addition for Areas 4-6	**N.I.C.**
7. **Loading Dock Equipment (complete)**	**N.I.C.**
8. **Overhead Doors**	

CONTRACTOR'S NAME:_____

8.1. Structural Framing (as required)	**N.I.C.**
8.2. Overhead Doors (complete)	**N.I.C.**
9. **Personnel Doors and Hardware (complete) including Breakroom North Door & All other Doors to the Exterior**	**N.I.C.**
10. **Miscellaneous Construction**	
10.1. Environmental Wall – Insulated Metal Panel between Areas 1 &2 and between Areas 5 &6	**N.I.C.**
10.2. Bollards	**N.I.C.**
10.3. Floor Damage Repairs (Area 2)	**N.I.C.**
10.4. Electrical Disconnect (Make Safe) for Demo	**N.I.C.**
10.5. Cleaning / Blowdown of Areas 1 & 2 (Walls & Roof Underside)	**N.I.C.**
10.6. Allowance for providing waste disposal containers & hauling to Rockland Green's Transfer Station for waste generated from Contract Nos. 3-6	**N.I.C.**
11. **General Conditions & Insurance – Contract 2**	**N.I.C.**
12. **Bonds – Contract 2**	**N.I.C.**
13. **Mechanical/HVAC**	
13.1. Exhaust Fans All Areas	
13.2. Gas-fired and Infrared Heating Areas 2 and 5	
13.3. Gas-fired Rooftop Unit and Ductwork to Two (2) Equipment Sort Rooms Area 2	
13.4. Ductwork Area 3	
13.5. Gas-fired Rooftop Unit and VAV system Area 3	
13.6. Dedicated Cooling for IT Closet Area 3	
13.7. Heating and Ventilation (including Louvers) for Compressor Room Area 3	
13.8. Air Intake and Venting for Gas-fired Water Heater for Mechanical Room Area 3	
13.9. Controls for All Mechanical Equipment	
13.10. Balancing for All Mechanical Equipment	
14. **General Conditions & Insurance – Contract 3**	

CONTRACTOR'S NAME:_____

15. **Bonds – Contract 3**	
16. **Plumbing**	
16.1. Sump Discharge System for Baler Area 2	**N.I.C.**
16.2. Water, Sanitary and Vent Piping for Emergency Showers and Eyewash Stations Area 2	**N.I.C.**
16.3. Water, Sanitary and Vent Piping for all Plumbing Fixtures Area 3	**N.I.C.**
16.4. Floor Drain for Compressor Room Area 3	**N.I.C.**
16.5. Water Heater Area 3	**N.I.C.**
16.6. Gas Distribution Piping & Connections All Areas	**N.I.C.**
17. **General Conditions & Insurance – Contract 4**	**N.I.C.**
18. **Bonds – Contract 4**	**N.I.C.**
19. **Electrical**	
19.1. Service Upgrade	**N.I.C.**
19.2. Electrical System Grounding	**N.I.C.**
19.3. Power Drops for Contract No. 1 to Areas 2, 5 and Compressor Room	**N.I.C.**
19.4. Area 3 Electrical	**N.I.C.**
19.5. Areas 1,2,4,5 & 6 Interior Lighting	**N.I.C.**
19.6. Miscellaneous Power and Wiring for all OH Doors, Mechanical Equipment, Dock Equipment, Exit Lights, Emergency Lights, Task & Supplemental Lights & Fire Protection Equipment	**N.I.C.**
19.7. Exterior Lighting	**N.I.C.**
19.8. IT/Communications for Processing Equipment, Fire Rover Units, Security Camera System and Sleeves for Operator Phone and Internet	**N.I.C.**
20. **General Conditions & Insurance – Contract 5**	**N.I.C.**
21. **Bonds – Contract 5**	**N.I.C.**
22. **Fire Protection Systems**	
22.1. Fire Alarm Systems All Areas	**N.I.C.**
22.2. Fire Alarm Panel Area 3	**N.I.C.**
22.3. Fire Sprinkler Systems All Areas including Fire Sprinklers Under Processing Equipment Platforms	**N.I.C.**
22.4. Backflow Prevention Fire Water Service Area 5	**N.I.C.**

CONTRACTOR'S NAME:_____

23. **General Conditions & Insurance – Contract 6**	**N.I.C.**
24. **Bonds – Contract 6**	**N.I.C.**
TOTAL PROPOSED PRICE:	$
WRITTEN IN WORDS:	

ALTERNATE PRICING	**$ VALUE**
25. ALTERNATE 1: Area 1 and 2 Roof Work: Full removal and replacement for metal roof and roof insulation	**N.I.C.**
26. ALTERNATE 2: Environmental Wall between Areas 1&2 and between Areas 4&5 supplied and constructed as an insulated PEMB wall partition instead of IMP wall panels	**N.I.C.**
27. ALTERNATE 3: Extend the East Side Retaining Wall (along the east fence line) the additional length plus the additional paving. Insert here the net additional price to Item 1.9 for this additional Work.	**N.I.C.**
28. ALTERNATE 4: For Area 1, in lieu of removing only portions of the existing concrete floor for replacement, provide the net additional price to remove the entire floor area and replace with a new floor with the same specifications of new floor for Area 4.	**N.I.C.**
29. ALTERNATE 5: Complete removal and replacement of existing metal roof and insulation for Areas 1&2 with same specifications for Areas 4-6.	**N.I.C.**
30. ALTERNATE 6: Deduct scope for ductwork from Two (2) RTUs to the Two (2) Sort Rooms. Revise the two (2) RTUs for heating and ventilating only with ductwork to a diffuser directly below the roof.	
31. **ALTERNATE 7: For Women's Toilet 104, Men's Toilet 107, and Toilet Room 114, provide 2-part epoxy floor in lieu of porcelain tiles. Epoxy shall extend four (4) feet AFF on the walls.**	**N.I.C.**

CONTRACTOR'S NAME:_____

VOLUNTARY ALTERNATE PRICING (Identify) Contractors are encouraged (but are not required) to offer any beneficial Voluntary Alternates for review and consideration by Rockland Green and its Engineer's. Provide detailed description for each, attach additional sheets as needed.	**VALUE**
32.	
33.	
34.	

NOTES:

1. Work Item Values **shall not** include disposal fees at the Rockland Green facilities for waste or for concrete recycling.
2. Price to assume no presence of lead, mold or asbestos in Area 3. Any associated removal costs are not to be included in the price.

UNIT PRICING & SUPPLEMENTAL REQUIRED INFORMATION

No unit pricing is required for this RFP.

_____ _____

Authorized Signature Date

_____

Name & Title