



# New England Air Systems

**Complete Mechanical Systems & Service**



January 27, 2021

Mr. Josh Arneson  
*Town Manager*  
Town of Richmond  
P.O. Box 285  
Richmond, VT 05477

Re: *Richmond Free Library  
Mechanical Design-Build Proposal (Revised)*

Dear Mr. Arneson,

New England Air Systems is pleased to provide this proposal to you for a new heating system for the Library. This proposal – originally submitted to John Johnston and the Bread Loaf Corporation on July 14, 2020 – is revised to reflect changes requested by the Town. This proposal supersedes our previous proposals submitted to both Bread Loaf Corporation and the Town of Richmond.

## **Scope of Work**

New England Air Systems will provide the following mechanical-HVAC design build system for the Library Stack area.

1. Design. Provide design-build installation drawings for the central system including equipment schedule. Drawings will require a field visit for existing conditions discovery (discovery is completed). Design drawings are stamped by our on-staff professional engineer licensed by the State of Vermont.
2. Heating and Cooling Unit (#F-1 and A/C-1).
  - a. Provide (1) gas-fired furnace based on Carrier 59MN Infinity+97 modulating and condensing furnace. The nominal 80/32MBH input unit is Energy Star ver.4.0 compliant with a variable speed blower and modulating gas heating valve. The gas-fired burner is considered second stage heating based on heat pump operating as first stage.
  - b. Provide (1) electric heat pump split system air conditioning unit based on Carrier 25VNA-series heat pump and matched CSPH-series R-410A D/X coil. The nominal 4.0-ton unit is variable speed based on Carrier's "Greenspeed Intelligence". The heat pump is located on the north side of the building and is mounted on a precast concrete pad.
  - c. The system includes (1) Carrier *Infinity System Control* 7-day programmable Wi-Fi thermostat and new shielded cabling between the thermostat and the A/C – furnace system.
  - d. Filtration. We will provide a shop-fabricated filtration rack mounted in the return is ductwork. Filters are 2" thick, MERV13 rated
  - e. Electrical: The heat pump is rated for 208V-1Phase operation; the furnace is 120Volt-1Phase.
3. Ventilation.
  - a. Provide (1) dedicated energy recovery unit based on Carrier ERVCRL-series indoor unit.

- b. The nominal 195CFM unit is a static plate style ERV with ductwork connections for outside air intake and exhaust air discharge through the exterior wall. The exterior ductwork penetrates the building's rim joists and is exposed on the north wall terminating at 42" above the grade.
  - c. The unit is ducted to the return air ductwork side of the furnace for ventilation requirements. Controls are interlocked with each furnace unit (120v-1Phase operation).
4. UV-C Lighting. Provide Carrier #UVL-CC-2LP ultraviolet lamp assembly. The double lamp fixture is mounted in the supply ductwork before the cooling coil.
5. Furnace Venting. Combustion air and exhaust for the furnace system (3" diameter each) is through the existing boarded-up basement window. We will replace the board with an insulated panel and penetrate the panel. Ductwork is exposed on the north wall terminating at 42" above the grade.
6. Sheet Metal Distribution. Provide galvanized sheet metal supply and return air ductwork in the basement with floor grilles distributed along the perimeter wall of the Stacks area. Ductwork has acoustical lining at specific areas to reduce noise transmission.
7. Floor Grilles. Provide Price #LBMH-series heavy duty mandrel linear bar grilles for the floor-mounted registers and grilles. The supply and return air grilles are extruded aluminum pencil-proof flanged registers with a 15° discharge pattern. The finish is aluminum powder coat.

*Note: Due to the engineered floor framing of the Stacks area and congested basement ceiling areas, the return air grilles are located along the south wall of the building, are oversized to reduce noise transmission, and are parallel to the floor joist to eliminate the need for additional framing.*

8. Hydronic Modifications. The existing boiler system and distribution will remain. Modifications are limited to the following:
  - a. The existing radiant floor system in the Stacks area will be isolated, drained, cut-off from the central boiler system and abandoned in place.
  - b. The control panel in the mechanical room will be relocated to the north side of the mechanical room to permit installation of the new furnace and ERV unit.
  - c. The zone piping and pump assembly in the mechanical room will remain in place. Modifications to reflect removal of the radiant floor system and associated zone piping and pump.
  - d. Existing finned tube radiation and controls in the 1<sup>st</sup> floor, south side Computer Office to remain. We will extend this hot water loop in the adjoining office and vestibule currently served by the radiant floor and provide a section of finned tube radiation with continuous cover in the office and a surface-mounted fan-forced cabinet heater for the vestibule.

*Note: Control for the expanded areas are subject to the existing thermostat in the Computer Office. The new radiation will not have separate control and the cabinet heater fan will operate from a unit-mounted aquastat. Modifications to this revision available as an additional cost.*

9. Plumbing.
  - a. Provide a new dedicated gas pipe for the furnace system. Piping connects to existing gas main outside and does not connect to the piping serving the upper floor mechanical room. Piping is painted per Vermont Gas standards and labeled.
  - b. Provide (1) new sump pump in the existing sump pit in the mechanical room. Based on Zoeller-series pump, the pump includes copper vertical piping with isolation and check valve. The pump is piped to the exterior wall with a single wall exit for connection at the exterior of the building. Pump includes start/stop float and Zoller's "A-Pak" surface water Wi-Fi alarm.



- c. Existing elevator sump pit pump to remain. We will correct the discharge piping to connect it to the mechanical room sump pump discharge and provide (1) Zoller's "A-Pak" surface water Wi-Fi alarm for this pump area.
10. Electrical Work. We have included Cummings Electrical, Inc. as our electrical subcontractor. Work includes electrical for the furnace, heat pump, new lighting in the mechanical room, and receptacle relocation in the mechanical room (\$6,950.00).
  11. Additional scope of work and HVAC system items included.
    - a. Ductwork fiberglass insulation and labels.
    - b. Test and Balance subcontractor (air side).
    - c. System check, start, and functional testing with NEAIR staff. Written reports are included. Formal Cx documentation is not included.
    - d. Thermostat programming and two (2) hours of Owner system operating instruction.
    - e. Trade permits where applicable.
    - f. Submittals, record drawings and O&M Manuals.
    - g. Standard 12-month workmanship, material, and equipment warranty. System and factory maintenance requirements are excluded (available as an additional cost).

### **Understandings and Exclusions**

This proposal includes the following understandings and exclusions.

1. Proposal is based on normal working hours (M-F, 7:00AM – 3:30PM). Off-shift work is considered an additional service and will be quoted upon request.
2. The existing electrical system is sufficient for the new work; the service will not be upgraded.
3. Toilet exhaust systems to remain; no work required.
4. Project-specific items excluded include (standard exclusions also attached):
  - a. New heating or cooling system for the south-side, first floor office areas without exception.
  - b. Basement-level hydronic unit heater, pump, and control to remain, no work.
  - c. Basement-level dehumidification unit.
  - d. Costs associated with replacement of the gas regulator or meter (if required).
  - e. Work associated with the waterproofing, grading, vapor barriers, etc. for the basement-level areas.
  - f. Foundation stone core drilling, removal, and/or patching.
  - g. General construction requirements.
  - h. Fire Protection work.
  - i. Cut, patch, paint (interior and exterior walls, ceilings, roof, etc.) including floor cutting for the registers and grilles. *Note: Cutting and patching required for the project provided by a subcontractor of the Owner's choice (i.e. Bread Loaf Corporation) under direct contract with the Owner. We will coordinate with the contractor for floor opening locations.*

### **Project Schedule**

Based on current manpower schedules, we are prepared to begin the field work in late spring/summer of 2021 after the heating season has passed. Material and equipment delivery delays due to manufacturing impacts are out of our control therefore a timely release of this contract is recommended.

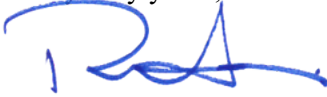


**Proposal Cost**

**Our lump sum cost for this work is \$82,800.00 excluding taxes and bonds.** Invoicing is based on progress of work completed; payment in 30 days. Final payment including retained costs is net 30 days from date of final invoice. We are prepared to begin within two weeks after receipt of this signed agreement (see below).

New England Air Systems is pleased to have the opportunity to provide this proposal to you. Please do not hesitate to call if you have any questions or would like to review this proposal.

Very truly yours,



Robert J. Favali  
Executive Vice President

*(Proposal Reference Number: O-1515-21)*

**Authorization and Notice to Proceed.**

If this proposal and terms of payment are acceptable, please sign, date, and return a copy of this agreement to my attention. New England Air Systems is authorized to proceed with the work.

\_\_\_\_\_  
Acceptance of Proposal

\_\_\_\_\_  
Date



### GENERAL EXCLUSIONS FROM SCOPE OF WORK

1. Any and all costs, expenses, fees, or damages arising from delays beyond the control of NEAS, LLC.
2. Asbestos identification and removal and/or other means of abatement, including without limitation lead, mercury, oil and other hazardous wastes, hazardous materials surveys, and abatement action programs.
3. Architectural access panels and/or doors.
4. AutoCAD coordination and/or record drawings, B.I.M. or other means of 3-D modeling and/or background and per drawing fees assigned by the A/E team.
5. Breakout costs if provided, are for accounting purposes only and will not be considered final pricing for separate contracts or considered as stand-alone bid values.
6. Bonds.
7. Building Sanitary and Rain Leader/Storm Drain piping beyond 5-feet outside of building foundation including connections to site piping, manholes, troughs, drywells, or other devices.
8. Ceiling removal and/or replacement including without limitations replacement tiles or grid systems, ceiling patching or painting.
9. Commissioning including 3<sup>rd</sup> party commissioning costs and/or commissioning assistance.
10. Concrete pads (interior or exterior), inertia base fill and/or thrust blocks, pour stops, and concrete or masonry infill of floors, walls or roof openings; concrete or masonry saw cutting, breakout, disposal and/or patching.
11. Core drilling larger than 8" in diameter.
12. Cutting & Patching & Painting in conjunction with structural components, MEP systems, walls, floors, and finished surfaces.
13. Duct cleaning and/or IAQ management services including temporary services.
14. Duct leak testing and/or independent agency witness fees and verification reports.
15. Duct-mounted smoke detectors.
16. Dumpsters.
17. Electrical including without limitation furnishing starters and/or disconnects and whips, VFD's, speed controllers and replacement motors not integral to HVAC or plumbing equipment and/or lighting controls (unless specifically assigned to the temperature controls scope of work and included in our costs).
18. Excavation backfill and compaction; rock, boulder or ledge blasting or removal, shoring, trenching, or hand digging for buried piping and/or dewatering of the same.
19. Domestic water, storm, and sanitary piping connections to site systems. Fire line piping stub outs up to 5-feet outside of building footprint.
20. Fire Alarm including duct-mounted smoke detectors.
21. Filter replacements, temporary filter media, IAQ management and/or mold remediation programs, final duct cleaning in conjunction with Construction Management project delivery and provisions for the same as they relate to pre-purchased equipment, terminal HVAC units, fixtures and/or devices furnished by others.
22. Handling or setting of equipment furnished or pre-purchased by others.
23. Heat tracing (furnish, install, and power/controls).
24. Insurance coverage beyond our standard coverage.
25. Kitchen hoods and/or suppression systems including without limitation any skirting, hanger/support systems for hoods furnished by others, remote bottles and/or solenoid valves.
26. Life safety systems including without limitation fire sprinkler systems, fire suppression systems, smoke detectors, carbon monoxide detectors, radon and/or refrigerant detection systems.
27. Maintenance services and/or preventative maintenance agreements for equipment, fixtures, and devices pre-purchased or furnished by others.
28. Manpower for this project was based on the preliminary construction schedule provided at bid time. We reserve the right to review and price any major changes to this schedule or any project phasing that occurs once under contract. NEAS will not be held liable for any additional expenses derived from project phasing not previously agreed upon, hastened schedules due to other trades, or project delays outside of our control.
29. Overtime, off-shift, weekends and/or holiday work hours.
30. Painting including prime and touch up.
31. Permitting or fees related to land use, zoning, subdivision or other codes, laws, statutes, ordinances, or other regulations, except to the extent compliance is a condition of licensure in the trades performed by NEAS, LLC.
32. Pre-cast catch basins and grates and piping terminations.
33. Natural gas high pressure piping, regulators, and meters. LP (Propane) tank, high pressure piping (above or underground), regulators and meters.
34. Roof curb flashing, blocking, leveling, & insulating.
35. Roof flashing for penetrations.



36. Roof perimeter or fall barriers, safety railings, and/ or flagging.
37. Rainwater boots, exterior storm lateral connections and/or roof drain sump pans.
38. Site or civil work.
39. Sound and/or vibration tests, surveys, and reports.
40. Startup of equipment, terminal units, fixtures and/or devices pre-purchased or furnished by others.
41. Steel for mechanical openings (including structural steel lintels), structural steel equipment supports and roof framing including without limitation any and all engineering surveys, stamping requirements or engineering fees associated with structural components (interior or exterior locations).
42. Submittal review of pre-purchased or furnished by others equipment, terminal units, fixtures and/or devices.
43. Storage and staging of equipment, terminal units, fixtures and/or devices pre-purchased or furnished by others.
44. Temporary HVAC and plumbing systems or services.
45. Toilet accessories and wood blocking including furnish and/or installation.
46. Undercutting of doors or door penetrations for door ventilation grilles.
47. Utility metering (gas, water, steam, etc.)
48. Warranties on equipment, fixtures, and devices pre-purchased, pre-existing, or furnished by others.
49. SDS Sheets - hard copies are excluded, we provide in thumb drive only.

**New Customers:** New customers are required to complete our New Customer Application for credit approval prior to commencing the work.

**Credit Card Payments:** Credit Card payments are assessed a 3% service charge for existing customers. Subject to prior approval for payments, COD and others are assessed a 7% service charge. Maximum permitted value for credit card payment: \$5,000.00 including taxes and fees.

