Richmond Town Hall Feasibility Study
Outline Specification August 1, 2023

DIVISION 01 - GENERAL:

Allowances:

- Construction Contingency:
- Design Contingency:
- Inflation: X% per year
- Furniture: By Owner
- Air Sealing & Envelope Assessment: ***Total Allowance $50,000***
    - $10,000 for 3rd party testing (including blower door/smoke testing/infrared scanning, schematic planning assessment, and limited CA coordination). Allowance does not include cost of air sealing at windows
    - Ground level Post Office - $10,000
    - Basement Historic Building - $10,000
    - First Floor Historic Building - $10,000
    - Second Floor Historic Building- $10,000
    - Does not include envelope upgrades described for indepth on drawing set at historic and post office buildings
- Elevator: Relocate EMR only
- Sprinkler System – Provide cost to install new NFPA 13 compliant sprinkler system. Sprinkler system shall provide coverage to Historic Building basement, first floor, and second floor, and post office. Provide dry system in attic of historic building

DIVISION 02 – EXISTING CONDITIONS:

Demolition:

- Site Demolition: See Drawings and narratives provided by WHLA and Engineering Ventures for scope definition
- See architectural demo plans for general notes & scope of demolition
- See mechanical & electrical narratives for scope of building system demolition

DIVISION 03 - CONCRETE:

Foundation:

- Historic Building:
    - New 12” concrete foundation wall at stairwell and infilled portion of historic stone wall where basement is proposed to access the basement level
    - Historic stone wall to remain
- Post Office:
    - Existing CMU foundation walls to remain at post office (typical of 2 at each side of pipe trench)

Slabs on Grade:

- Historic Building:
    - Slab infill with vapor barrier at north-east corner where existing EMR/Elevator entrance is. See basement plan for location of slab infill and assembly information for description
    - Slab cutting as needed for floor relief valves. Refer to structural notes for additional information
    - Slab on grade at bottom level on new stairwell
- Post Office
    - See architectural plan – 2” topping slab at southernmost bay to bring above minimum offset above BFE
    - Slab on grade infill at locations of pipe trench. See architectural floor plan and sections for locations and assembly information

Slabs above Grade:

- Stairwell Addition: Metal pan stair with concrete

DIVISION 04 - MASONRY:

Brick/Block:

- Historic Building
    - Brick veneer: Refer to elevations for scope of repointing
    - Refer to AD-01 for wall vents to be removed and infilled
    - Refer to wall assemblies for additional minimal scope of infilling at old window openings located at stairwell addition
- Post Office
    - Remove existing brick veneer
    - Patching CMU foundation wall at post office exterior wall of pipe trench. Assume about 10% replacement
    - CMU interior walls at Post Office only

DIVISION 05 - METALS:

Steel Framing System:

- Post Office:
    - Coordination steel framing replacement at post office as needed
- Historic Building:
    - Remove existing pipe columns at north-west corner of building on ground level. Add steel header and columns at header ends as noted on plan
- Stairwell Addition:
    - Free standing steel structure at stairwell

Metal Studs: Refer to partition types for locations of metal stud framed walls

Metal Stairs/Railings:

- Stairwell Addition: Metal pan stairs, metal channel stringers, metal railing with wire mesh guardrail, metal pipe handrails
- Existing wood stairs to remain

Miscellaneous/Fasteners:

- Historic Building: NA
- Post Office\
    - Misc. lintels at door openings in CMU walls
- Stairwell Addition
    - Misc. at metal stairwell

DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES:

Exterior Walls & Sheathing: Existing to remain at historic building

Floor Construction:

- Historic Building:
    - Wood framing infill @ area denoted on floor plans. See
    - Wood Flooring to be restored. Existing carpeting covering wood flooring. See finish schedules for flooring for additional information. At areas where existing wood flooring will be left exposed, provide 10% allowance for replacement vs. restoration
- Post Office: Not applicable
- Stairwell Addition: not applicable

Ceiling & Roof Construction:

- Historic Building:
    - Tin ceilings: restore and new to match, painted. Refer to finish schedules
    - T&G Wood ceiling at entry porches. Assume 100% replacement at front portico and Post Office Portico

    - Existing roof sheathing to remain
- Post Office:
    - Coordinate with Structural
- Stairwell Addition:
    - Wood framing at roof, and wood sheathing

Trim:

- Historic Building:
    - Interior: Wood – See window elevation for typical restoration/replacement scope
    - Exterior: restore wood soffit, restore fluted wood corbels. Paint. See photo for scope definition
- Post Office:
    - Not applicable
- Stairwell Addition
    - Wood Trim at windows

Exterior Siding:

- Historic Building: Not Applicable
- Post Office: Mix of Metal/Wood Siding (50%/50%)
- Stairwell Addition:
    - Mix of Metal wood siding (50%/50%)

Finish Carpentry

- Historic Building:
    - Wood Base – existing restored, new to match
    - Wood chair rail at exterior walls – existing restored, new to match
    - Wood railing in central stairwell – restore

Architectural Wood Cabinetry:

- Reference floor plans and notes for casework descriptions.
- Typical cabinetry dimensions and finishes, unless noted otherwise:
    - Countertops - 25” deep solid surface with tile backsplash
    - Base cabinets – melamine-clad wood cabinets with adjustable shelving

DIVISION 07 - THERMAL & MOISTURE PROTECTION:

Foundation Waterproofing:

- Historic Building:
    - Provide fluid applied foundation waterproofing on exterior. Refer to civil notes for excavation at perimeter
- Stairwell Addition: Fluid Applied
- Post Office: Fluid Applied on face of CMU foundation wall

Foundation Drainage:

- Adding foundation drainage at west elevation of historic building. Refer to civil drawings for additional information

Insulation: Refer to wall sections and wall assemblies for additional information

Acoustical Insulation: Refer to partition schedule for additional information

Roofing: Refer to roof assemblies for additional information

Flashing: Metal stepped flashing at membrane roof

DIVISION 8 - OPENINGS:

Doors/Frames: See door schedule for additional information

Hardware: All doors to receive new hardware

Windows/Glazing: Refer to Pella information for basis of design and architectural drawings for sizes, elevations, coutns, etc.

Storefront: Basis of design Kawneer Trifab 451-UT or equali w/Low-E insulated glazing. See wall schedule for additional information

Overhead/Coiling: See Door Schedule and plans for location/sizes

DIVISION 9 - FINISHES:

Interior: Refer to finish schedules for additional information. Schedules have been broken up by location (floors, ceilings, walls)

DIVISION 10 - SPECIALTIES:

Chalk/Marker/Tack:

Signage: Interior signage assume high pressure plastic laminate interior signage at each door, with raised lettering and braille indicating room name and number. Pictograms at bathrooms

Lockers: Limited at Police locker rooms – see plans for counts

Locker Benches: Limited at police locker rooms – see plans for counts

Fire Extinguishers: Assume (4) new semi recessed fire cabinets

Toilet Accessories:

- Single stall toilets w/ sinks -

1. 24"x36" mirror bottom mounted 6" above rim of sink – contractor provided and installed
2. Soap dispenser mounted at 44" AFF – owner provided, contractor installed
3. Paper towel holder mounted at 44" AFF – owner provided, contractor installed
4. Toilet paper dispensers mounted at 19" AFF – owner provided, contractor installed
5. Grab bars, (1) 36", (1) 42" mounted at 36" AFF (if HC accessible) – contractor provided and installed

DIVISION 11 - EQUIPMENT: Owner furnished

DIVISION 12 - FURNISHINGS:

Window Treatments: For each window, carry perforated PVC-coated roller shade, 3-5% openness with manual operation and geared clutch.

DIVISION 13 - SPECIAL CONSTRUCTION:

Solar components: See electrical narrative for scope

DIVISION 14 - CONVEYING EQUIPMENT:

Elevators: Coordinate – existing hydraulic elevator.

- Remove EMR and relocated to upper floor
- Existing hoistway to remain., demo two walls and enlarge hoistway Provide new traction elevator

DIVISION 22 - PLUMBING: See narrative from Dubois and King for additional information

DIVISION 23 – HEATING, VENTILATING, AND AIR CONDITIONING (HVAC): See narrative from Dubois and King for additional information

DIVISION 26 - ELECTRICAL: See narrative from Dubois & king for additional information

DIVISION 31 - EARTHWORK: See narrative from WLHA and Engineering Ventures for additional information

DIVISION 32 – EXTERIOR IMPROVEMENTS: See narrative from WLHA and Engineering Ventures for additional information

DIVISION 33 – UTILITIES: See narrative from WLHA and Engineering Ventures for additional information

Richmond Town Center

Mechanical, Electrical, and Plumbing

Schematic Design Narrative

General Information

The project involves renovation of the existing town center and Post Office. The project will be a renovation of the ground floor and level 2 of the existing town offices. The Post office will have limited work. Existing MEP systems will be relocated to a new mechanical room on the corner of the Post Office space. MEP services are being relocated to bring them out of the flood plain. Architectural services are provided by Black River Design. D&K is providing MEP services for Black River Design. This narrative covers Mechanical, Electrical, and Plumbing systems.

Codes and Standards

- Vermont Fire and Building Safety Code - 2015
- Uniform Fire - NFPA 1-2015
- Life Safety - NFPA 101-2015
- Energy Efficiency - VT Commercial Building Energy Standard (CBES)-2020
- Energy Standard – ASHRAE 90.1-2016
- Ventilation Standard - ASHRAE 62.1-2016
- Plumbing Code IPC 2021 with VT Plumbing Rules 2021
- National Electrical Code – NFPA 70-2020
- International Building Code – 2015

Mechanical

DEMOLITION

1. Remove existing indoor air handlers, ductwork and diffusers
2. Remove existing remote condensing units and refrigeration piping
3. Remove existing roof top unit (Post Office)
4. Remove existing boilers, pumps and hydronic piping and accessories.
5. Remove existing controls and wiring

PORPOSED

1. Provide an HVRF system to provide heating and cooling in all areas (unless noted otherwise).
    a. HVRF system (Hybrid Variable Refrigeration System) is a combination refrigeration based system and hydronic system.
    b. Refrigeration piping is installed from outdoor heat pump to a heat exchanger/branch box within the building
        - One heat exchanger/branch box per floor (two total for the project)
    c. From the branch box to the terminal devices flexible piping is installed

- Piping carries either heated or cooled water.
- One run of supply and return piping per terminal unit.
    - Piping is Rehua RAUTITAN multilayer piping.

2. Proposed system zoning:
    a. Zone 1 – Select Board Meeting room
        - Estimated – 2.5 Tons
    b. Zone 2 – Town Manager, Assistant Manager, Business Manager
        - Estimated – 1.5 Tons
    c. Zone 3 – Zoning, Office, work room
        - Estimated – 2.5 Tons
    d. Zone 4 – Town Clerk/Listors
        - Estimated – 2.5 Tons
    e. Zone 6 – Common space/Stairs
        - Heat only
        - Electric cabinet heater
    f. Zone 7 – New Stair (Addition)
        - Electric cabinet heater
    g. Zone 8 – Corridor/Vestibule (Between Town offices and Post Office)
        - Electric cabinet heater
    h. Zone 9 – Tenant/Common Area
        - Estimated – 2.5 tons
    i. Zone 10 – Senior Center, Historical Society, break room.
        - Estimated – 1.5 tons
    j. Zone 11 – Conference room 111
        - Estimated – 1 Ton
        - They space would have a one to one cold climate heat pump
        - Indoor unit would be wall mounted
        - Outdoor unit would be located on the flat post office roof.
    k. Zone 12 - Police station NW
        - Estimated – 2.5 ton
    l. Zone 13 – Police Station NE
        - Estimated – 2.5 Ton
    m. Zone 14 – Post office NE (lobby and counter)
        - Estimated - 6 Ton
    n. Zone 15 – Post office SW (Warehouse Area)
        - Estimated – 4 Ton

Unless noted otherwise above, each zone would have a concealed ducted unit. Supply and return air would be ducted to each space in the zone.

Proposed location for outdoor heat pumps would be on the flat Post Office roof near the mechanical room.

a. Proposed two heat pumps with associated branch box
    a. One heat pump to serve the first floor and one to serve the second floor
    b. Estimated heat pump sizes
        i. First floor – 20 tons
        ii. Second floor – 7 tons

b. Unit would set on an 18" high equipment stand.

3. One (1) energy recovery units (ERU) would be located on the flat Post Office roof near the mechanical room.
    a. ERU-1 to provide ventilation air for the Town Office portion of the building.
        - Exhaust air will be ducted from a ceiling grilles from the common space, toilet rooms and offices
        - Supply/Outside air will be ducted to return on each concealed ducted unit.
            - Except where one to one split system is located. In that location supply will be ducted to ceiling diffuser.
        - Unit to have an estimated CFM rate of – 650CFM
        - Baseline – RenewAire model HE-1X with Variable speed ECM motors, MERV 13 filter on Outside air, Double wall insulation, roof curb, integrated premium controls, vibration isolation kit, motion sensor, louver with 10" round duct connection.
        - Provide 24V motor operated dampers in outside and exhaust air streams
4. One (1) energy recovery units (ERU) would be located on the flat Post Office roof near the mechanical room.
    a. ERU-1 will provide ventilation to the Post Office.
        - Exhaust air will be ducted from a ceiling grilles within the space
        - Supply/Outside air will be ducted to return on each concealed ducted unit.
        - Unit to have an estimated CFM rate of – 600CFM
        - Baseline – RenewAire model HE-1X with Variable speed ECM motors, MERV 13 filter on Outside air, Double wall insulation, roof curb, integrated premium controls, vibration isolation kit, motion sensor, louver with 10" round duct connection.
        - Provide 24V motor operated dampers in outside and exhaust air streams
5. Mechanical/electrical room to have an exhaust fan controlled by a reverse acting thermostat
    a. Provide 100CFM inline fan
    b. Line voltage thermostat.
6. Basement would be conditioned with electric unit heaters
    a. Provide 3 units
7. Provide dehumidifier for basement space.
    a. Ceiling hung unit
    b. Provide with 20 of supply duct (round)
8. **Materials**
    a. <u>Ductwork:</u>
        - Galvanized steel, G90
        - Flexible ductwork will be utilized in lengths no greater than 5'.
        - Pressure Class 2", Seal Class A, all joints.
    b. <u>Piping:</u>
        - Refrigerant Piping
            - Type ACR copper with brazed joints

- Refrigeration Line sets are an acceptable option

c. Insulation:
- Refrigerant Piping
  - Type: Flexible Elastomeric cellular
  - Outdoor piping metal or PVC clad
- Ductwork
  - Supply ductwork – R8 system
  - Outside air – R12 system per CBES
  - Exhaust air between ERU and exhaust location at exterior wall – R12 system per CBES

d. Air Terminals:
- RGD's as required for airside distribution to the spaces. Type, size and style to be coordinated with Architectural features and ceiling types. Components selected to have a noise rating under NC25 or lower.

Plumbing

Demolition

1. Remove existing plumbing fixtures and dispose of.
2. Remove existing water heater (s) and dispose.
3. Remove existing water entrance and domestic water piping
4. Remove existing sanitary to basement level.
   a. Keep main in basement
5. Remove vent piping to roof.
   a. Keep vent penetrations through roof for proposed work.

PORPOSED

1. Water heater to be a 80 gallon air source heat pump water heater
   a. Water heater to be located in new mechanical room.
2. Provide digital mixing valve and domestic hot water recirculation pump.
3. Install new fixtures in each bathroom:
   a. Water Closet – Floor mounted tank type, 1.28GPF, Handicap height.
   b. Lavatory – Wall mounted with manual single handle faucet
   c. Shower – 36x36 fiberglass, one piece ADA shower with ¾" threshold, provide with collapsible damn, provide with ADA shower valve
   d. Sink (Breakroom) – 33x25 double bowl, 5-3/4" (ADA depth). Drop in SS sink
4. Provide new PVC DWV piping from each fixture t o a sanitary main.
   a. Sanitary main to be 4" dia.
5. Provide new vent piping from fixtures to an existing 4" vent up through the roof.
6. Provide DCW from water entrance in mechanical room to each bathroom
   a. Water entrance to include backflow preventer, pressure reducing valve, strainer and water meter
   b. Water meter provided by contractor
   c. Estimated size – 2"
7. Provide 1-1/4"DCW, ¾"DHW and ½"DHW recirc. line from the mechanical room to the

Town Office portion of the building.

a. ½"DHW and DCW to the second floor toilet rooms.
b. 1"DCW, ¾"DHW and ½"DHW recric. To the NE side of the building.
c. ½"DCW and DHW to first floor toilet rooms.
d. ¾"DCW, ½"DHW and ½"DHW recirc. to the toilet room in the police station on level 2

8. Materials

a. Piping:
   - Domestic cold, and hot water recirculating:
     - ≤ 2" – Type L copper with soldered joints
   - Condensate – PVC Sch. 80
   - DWV piping to be Cast Iron or schedule 40 PVC DWV

b. Insulation:
   - Domestic water:
     - Domestic Cold – 0.5" thick, condensation prevention
     - Domestic hot - 1.0" thick, comply with RBES

Electrical

Demolition

Basement:

The existing underground, 400-amp, three-phase, 120/208-volt service to the basement meter pack shall be removed completely. The existing meter pack and all basement distribution panels shall be removed completely. The existing sub-panels in the post office and (2) 225A 3-phase sub-panels on the upper floors shall be salvaged and reused. All existing lighting, fire alarm, wiring, conduit, boxes, and electrical devices shall be removed in the areas of demolition back to the source. Disconnect and remove all wiring, conduit, boxes, and disconnects associated with mechanical equipment to be removed.

First Floor:

All existing lighting, fire alarm, wiring, conduit, boxes, and electrical devices shall be removed in the areas of demolition back to the source. All existing lighting in other areas shall be removed for replacement, salvage and reuse existing wiring and controls. All existing fire alarm devices shall be removed back to the source. Disconnect and remove all wiring, conduit, boxes, and disconnects associated with mechanical equipment to be removed.

Second floor:

All existing lighting, fire alarm, wiring, conduit, boxes, and electrical devices shall be removed in the areas of demolition back to the source. All existing lighting in other areas shall be removed for replacement, salvage and reuse existing wiring and controls. All existing fire alarm devices shall be removed back to the source. Disconnect and remove all wiring, conduit, boxes, and disconnects associated with mechanical equipment to be removed.

Power

Provide new underground, 600-amp, three-phase, 120/208-volt service to the new mechanical room from the new utility pole in front of the building, refer to electrical site plan markup. Provide new 600-amp, three-phase, 120/208-volt 4-gang meter pack in new mechanical room with main circuit breaker. Provide additional lugs for solar connection on line side of main breaker. In the 4-gang meter pack provide (1) Class 320A meter socket for the town office & house loads, (1) 200A meter socket for the post office, (1) 150A meter socket for the police space, and (1) 100A meter socket for the 2nd floor tenant space. Provide a new 120/208V, 400A, 3-phase distribution panel for the town office and house loads, locate panel in the new mechanical room. Reuse (2) salvaged 120/208V, 225A, 3-phase panels for the police station and the second floor tenant. Reuse and refeed existing post office panels. Provide a 61.4KWDC solar array on the USPS roof and the southeast and southwest facing pitched roofs, refer to roof solar plan. The solar array shall consist of (128) 480W PV panels with Solaredge optimizers. Provide (1) solaredge SE50KUS 208V inverter in the mechanical room. Provide 200A 3-phase solar disconnect and production meter on the exterior of the mechanical room. Provide a 200A feeder from the solar disconnect to building meter pack for interconnection.

Site:

Provide (2) dual port level 2 EV chargers on the site, refer to electrical site plan for locations.

Basement:

Provide (5) duplex GFCI receptacles throughout the basement on a dedicated 120V, 20A circuit.

Provide power to all proposed mechanical equipment, provide heavy duty fused disconnects at each piece of equipment. Provide service duplex GFCI receptacles at equipment where required by code.

Post Office:

In the Post Office provide (8) duplex receptacles in the new service counter and office area, provide (2) dedicate circuits for these receptacles. Provide (1) duplex GFCI receptacle in each bathroom adjacent to the sink. Connect to existing bathroom circuit. All new circuits shall originate from existing post office panels.

First Floor:

Provide (1) duplex GFCI receptacle in each bathroom adjacent to the sink. Connect to corridor receptacle circuit.

Provide (4) duplex receptacles in the corridor, provide (1) dedicate circuit for corridor and bathroom receptacles.

Each enclosed office shall be provided with (1) duplex receptacle per wall and (1) quad receptacle at the desk locations, with (1) dedicated circuit per office.

Each conference room shall have at least (1) duplex receptacle per wall and receptacle shall be spaced at a maximum interval of 12’. Provide wall mounted monitor wall box at presentation wall with duplex receptacle, standard tel/data jack, and conduit pathway to floor box for AV connections. Provide floor box under conference table with duplex receptacle, standard tel/data jack, and conduit pathway to wall box for AV connections. Provide (1) dedicated circuit per conference room.

Provide (12) duplex receptacles in the selectboard meeting room. Provide (2) dedicate circuit for these receptacles. Provide (2) wall mounted monitor wall box at presentation wall with duplex receptacle, standard tel/data jack, and conduit pathway to each floor box for AV connections. Provide (2) floor boxes centered in the room with duplex receptacle, standard tel/data jack, and conduit pathway to wall boxes for AV connections.

Provide (8) duplex receptacles in the Town Clerk & Listors space. Provide (2) dedicate circuit for these receptacles.

Provide (8) duplex receptacles in the Zoning space. Provide (2) dedicate circuit for these receptacles.

Provide (5) duplex GFCI receptacle in the mechanical room. Provide (1) dedicate circuit for these receptacles.

Provide (2) quad receptacles at the tel/data termination area. Provide (1) dedicate circuit for these receptacles.

Provide power to all proposed mechanical equipment, provide heavy duty fused disconnects at each piece of equipment. Provide service duplex GFCI receptacles at equipment where required by code.

All town office and house circuits shall originate from the new 400A distribution panel in the mechanical room

Second Floor:

Provide (1) duplex GFCI receptacle in each bathroom adjacent to the sink. Connect to corridor receptacle circuit.

Provide (5) duplex receptacles in the corridor, provide (1) dedicate circuit for corridor and bathroom receptacles.

Each enclosed office shall be provided with (1) duplex receptacle per wall and (1) quad receptacle at the desk locations, with (1) dedicated circuit per office.

Each conference room shall have at least (1) duplex receptacle per wall and receptacle shall be spaced at a maximum interval of 12’. Provide wall mounted monitor wall box at presentation wall with duplex receptacle, standard tel/data jack, and conduit pathway to floor box for AV connections. Provide floor box under conference table with duplex receptacle, standard tel/data jack, and conduit pathway to wall box for AV connections. Provide (1) dedicated circuit per conference room.

Provide (6) duplex receptacles in the Historical Society space. Provide (1) dedicate circuit for these receptacles.

Provide (6) duplex receptacles in the Breakroom. Provide (1) dedicate circuit for these receptacles. Provide (3) duplex GFCI receptacles for microwaves and coffee makers, Provide (3) dedicate circuit for these receptacles

Provide (10) duplex receptacles in the tenant space. Provide (2) dedicate circuit for these receptacles from the tenant panel. The salvaged 225A distribution panel shall be located in the tenant space.

Provide (6) duplex receptacles in the Patrol space. Provide (1) dedicate circuit for these receptacles.

Provide power to all proposed mechanical equipment, provide heavy duty fused disconnects at each piece of equipment. Provide service duplex GFCI receptacles at equipment where required by code.

All town office and house circuits shall originate from the new 400A distribution panel in the first floor mechanical room.

All Police Station circuits shall originate from the salvaged 225A distribution panel located in the police station space.

Lighting

All lighting shall be DLC or energy star listed and meet VTCBES requirements.

Basement:

Provide (12) 4' surface LED strip lights in the basement space controlled by a single pole switch.

Provide exit and emergency lighting in all egress paths to meet code.

Post Office:

Replace existing light fixtures 1 for 1 with new LED wraparound fixtures. Provide (7) new LED wraparound fixtures in the new office and service counter area. Provide an occupancy dimmer switch in the office. Provide (1) new LED wraparound fixture in each bathroom controlled by an occupancy switch.

Provide exit and emergency lighting in all egress paths to meet code.

First Floor:

Provide (5) 4' surface LED strip lights in the mechanical space controlled by a single pole switch.

The corridors and common space shall be provide with slim surface 7" round lights, spaced no more than 8' on center controlled by ceiling occupancy sensors and wall switches.

Each bathroom shall be provide with (2) slim surface 7" round lights and a vanity light controlled by an occupancy switch. Provide emergency light in each bathroom.

Each office and conference room shall be provided with (1) 8' LED linear pendant fixture with 80% downlight and 20% uplight controlled by an occupancy dimmer switch.

Provide (9) LED school/meeting house pendants in the select board meeting room controlled by ceiling occupancy sensors and dimmer switches. Provide exit and emergency lighting.

Provide (4) 8' LED linear pendant fixture with 80% downlight and 20% uplight in the town clerk room controlled by ceiling occupancy sensors and dimmer switches. Provide exit and emergency lighting.

Provide (5) 8' LED linear pendant fixture with 80% downlight and 20% uplight in the town clerk room controlled by ceiling occupancy sensors and dimmer switches. Provide exit and emergency lighting.

Provide (4) 4' surface LED strip lights in the vault space controlled by a single pole switch.

Provide 4' wall mounted LED light with integral occupancy sensor and emergency battery on each landing of the new stairwell.

Provide (2) LED school/meeting house pendant on each landing of the existing stairwell.

Provide exit and emergency lighting in all egress paths to meet code.

Second Floor:

The corridors and common space shall be provide with slim surface 7" round lights, spaced no more than 8' on center controlled by ceiling occupancy sensors and wall switches.

Each bathroom shall be provide with (2) slim surface 7" round lights and a vanity light controlled by an occupancy switch. Provide emergency light in each bathroom.

Each office and conference room shall be provided with (1) 8' LED linear pendant fixture with 80% downlight and 20% uplight controlled by an occupancy dimmer switch.

Provide (4) LED school/meeting house pendants in the break room controlled by ceiling occupancy sensors and dimmer switches.

Provide (3) 8' LED linear pendant fixture with 80% downlight and 20% uplight in the historical society controlled by ceiling occupancy sensors and dimmer switches.

Provide (5) 8' LED linear pendant fixture with 80% downlight and 20% uplight in the tenant area controlled by ceiling occupancy sensors and dimmer switches.

Provide (3) 8' LED linear pendant fixture with 80% downlight and 20% uplight in the Patrol room controlled by ceiling occupancy sensors and dimmer switches.

Provide (2) 8' LED linear pendant fixture with 80% downlight and 20% uplight in the locker room controlled by ceiling occupancy sensors and dimmer switches.

Provide (1) 4' surface LED strip lights in each storage room controlled by an occupancy switch.

Provide 4' wall mounted LED light with integral occupancy sensor and emergency battery on each landing of the new stairwell.

Provide (2) LED school/meeting house pendant on each landing of the existing stairwell.

Provide exit and emergency lighting in all egress paths to meet code.

Tel/Data

Provide a tel/data demarcation backboard in the electrical/mechanical room. Provide (2) 4" conduits from the demarcation to the new utility pole on the site. Provide a wall mounted rack with (2) cat. 6 48-port patch panel. All tel/data shall originate from this location.

First Floor:

Provide (2) standard 2-port Cat. 6 tel/data jacks in all offices and conference rooms.

Provide (5) standard 2-port Cat. 6 tel/data jacks in the select board meeting room.

Provide (4) standard 2-port Cat. 6 tel/data jacks in the post office.

Provide (4) Wi-Fi locations in the common space.

Second Floor:

Provide (2) standard 2-port Cat. 6 tel/data jacks in all offices and conference rooms.

Provide (4) standard 2-port Cat. 6 tel/data jacks in the tenant/common room.

Provide (4) Wi-Fi locations in the common space.

Fire Alarm System

Provide an addressable fire alarm system. The fire alarm control panel and NAC panel shall be located in the electrical/mechanical room. Provide a remote annunciator in the main entry vestibule.

Provide strobe in each restroom.

Provide horn/strobes in all common space as required to meet code coverages.

Provide system smoke detector in all egress routes and for elevator recall. Provide heat detectors in all rooms as required to meet code coverages.

Security

Provide cat. 6 cable from tel/data rack to the following camera locations: All exterior doors. Cameras to be provided by owner.

Provide boxes and raceways for card access on all exterior doors.

Materials

Wiring Methods:

- MC Cable and metal boxes where concealed in walls and ceilings.
- EMT conduit and metal boxes where exposed in utility spaces.
- Metal Wiremold in finished spaces deemed too difficult to fish.
- Cat. 6 tel/data cabling.

Panelboards/Circuit Breakers:

- Panelboard construction with bolt on breakers.

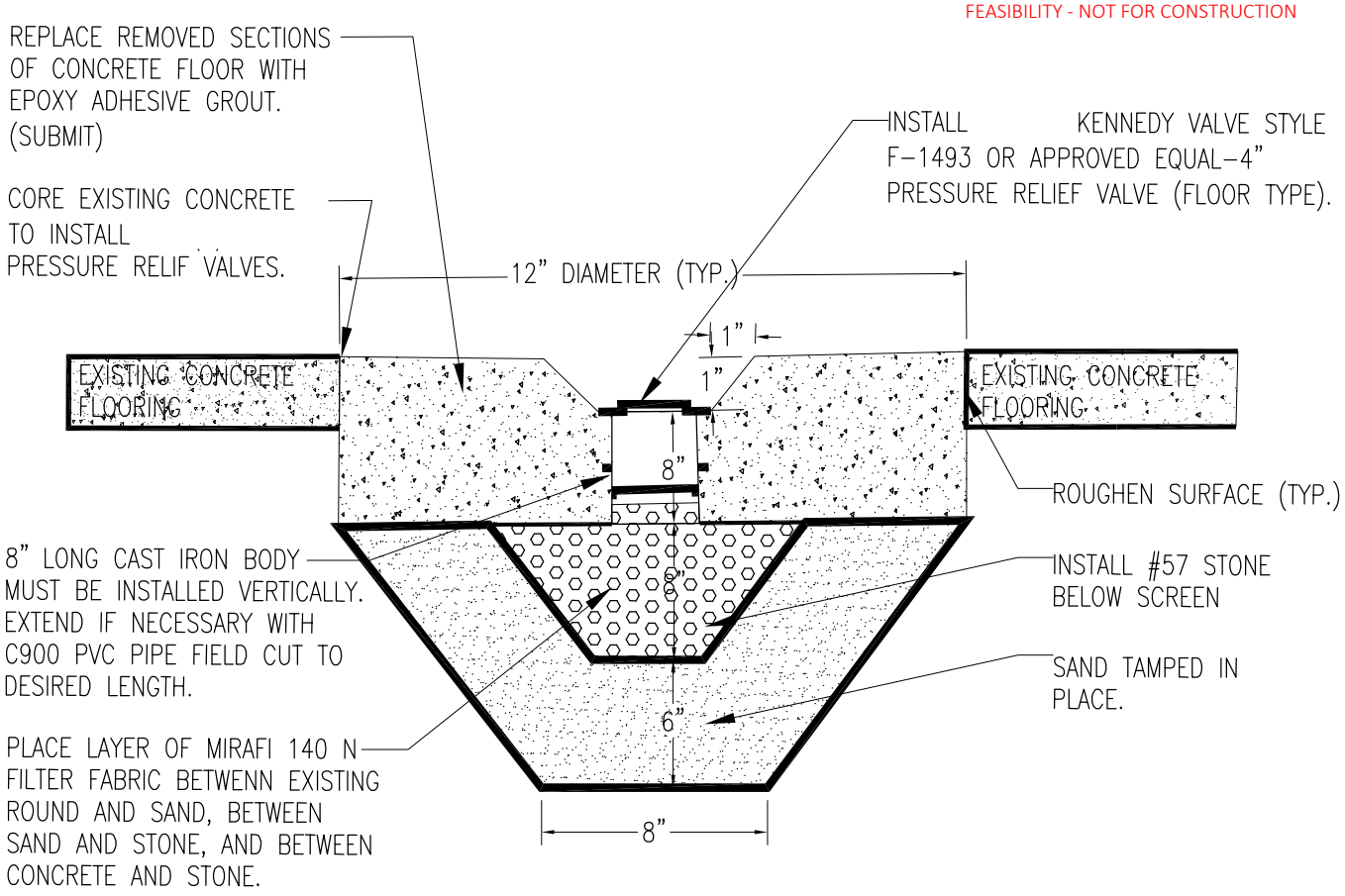
Disconnects:

- Heavy Duty Fused Disconnects NEMA 3R or 1 as required for the installation environment.

Electrical Devices:

- 20 Amp, Commercial grade switches and receptacles.

FEASIBILITY - NOT FOR CONSTRUCTION



NOTES:

1) GROUND WATER PRESSURE CANNOT SEPERATE COVER OR GRATE FROM BODY.

2) COVER AND GRATE CAN BE REMOVED BY TURNING TO THE RIGHT OR LEFT AND LIFTING OUT.

3) VALVE STARTS TOO OPEN AT A HEAD OF APPROXIMATELY 9" OF WATER.

4) IN ORDER FOR THE F-1493 "FLOOR TYPE VALVE" TO OPERATE CORRECTLY, IT MUST BE INSTALLED IN A VERTICAL POSITION.

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Checked By:	Scale: NTS
Drawn By:	Project No.:
Date:	Drawing No.:

BUDGET ESTIMATE 8-22-23 PROJECT: **RICHMOND TOWN HALL Feasibility Study**

Revision 1 **Schematic Drawings** FEASIBILITY - NOT FOR CONSTRUCTION

COST ESTIMATOR : Peter Smejkal
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All Divisions Scopes

	Division	DESCRIPTION	QUANTITY	UNIT	LABOR HOURS	PER HOUR	TOTAL LABOR	UNIT COST	MATERIAL TOTAL	EQUIP. TOTAL	SUB TRADES	TOTAL COST	
	1	**General Conditions:**											
												0	**$ 532,650**
Site	a	**SITEWORK:**											
Site	General	NO Construction entrance - excav.,fabric,gravel									0	0	
Site		NO Silt fence-install,removal or any other									0	0	
Site		NO Hazardous waste/soils provisions									0	0	
Site		NO ledge removal, NO allowance for unforseen cond.									0	0	
Site		Temp provisions for access to library (none for others)	1	ls							10000	10000	
Site		Site demolitions, clearing/relocating items - Allowance									20000	20000	
Site		Pavement demolitions or grind to recycle - 3" Allowanc	35000	sf				0.80			28000	28000	
Site		Sidewalks demolitions	2795	sf				2.00			5590	5590	
Site		NO Existing Bldg exterior repairs/ painting									0	0	
Site	P-lot	P-lot retaining wall Allowance 200'x6'	1200	sf				60.00			72000	72000	
Site		Regrade existing gravels/Allowance for replacement	150	yds				55			8250	8250	
Site		Excavate other areas for re-shaping lot/fabric/18" gravel	200	yds				55			11000	11000	
Site		New paving - 2 courses 2.5+1.5 = 4" - 35000 sf	900	tons				165			148500	148500	
Site												0	
Site		**TOWN OFFICES/POST OFFICE:**										0	
Site		Street entrance/stairs/railings = Existing									0	0	
Site		Conc. Sidewalks - 12" gravel subbase, fabric	2,770	sf				8			22160	22160	
Site		NO ramp railings or steps to stair exit									0	0	
Site		Granite curbs with excav, backfill etc.	1,295	ft				65			84175	84175	
Site		Pavers w. fabric/18"subbase+drainage Allowance	956	sf				38			36328	36328	
Site		Signage or relocating BY OTHERS									**By Owner**	0	
Site		ADA signs	2	ea				500			1000	1000	
Site		Dumpster/garbage Pad+enclosure Allowance	1	ls							10000	10000	
Site	Storm	Stone drip edge 5'x180' w.6" drainage,edging	190	ft				41			7790	7790	
Site		Catch basins	3	ea				5000			15000	15000	
Site		Storm drainage 10" PVC	280	ft				45			12600	12600	
Site		Drainage under/behind retaining wall	200	ft				40			8000	8000	
Site		Storm Pond/wetland/ outfall drainage/riprap for 2-10"	1	ls							25000	25000	
Site		NO fence around pond									0	0	
Site	Water	New water service (sprinkler) to building - 6" - Allowanc	120	ft				80			9600	9600	
Site		NO separate domestic water line (=tap off 6" inside)									0	0	
Site		Water meter - 2" + tap off sprinkler entrance/BFP	1	ea							3500	3500	
Site		Street tap and pavement patching by Town incl. traffic control									**By Owner**	0	
Site	Sewer	New sewer line - 6"	120	ft				60			7200	7200	
Site		Street tap and pavement patching by Town incl. traffic control									**By Owner**	0	
Site	Power	New electrical service 600A 3ph 120/208 UG/cond./wir	200	ft				100			20000	20000	
Site		Service entrance/metering/disconnect/4 meters	1	ls							10000	10000	
Site		Power company charges Budget	1	ls							10000	10000	
Site		Removal of old 400Amp service (leave old UG conduit)	1	ls							4000	4000	
Site		EV chargers Budget	2	ea				10000			20000	20000	
Site		New communications 2-4" conduits/wire - Budget	200	ft				50			10000	10000	
Site		Site lighting conduits+wires	700	ft				15			10500	10500	
Site		Site light/poles/found etc.	10	ea				7000			70000	70000	
Site		Sign light	1	set				3000			3000	3000	
Site	Fuel	NO new fuel tank, pad or tiedowns									0	0	
Site											0	0	
Site		**LIBRARY:**										0	
Site		Street entrance/stairs BY OTHERS									**By Owner**	0	
Site		Side entrance stairs - site, concrete, railings	1	ls							20000	20000	
Site		HC ramp - found,conc deck, railings	324	sf							38000	38000	
Site		Conc. Sidewalks - 12" gravel subbase, fabric	3,340	sf				8			26720	26720	
Site		Granite curbs with excav, backfill etc.	300	ft				65			19500	19500	
Site		Story Pavilion Allowance (w.power/lights etc.)	240	sf				250			60000	60000	
Site		Signage or relocating BY OTHERS									**By Owner**	0	
Site		ADA signs	2	ea				500			1000	1000	
Site		NO new utility services to the building									0	0	
Site												0	
Site	Other	Parking/traffic signs, Bicycle racks, benches etc.	1	ls							10000	10000	
Site		Street sign by Owner - Town Hall/Police									**By Owner**	0	
Site		Site restorations	1	ls							3000	3000	
Site		Landscaping - trees and shrubs Allowance	1	ls							40000	40000	
Site		Top soil 4",seeding, watering	38000	sf				1.50			57000	57000	
Site		Site contractor's general conditions+Makup 25%									244000	244000	
Site												0	**$ 1,222,413**
Histor.Building	Building	**HISTORIC BUILDING**											
Histor.Building	Bldg	Demolitions - basement	1	ls							10000	10000	
Histor.Building		Slab cuts and patching	1	ls							3000	3000	
Histor.Building		Basement Flood relieve valves/slab core, patch etc.	10	ea				1585			15850	15850	
Histor.Building		Demolitions - Ground Level	5600	sf				6			33600	33600	
Histor.Building		Demolitions - Level 2	5600	sf				5			28000	28000	
Histor.Building		Demo roof over Vault and Fire escape	1	ls							11000	11000	
Histor.Building		Wall vents removal, masonry/insul/inter patching	24	ea				1000			24000	24000	
Histor.Building											3000	3000	
Histor.Building	3	Slab infill w. vapor barrier NE corner etc.666sf	10	yd3				500			5000	5000	
Histor.Building											0	0	
Histor.Building	4	Exterior Bricks repointing Allowance (incl. lift)	1	ls							**20000**	20000	
Histor.Building		Infill masonry opening into pipe trench	1	ea							1000	1000	
Histor.Building												0	
Histor.Building	5	Steel reinforcing Allowance	1	ls							25000	25000	
Histor.Building												0	
Histor.Building	6	Modify basement stairs	1	ls							4000	4000	

Histor.Building		F4 - wood framed floor infill	104	sf				25			2600	2600	
Histor.Building		Misc carpentry/blocking	1	ls							20000	20000	
Histor.Building		Entry wood ceiling replacement	324	sf				25			8100	8100	
Histor.Building		Finish - chairrail and stairwell restorations	1	ls							30000	30000	
Histor.Building		New Interior trimwork Allowance	1	ls							30000	30000	
Histor.Building		Window trim resto/new	77	sets				300			23100	23100	
Histor.Building		Misc, mods/repairs	1	ls	80	50	4000		4000			8000	
Histor.Building													
Histor.Building	7	Vault roofing R1 = Vapor/7" insul/membrane/flashing	500	sf				15			7500	7500	
Histor.Building		Parapet wall/flashing	40	ft				55			2200	2200	
Histor.Building		Scupper	1	ea				800			800	800	
Histor.Building		NO gutters									0	0	
Histor.Building		NO roofing repairs of main Historic building									0	0	
Histor.Building		Air Sealing Allowance - see specs	1	ls							**50000**	50000	
Histor.Building		Excavate, parge, insulate Vault foundations ???	700	sf				20			14000	14000	
Histor.Building		NO Exterior walls insulating main bldg 340x33	11220	sf							0	0	
Histor.Building		Re-fill existing densepack 35%/repairs	4000	sf				6			24000	24000	
Histor.Building		NO Roof/deck insulating main bldg = Existing	6000	sf							0	0	
Histor.Building		Add 6" celulose blown in	6000	sf				3			18000	18000	
Histor.Building		Basement insulating/found walls - front only	1000	sf				10			10000	10000	
Histor.Building													
Histor.Building	8	Street doors/transoms - wood H = salvage existing	4	ea				10000			40000	40000	
Histor.Building		Opt.#1 Windows - New Pella windows Quote=dbl pane	1	ls					**181300**			181300	
Histor.Building		Opt.#2 Windows - PellaQuote=triple pane Add	1	ls					**153800**			0	**$ 153,800**
Histor.Building		Addd brickmold and clips by Pella	1	ls					**23200**			23200	
Histor.Building		Foam exist. Weight pockets Allowance	77	ea				100			7700	7700	
Histor.Building		Remove old windows, install,trim, sills, paint etc.	77	ea				2510			193270	193270	
Histor.Building		Interior doors	56	sets				3500			196000	196000	
Histor.Building		Exterior doors card readers incl 1 stair tower door	3	ea				5000			15000	15000	
Histor.Building		NO Roof hatch or attic access? = existing									0	0	
Histor.Building		Police security features???									**By Owner**	0	
Histor.Building												0	
Histor.Building												0	
Histor.Building												0	
Histor.Building												0	
Histor.Building	9	Exterior soffits/corbels repairs/scraping/painting/lift	312	ft				70			21840	21840	
Histor.Building		New interior walls H40A =2Lgwbmtl studs/ins/paint/bas	6260	sf				20			125200	125200	
Histor.Building		New interior walls K80 = CMU,base,paint	663	sf				38			25194	25194	
Histor.Building		New interior walls S2 = mtl siding/4"iso/strappin/barrier	315	sf				37			11655	11655	
Histor.Building		Ceilings	17000	sf				6			102000	102000	
Histor.Building		Add for tin ceiling restoration	6000	sf				20			120000	120000	
Histor.Building		NO Basement flooring +base	5877	sf							0	0	
Histor.Building		Flooring, rubber steps and base Allowance L1+2 CPT	11312	sf				8			90496	90496	
Histor.Building		WOOD floors	400	sf				15			6000	6000	
Histor.Building		Existing stairs - rubber or repair/re-finish Allow.	1	ls							10000	10000	
Histor.Building		Add for tile	1	ls							10000	10000	
Histor.Building		Painting - walls, trim, doors, windows	17000	sf				4			68000	68000	
Histor.Building		Exterior walls - repair exist. GWB- taped	10000	sf				1			10000	10000	
Histor.Building		GWB soffits Allowance	1	ls							10000	10000	
Histor.Building												0	
Histor.Building	10-12	Kitchen/other cabinetry, p-lam top	81	ft				650			52650	52650	
Histor.Building		NO Dispatch + Comand base cabinets/P-lam top									0	0	
Histor.Building		Lockers - police only	10	ea				350			3500	3500	
Histor.Building		Locker benches - police only	3	ea				1000			3000	3000	
Histor.Building		Toilet room accessories	5	sets				500			2500	2500	
Histor.Building		FE in cabinets	4	ea				500			2000	2000	
Histor.Building		FE wall hung - mech and elev. Mach rms	2	ea				150			300	300	
Histor.Building		Signage Allowance	45	ea				70			3150	3150	
Histor.Building		Windows roller shades	77	ea				250			19250	19250	
Histor.Building												0	
Histor.Building	14	**Conveying Systems:**										0	
Histor.Building		Elevator-existing Elevator+Shaft = no modifications									0	0	
Histor.Building		NO controller or cab upgrades									0	0	
Histor.Building		Relocate controller, power, logistics	1	ls							20000	20000	
Histor.Building		New build elev. Machine room	1	ls							10000	10000	
Histor.Building												0	
Histor.Building	21	**Sprinkler**										0	
Histor.Building		NO existing building Sprinkler= no demolitions									0	0	
Histor.Building		Sprinkler Service to building - in Sitework									See Site	0	
Histor.Building		Sprinkler riser, BFP, switches, etc.	1	ea							10000	10000	
Histor.Building		Sprinkler system building	17189	sf				5			85945	85945	
Histor.Building		Sprinkler coverage attic - dry system	5435	sf				4			21740	21740	
Histor.Building		Dry system compressor etc.	1	ls							3000	3000	
Histor.Building		Sprinkler system post office -ground level only	5225	sf							in Post Office	0	
Histor.Building		Stand pipe and storz connection - stairwell…?	1	ea							in Stairwell	0	
Histor.Building		Opening/patch through foundations, thrust block etc.	1	ls							1000	1000	
Histor.Building		NO Fire pump									0	0	
Histor.Building												0	
Histor.Building	22	**PLUMBING:**										0	
Histor.Building		Existing building plumbing demolitions	17189	sf				1.00			17189	17189	
Histor.Building		New plumbing distribution - vent, H/C, waste	17189	sf				2			25784	25784	
Histor.Building		Plumbing fixtures	19	ea				6000			114000	114000	
Histor.Building		New HWH 80 gal	1	ea							10000	10000	
Histor.Building		Plumbing for HVAC, water service, BFP	1	ls							15000	15000	
Histor.Building												0	
Histor.Building	23	**HVAC:**										0	
Histor.Building		Existing building HVAC,ducts demolitions	17189	sf				3.00			51567	51567	
Histor.Building		New HVAC, ERU, exhausts	17189	sf				30			515670	515670	
Histor.Building		Heating Allowance - 3 electric unit heaters - basement	3	ea				5000			15000	15000	
Histor.Building		Dehumidification - basement - ceil. Hung. 20' ducts	1	ls							5000	5000	
Histor.Building		Basement/mech rm exhausts	3	sets				1800			5400	5400	
Histor.Building												0	
Histor.Building	26	**ELECTRICAL:**										0	
Histor.Building		Existing building electrical demolitions incl FA/Data/etc.	17189	sf				2			34378	34378	
Histor.Building		New switch gear	1	ls							15000	15000	
Histor.Building		Power distribution incl reuse/re-feed exist panels)-L1+2	11312	sf				7			79184	79184	
Histor.Building		Power distribution - basement/Elev/Mech	5877	sf				5			29385	29385	
Histor.Building		Lighting, switching	17189	sf				7			120323	120323	
Histor.Building		Electrical for HVAC	1	ls							25000	25000	
Histor.Building		EM/Exit lighting	17189	sf				1			17189	17189	
Histor.Building		FA system and devices	17189	ea				5			85945	85945	

Histor.Building		NO Generator									0	0	
Histor.Building		NO SOLAR									0	0	
Histor.Building		Security and Data wiring	17189	sf				2.00			34378	34378	
Histor.Building		Cameras by Owner									By Owner	0	
Histor.Building		Extra provisions for Police - Budget									35000	35000	
Histor.Building		All Police equipment by others									By Owner	0	
Histor.Building											0	0	
Histor.Building												0	$ 3,187,032
Stair tower	Stair	STAIR TOWER ADDITION:										0	
Stair tower	2	Demolitions/brace masonry/foundations	1	ls							8000	8000	
Stair tower		Excavate next to stone foundations 10' (24x13 addition)	160	yd3				20			3200	3200	
Stair tower		NO ledge removal, NO old found underpinning									0	0	
Stair tower		Slab subbase 12" gravel,fabric, pressure relief valve	1	ls							4100	4100	
Stair tower		Backfill - gravel	16	yd3				60			4100	4100	
Stair tower		Cut back roof overhangs/patch	1	ls							3000	3000	
Stair tower		Post office windows, doors etc.	4	ea							1600	1600	
Stair tower											0	0	
Stair tower	3	Concrete footings, walls 12" + infill - 61+3'	29	yd3				700			20300	20300	
Stair tower		New concrete slab, reinforced, pumped, 5"- sf	6	yd3				400			2400	2400	
Stair tower		Stairs, landings concrete	8	yd3				400			3200	3200	
Stair tower												0	
Stair tower	4	Open stairwell access/openings - ??? Old windows	3	ea				4000			12000	12000	
Stair tower		Post office windows at stairwell, infill w. bricks etc	2	ea				3500			7000	7000	
Stair tower		Miscell masonry/cleaning/repointing = will be interior	400	sf				10			4000	4000	
Stair tower												0	
Stair tower	5	Pour stops angles at metal decks/stairwell	160	ft				15			2400	2400	
Stair tower		Structural Mtl stud exterior walls w. X-bracing	2100	sf				10			21000	21000	
Stair tower		Allowance other structural steel/supports	1	ls							10000	10000	
Stair tower		Roof Mtl stud structure w. ply decking - see div 6									0	0	
Stair tower		Measurements, shop drawings	1	ls							5000	5000	
Stair tower		Steel decks and structure- 4 landings	400	sf				25			10000	10000	
Stair tower		Steel stairs - 4 flights	41	risers				350			14350	14350	
Stair tower		Steel railings - inner	62	ft				200			12400	12400	
Stair tower		Wall rails	62	ft				150			9300	9300	
Stair tower			1	ls							2000	2000	
Stair tower	6	Exterior walls system+furring/gwb/painted	2074	sf				22			45628	45628	
Stair tower		Siding - 50/50 metal and wood	2200	sf				21			46200	46200	
Stair tower		This can be lowered where tower is wedged between buildings…??									0	0	
Stair tower		Wood blocking, carpentry	1	ls							5000	5000	
Stair tower		Roof system framing/sheathing (2),strapping	500	sf				28			14000	14000	
Stair tower		Soffits/fascias	64	ft				50			3200	3200	
Stair tower		Interior trimwork	1	ls							2000	2000	
Stair tower												0	
Stair tower	7	2" rigid+ poly under the slab	300	sf				3			900	900	
Stair tower		Walls waterproofing, insulation etc.62'x9'	560	sf				8			4480	4480	
Stair tower		Walls insulation	2074	sf				7			14518	14518	
Stair tower	R2	Roof insulation - 7" iso/taped layers	600	sf				10			6000	6000	
Stair tower	R2	Roofing - shingles/underlay/vapor barrier	600	sf				16			9600	9600	
Stair tower		Misc.+parapet flashing	90	ft				12			1080	1080	
Stair tower		NO gutters									0	0	
Stair tower												0	
Stair tower	8	Doors	4	ea				4000			16000	16000	
Stair tower		Key card access	1	ea				4000			4000	4000	
Stair tower		Windows D - 6 ea 4x8'	192	sf				100			19200	19200	
Stair tower												0	
Stair tower	9	Exterior walls - see div 6									0	0	
Stair tower		Top ceiling- 2nd level mtl studs/GWB painted	336	sf				10			3360	3360	
Stair tower		Repairs/changes inside bldg break ins	3	sets				1000			3000	3000	
Stair tower		NO ceilings under stairs/leandings = painted structure									0	0	
Stair tower		Stair/landings rubber flooring	1	ls							10000	10000	
Stair tower		Rubber / wood base	600	ft				4			2400	2400	
Stair tower	10	FE in cabinets	4	ea				500			2000	2000	
Stair tower		Signage Allowance	5	ea				100			500	500	
Stair tower												0	
Stair tower	21	Sprinkler:										0	
Stair tower		Sprinkler	864	sf				5			4320	4320	
Stair tower		New sprinkler riser, BFPs, switches etc.									in Hist. buildig	0	
Stair tower		Stand pipe and storz connection - stairwell…?	1	ea							8000	8000	
Stair tower												0	
Stair tower	22	PLUMBING:										0	
Stair tower		NO Plumbing/NO exterior hose bib									0	0	
Stair tower												0	
Stair tower	23	HVAC:										0	
Stair tower		NO HVAC system in stair tower/NO ventiation/exhaust									0	0	
Stair tower		Electric heater at bottom of stairwell	1	ea							5000	5000	
Stair tower												0	
Stair tower	26	ELECTRICAL:										0	
Stair tower		Power distribution - 5 outlets/ 1 per landing	5	ea				400			2000	2000	
Stair tower		Lighting, switching incl exterior wall light	14	ea				500			7000	7000	
Stair tower		Wiring/power for Electric heater	1	ea							2500	2500	
Stair tower		EM/Exit lighting	10	ea				500			5000	5000	
Stair tower		FA system and devices	4	ea				500			2000	2000	
Stair tower		Security wiring - for 4 cameras (by owner), NO data	4	sets				350			1400	1400	
Stair tower		Cameras by Owner									By Owner	0	
Stair tower		NO data									0	0	
Stair tower												0	$ 409,636
Post Office	Post Off.	POST OFFICE RENOVATIONS										0	
Post Office	2	Demo									10000	10000	
Post Office		Pipe trench slam and mtl deck out 735 sf	1	ls							3500	3500	
Post Office		Demo masonry - one side of trench to p-lot	780	sf				6			4680	4680	
Post Office		Ramp, stairs	1	ls							6000	6000	
Post Office		Fill pipe trench w. str. Sand - 245'x3'x4'	130	yd3				60			7800	7800	
Post Office		Roof planks/substructure and other items removal	1	ls							6000	6000	
Post Office		Roofing demo	5644	sf				2			11288	11288	
Post Office		Exterior digging/backfill for found walls/ waterproofing	130	ft				50			6500	6500	
Post Office		Demo bricks - exterior walls	2552	sf				4			10208	10208	
Post Office		Demo exterior walls CMU	1350	sf				5			6750	6750	
Post Office		Demo old found/trench wall	768	sf				10			7680	7680	
Post Office		Temp. supports of outer roof structure	130	ft							10000	10000	

Post Office												0
Post Office	3	Topping slab 2" - southern bay	730	sf				3.50			2555	2555
Post Office		Pipe trenches concrete slab infill - 4" -245x3' - 840sf	13	yd3				350			4550	4550
Post Office		New found wall N88+E40' + piers	30	yd3				800			24000	24000
Post Office		Two footings/piers for W16x45 beam, 2 columns	2	ea				2000			4000	4000
Post Office		New exterior ramp and stairs with sitework, steel railing	1	ls							20000	20000
Post Office												0
Post Office	4	New CMU K walls - 66'	900	ea				30			27000	27000
Post Office		New CMU exterior wall (could be framed for less)	1350	sf				38			51300	51300
Post Office		New brick veneer	2552	sf				30			76560	76560
Post Office		Replace 10% CMU in trench	80	sf				40			3200	3200
Post Office		Parging trench CMU ??? Allowance	1	ls							1500	1500
Post Office												0
Post Office	5-6	Steel support where bearing wall is removed, w. temp.									10300	10300
Post Office		Roof reinforcement Allowance per EV	5600	sf				12			**67200**	67200
Post Office		Canopy reinforcing/under finish - Allowance	300	sf				50			15000	15000
Post Office		NO other exterior wall finish = bricks in div 4									0	0
Post Office		Soffits/fascias rework	256	ft				50			12800	12800
Post Office												
Post Office	7	Roofing R1- membrane, tapered insulation etc	5613	sf				17			95421	95421
Post Office		Scupper	2	ea				800			1600	1600
Post Office		Parapet/edge blocking up/flashing	350	ft				30			10500	10500
Post Office		Re-cut new reglet into masonry + flashing/term bar	82	ft				30			2000	2000
Post Office		Roof walk pads for equipment	200	sf				12			2400	2400
Post Office		NO roof hatch or ladder									0	0
Post Office		Exterior walls insulation - 40+88+30+50+24=232x10-4"	2552	sf				7			17864	17864
Post Office											0	0
Post Office	8	Exterior/interior doors w.transoms - Aluminum	6	ea				7000			42000	42000
Post Office		Kawneer storefront	784	sf				60			47040	47040
Post Office		Exterior doors HM/insulated	3	ea				3700			11100	11100
Post Office		Blocking for doors/storefronts/windows	1	ls	80	50	4000		2000.00			6000
Post Office		OHD D = loading bay	1	ea							6000	6000
Post Office		New interior doors/painted	8	ea				3700			29600	29600
Post Office		Relocate existing bullet proof window		ea				1000			0	0
Post Office		New bullet proof window 3x4		sf				250			0	0
Post Office		Exterior doors card readers - dock, 2 Aluminum doors	3	ea				5000			15000	15000
Post Office		Security OHD coiling 24' x10'	240	sf				80			19200	19200
Post Office												0
Post Office	9	Exterior walls - new finish over exist CMU	3000	sf				4			12000	12000
Post Office		New interior walls H	300	sf				17			5100	5100
Post Office		Flooring and rubber base - Allowance	5600	sf				8			44800	44800
Post Office		Ceilings - Allowance	5600	sf				7			39200	39200
Post Office		Walls/doors/ misc. painting - Allowance	5600	sf				3			16800	16800
Post Office											0	0
Post Office	10-12	Main Solid Surface counter, shelving/cabinets below	20	ft				800			16000	16000
Post Office		Toilet Accessories for each bathroom (most by owner)	2	sets				500			1000	1000
Post Office		NO Lockers									0	0
Post Office		Window roller shades	14	sets				250			3500	3500
Post Office		FE in cabinets	3	ea				500			1500	1500
Post Office		Signage Allowance	6	ea				100			600	600
Post Office		ALL POST OFFICE EQUIPMENT by Others									**By Others**	0
Post Office												0
Post Office	21	**Sprinkler**										0
Post Office		NO existing building Sprinkler= no demolitions									0	0
Post Office		Sprinkler Service to building - in Sitework									See Site	0
Post Office		Sprinkler riser, BFP, switches, etc.	1	ea							in Hist. Bldg	0
Post Office		Sprinkler system post office -ground level only	5225	sf				5			26125	26125
Post Office												0
Post Office	22	**PLUMBING:**										0
Post Office		Existing building plumbing demolitions	5225	sf				1.00			5225	5225
Post Office		New plumbing distribution - vent, H/C, waste	5225	sf				2			7838	7838
Post Office		Plumbing fixtures	5	ea				6000			30000	30000
Post Office		Hose bib at loading dock w. H/C, reel	1	sets				3500			3500	3500
Post Office		NO re-circ = bathrooms and bib is close to HWH									0	0
Post Office												0
Post Office	23	**HVAC:**										0
Post Office		Existing building HVAC,ducts demolitions	5225	sf				2.00			10450	10450
Post Office		New HVAC, ERU	5225	sf				30			156750	156750
Post Office			1	ls								0
Post Office	26	**ELECTRICAL:**									0	0
Post Office		Existing building electrical demolitions incl FA/Data/etc.	5225	sf				2			10450	10450
Post Office		New switch gear									in Hist. Bldg	0
Post Office		Power distribution incl reuse/re-feed exist panels)	5225	sf				5			26125	26125
Post Office		Lighting, switching incl. exterior	5225	sf				7			36575	36575
Post Office		Electrical for HVAC	1	ls							5000	5000
Post Office		EM/Exit lighting	16	ea				500			8000	8000
Post Office		FA system/devices (panel in Hist bldg, announciator)	5225	sf				3			15675	15675
Post Office		NO Generator									0	0
Post Office		NO SOLAR									0	0
Post Office		Security and Data wiring	5225	sf				2.00			10450	10450
Post Office		Cameras by Owner									**By Owner**	0
Post Office		Data equipment by Owner									**By Owner**	0
Post Office											0	0 **$ 1,208,759**
		SUBTOTAL										$ 6,560,489
		CM Fee/Mark up 10%, Liability insurance .75%, Bonds 1% = Total 11.75%										$ 770,857
		TOTAL CONSTRUCTION BUDGET										**$ 7,331,346**

BLACK RIVER DESIGN ARCHITECTS

Richmond Town Hall Feasibility Study
August 2023

FEASIBILITY - NOT FOR CONSTRUCTION

REVISION 1

	Richmond Town Hall PreBond Feasibility Scope - Full Scope	
CONSTRUCTION AND SITE (Hard Costs...)		NOTES
Construction Estimate (Base)	$7,331,346	
15% Bid/Construction Contingency	$1,099,702	
Hazardous Materials Abatement	$0	
Construction Subtotal	$8,431,048	
FEES		
A/E Design Fees (7.5%)	$549,851	
Permit Fees		
DPS Permit (0.008/$1)	$58,651	
Act 250 Permit	$0	
Zoning/Local	$100	
W/W, Stormwater, Erosion Control	$0	
Permitting Services re: Flood Plain	$2,000	
Hazardous Materials Consulting & Testing	$2,000	
Clerk of the Works*	$60,000	owner to verify
Building Envelope Testing & Comissioning	$10,000	
Soil Borings	$5,000	
Construction Testing Services	$2,500	
HVAC Commissioning	$0	
Professional Fees Subtotal	$690,102	
MISCELLANEOUS COSTS		
Bid Advertising*	$500	
Printing/Postage*	$1,000	
Moving/Storage Expenses*	$100,000	owner to verify
Interim Financing*	$0	owner to verify
Builders Risk Insurance*	$5,000	owner to verify
Subtotal	$106,500	
OWNER PURCHASES		
Solar*	$200,000	Solar By Owner
Exterior Signage	$20,000	owner to verify
Furniture*	$25,000	owner to verify
Phone System*	$0	owner to verify
Equipment (Specialty Items, Police, etc.)*	$0	owner to verify
Subtotal	$245,000	
TOTAL PROJECT BUDGET	**$9,472,650**	
Soft costs	$2,141,304	
Soft cost %	**29.21%**	
INFLATION 7.5%	***$10,183,098***	

revision 1 notes and initial reduction opportunities

CONSTRUCTION AND SITE HARD COST SUMMARY	Primary Scope	Scope Reduction Opportunities
General Conditions	$ 532,650	$ 532,650
Sitework	$ 1,222,413	$ 1,092,413
Concrete Curb in Lieu of Granite		$ (50,000)
Story Pavilion Allowance		$ (60,000)
Allowance for Exterior Signage		$ (20,000)
Historic Building	$ 3,187,032	$ 3,187,032
Window Add Alt (base is double pane)		$ 153,800
Relocating EMR only	$ 30,000	
Stair Tower	$ 409,636	$ 409,636
Post Office	$ 1,208,759	$ 1,141,559
Remove Post Office Roof Reinforcement		$ (67,200)
Subtotal	$ 6,560,490	$ 6,363,290
Markup	$ 770,858	$ 747,687
Total Construction Budget	$ 7,331,348	$ 7,110,977

additional reduction: remove Owner solar scope at Post office - 100,000

With baseline reductions, scope gets reduced to ~9,100,000 excluding any inflationary contingency