

PART 3 – DRAWINGS AND SPECIFICATIONS

RFT No. Doc5400241558, Contract No. N/A

SUMMARY OF THE WORK

The following is a summary of Scope of Work for this tender:

SCOPE OF WORK

The purpose of this project is to perform on-site investigation of the mechanical and electrical infrastructure serving this facility and the construction of State of Good Repair and Decarbonization Measures proposed to help the City of Toronto reduce their stated goal of reducing their overall carbon footprint.

Important: The construction shall be done in **phases** in consultation with the Community Centre Management team to ensure that disruptions to the operations of the Centre will be minimized and localized. Allow for premium time (afterhours work) for any power shutdowns or for reasons of Health & Safety of the public and the occupants.

.1 The **Mechanical** scope of work includes:

- .1 Remove existing gas fired rooftop unit serving the Activity room complete with all fittings and accessories. Provide a new air-source heat pump with an integral gas fired heating section. Provide a new curb adaptor to re-use the existing openings. The new units shall connect to the existing supply and return distribution ductwork.
- .2 Remove the existing air compressor complete with all accessories. The pneumatic controllers and devices on existing equipment (that is not being replaced shall be provided with DDC Controllers and connected to the localized operator interface and system controller(s).
- .3 Remove the existing gas fired rooftop units serving the Front Office and Lobby; Gym; Conference room; the second-floor office and activity areas and the South Lounge complete with all accessories. The new units shall connect to the existing supply and return distribution ductwork. Provide new curb adaptors to re-use the existing openings.
- .4 Remove the existing(abandoned) furnace serving the basement complete with accessories. Provide a new Water Source Heat Pump (WSHP) to serve the basement with respect to fresh air-intake, temperature control for comfort and required ventilation. This equipment shall be in the enlarged closet in the basement. This WSHP shall use the pool water as its source and sink (both heating and cooling energy source). It will be provided with domestic cold water back -up for cooling.
- .5 Provide a new ceiling mounted ERV serving the new WSHP. The ERV unit volume is sized to meet the current building code minimum

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ventilation air requirements as per ASHRAE standard 62.1. Provide new exhaust and intake ductwork for the ERV.

- .6 Provide new supply air ductwork complete with fittings and accessories and connect to the existing ductwork in the basement.
 - .7 Remove the existing gas fired Hot Water heating boiler and the domestic water heating boiler complete with all pumps, heat exchanger(s), accessories and fittings. Cap the gas piping as required.
 - .8 Provide a new forced draft gas fired condensing boiler with 440kW(1500MBH) input and 382kW (1300 MBH) output. Modify the natural gas, and make-up water piping and pumping distribution to accommodate the new boiler arrangement. Provide new ductwork for venting, extend new boiler venting vertically to the roof.
 - .9 Provide new heat exchangers, pumps, valves, temperature and pressure gauges and control valves to serve the domestic hot water system.
 - .10 Provide and/ or modify the piping to connect the existing domestic hot water storage tanks to the new domestic water heating system.
 - .11 Provide new heat exchanger(s), pump(s), valves, and other accessories to serve the swimming pool water heating system.
 - .12 Provide and/ or modify the piping to connect the new swimming pool water heating system.
 - .13 Coordinate with Electrical Trades for the provision of power and control wiring associated with new and modified equipment.
 - .14 Provide a new Building Automation System (BAS) and integrate all new and existing mechanical equipment with DDC controls to the new BAS. Cap off all existing pneumatic control system as applicable.
 - .15 Provide a new WSHP to serve the Electrical room in the basement complete with all accessories, fittings and controls. The unit shall be suspended in the mechanical room and the supply and return shall be ducted from the unit into electrical room.
- .2 The **Electrical** scope of work includes:
- .1 Remove existing feeders from demolished mechanical equipment including roof top units, air compressors, boilers and furnace.
 - .2 Provide new dedicated electrical connections to all new mechanical equipment, including Water Sourced Heat Pumps, Pumps, Boilers and Energy Recovery Ventilators.
 - .3 Coordinate with Mechanical Trades for the provision of power and control wiring associated with new and modified equipment including power connections to Building Automation Panels.

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- .4 Provide a new 250A, 120/208V, 3Ph, 4W panel with new breakers as per single line diagram to power pumps in the basement.
- .5 Provide new breakers within the existing distribution panel to feed new mechanical equipment. Refer to single line diagram for reference.
- .6 Provide new LED lighting and lighting controls throughout the areas including the Gymnasium as shown. New lights shall replace existing luminaires within their locations. Existing line voltage switches shall be replaced with local switches with integral occupancy sensors.
- .7 Dispose of existing fluorescent tubes in accordance with local guidelines and provide disposal certificate.
- .8 Delete existing time switches for exterior lighting and replace them with central switching bank with photocell interface.

.3 Testing and Commissioning

Both the electrical and mechanical systems must be tested and commissioned to ensure the functionality and performance specified. For this purpose, it is required that support be provided by equipment manufacturers or other specialists (Independent Testing Organization, controls vendors or integrators, as applicable). The efforts of the various external parties must be coordinated for optimum outcomes, including timing and efficiency. All costs to be included in this tender.

REFERENCE DOCUMENTS

01 10 05 General Instructions.pdf
01 10 10 Administrative Procedures.pdf
01 11 40 Work Restrictions.pdf
22241-M Elec Dwgs IFT 2025-08-07.pdf
2025-08-07 - Elec Specs.pdf
2025-08-07 - Mech Specs.pdf
22241-M Mech Dwgs IFT 2025-08-07.pdf