



Subject: Additional Funding Operations Centre Roof Project

Department: Corporate Services

Division: Facilities/Parks

Report #: CMS-2021-009

Meeting Date: 2021-04-26

Recommendations

That report CMS-FP-2021-009, Additional Funding Operations Centre Roof Project, be received;

And that, Council approve additional funding from the General Capital Reserve in the amount of \$206,490. to cover the cost of required upgrades to the Public Works Operations Centre roof.

Background and Analysis

The Town's Operations Centre (OPC) is located at 500 C-Line. It is the home base for operations staff for roads, water works and parks, and is the location where Town trucks and heavy equipment are stored and maintained.

In the Spring of 2020, the roof was inspected by Criterium-Jansen Engineers and they concluded that the roof had reached its end of life and should be replaced. The Public Works Division proceeded to acquire quotes for the roof replacement from qualified roofing contractors. It became evident during this process that the design solutions that were being proposed by contractors would satisfy the immediate concerns of leaking but would be a short term extension of life expectancy. It also became evident that proceeding with the expenditure of \$120,000 needed more investigation to determine if the replacement of the roof membrane would be the most sustainable option and whether other analysis and recommendations should be considered. It was also felt that any life expectancy should take into consideration the longest possible warranty period and at a minimum of 25 years.

During the period since the initial roofing quotes staff have been involved in dealing with an ever-changing COVID environment that resulted in delays, restrictions and seasonal challenges outside of the optimal period for roof work.

It should also be noted that during this period the traditional public sector market pricing for roof replacements was also being impacted by COVID, i.e. supply of materials and labour challenges, this has translated into major increases in 2020 and continues to increase in 2021. Over the past 6 to 8 months the public sector roof budgeting has gone from \$10.00 to \$15.00 a square foot to an average of \$20.00 to \$25.00 a square foot.

In March of 2021 all building system maintenance associated with the Infrastructure Services Department were transferred to Community Services , Facilities and Parks Division, including the OPC. The division reviewed the file for the OPC and engaged roof expertise to complete a detailed inspection and analysis of the OPC roof to determine the most effective and sustainable long-term plan for the full roof replacement. This analysis included core sampling of the 10,000 sq ft service bay roof and the 2400 sq ft administrative office roof from the top membrane through to the existing insulation and steel decking. The detailed inspection also included a thermal scan of the existing roof to determine the presence of moisture within the roofing envelope.

The inspection and analysis confirmed that the roof was in a failed condition based on the presence of cracked ridges over the entire roof, thirteen (13) active leaks, the entire south perimeter has split open exposing wet phenolic foam insulation. The identification of phenolic foam insulation is a significant factor in the roof deterioration and failing process. The use of this insulation material is directly linked to premature deck corrosion on structural steel decking when the material becomes wet. It has also been observed over past years since the phenolic insulation was used (used between 1981-92) that the boards in contact with the insulation can shrink over time, creating gaps of up to an inch or more allowing for condensation conditions and the absorption of moisture at the edges of the insulation.

This analysis also confirmed that the original plan to install a single membrane (protective layer) over the existing roof would have extended the life of the roof however this would have trapped the wet insulation material underneath which would have caused further deterioration to the metal pan underneath the insulation resulting in more serious long-term issues with the actual building structure.

The overall conclusion for the long-term roof life expectancy based on the detailed analysis is that the existing roof as to be completely removed and replaced. The proposed replacement design would include a manufacturer's 30- year No dollar limit, leak free, materials, workmanship, and labour warranty, non-prorated with a no-charge annual follow-inspection.

It should also be noted that the roof design team and staff recommend that since we are proposing the complete replacement of the roof that such work be done to meet the current building code which would include fire rating of the roof for occupant safety.

In addition to the original scope of work, this scope includes replacing the roof over the administration offices (approx. 2400 sq ft). The roof analysis of this area also identified the presence of moisture within the phenolic foam insulation as well as ridges that will cause additional failure of the roof. The cost to replace this roof, which is included in the overall estimate, contributes approximately 20% of the overall cost. The original roof costing estimate was based solely on the service bay roof consisting of a 10,000 sq ft area.

The detailed estimated maximum cost to furnish all labour, materials, and equipment to replace approximately 12,400 square feet of roofing for the OPC is \$317,201 plus applicable taxes. The Department also recommends that a minimum contingency of \$6000 be allotted to cover any potential steel recoating or deterioration once the insulation is removed.

Strategic Alignment

Orangeville Forward – Strategic Plan

Priority Area: Sustainable Infrastructure

Objective: Maintaining Existing Assets

Sustainable Neighbourhood Action Plan

Theme: Corporate and Fiscal

Strategy: Create and Integrate sustainability principles into Town policies, processes and practices.

Notice Provisions

Not Applicable

Financial Impact

**Operations Centre Roofing Replacement-
Materials and Labour Maximum Estimate**

\$317, 201.23

Contingency – Potential Metal Deck Coating and/or

replacement (minimum) if required	6000.00
Sub-total	\$323,201.23
Applicable Taxes (Municipal Rebate)	3288.89
Less 2020/2021 Capital Budget IS- Operations Centre Roof	(\$120,000.00)
Total Additional Funding Required	\$206,490.12

Respectfully submitted,

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Attachment(s): Not Applicable