Director	CAO

COUNCIL AGENDA

Date: February 14, 2022 Item: 11.8

11.8

DISTRICT OF WEST VANCOUVER
750 17TH STREET, WEST VANCOUVER BC V7V 3T3

COUNCIL REPORT

Date:	February 2, 2022
From:	Mark Chan, Deputy CAO, John Wong, Senior Manager of Facilities & Assets and Ruby Clarke, Facilities Capital Project Manager
Subject:	Update on Municipal Hall Seismic Upgrades & Renewal Project
File:	0500-01

RECOMMENDATION

THAT the report titled "Update on Municipal Hall Seismic Upgrades & Renewal Project" dated February 2, 2022 be received for information.

1.0 Purpose

This report provides an update on the Municipal Hall Seismic Upgrades & Renewal Project ("the Project") including the anticipated completion date and projected costs for completion.

2.0 Legislation/Bylaw/Policy

There is no legislation/bylaw/policy directly related to the subject matter of this report.

3.0 Council Strategic Objective(s)/Official Community Plan

The Official Community Plan contains multiple supporting policies for the Project including: 2.1.9 regarding the protection of heritage buildings; 2.1.23 regarding the advancement of community energy efficiency and reduction of Green House Gas emissions; 2.4.24 regarding providing infrastructure for electric and low-emission vehicles and charging stations; 2.6.23 regarding incorporation of low-carbon energy systems in public projects; and 2.8.9 regarding maintaining and optimizing existing civic facilities and managing space to meet changing needs.

4.0 Financial Implications

The financial implications for the Project are set out in the Analysis section below.

5.0 Background

5.1 Previous Decisions and History

The detailed planning for the Project began in 2017. Council determined that following completion of the Police Services and Municipal Hall building ("PSMH"), the next phase for the Municipal Hall Precinct (i.e. 17th

Street and Fulton Avenue) was to start the Municipal Hall Seismic Upgrades & Renewal Project.

The primary rationale for the Project was that: the Municipal Hall and its building systems were at end of useful life as the building had never had a significant renovation; due to the age of the building (50+ years) and the unique design of the tower at Municipal Hall, the seismic performance was well below modern standards; and there could be a risk of damage to both the Municipal Hall and the newly constructed PSMH building thereby affecting the District's ability to provide essential services after a major seismic event.

Council approved funding each year through adoption of the District's Five Year Financial Plan Bylaws. The approved funding for each year and the total is set out below.

2017	2018	2019	2020	2021	TOTAL
$500,000	$900,000	$5,674,536	$8,350,000	$4,250,000	$19,674,536

Construction started on the Project in August 2019 with the Project divided into three main phases: Phase 1 – seismic upgrades; Phase 2 – building envelope and major building systems; and Phase 3 – interior modifications.

As with most renovations of old buildings, during the Project surprises were encountered that could only be discovered as excavation exposed underground site conditions, and walls and ceilings were opened up. Furthermore, some surprises were discovered due to inaccuracies in the original as-built drawings. The District has been able to address these surprises and absorb this additional scope into the Project.

Examples of these surprises are: the discovery of additional hazardous materials that will be removed from the Building; the discovery of unreinforced non-structural elements of the Building that will be seismically reinforced; and the strengthening of previously unknown unreinforced walls in the Council Chamber and throughout the main floor area of the Building. If undiscovered and unaddressed, these would have created significant risk to the safety of the public and staff at Municipal Hall.

As previously advised in the September 1, 2021, Council Report, upon completion the Municipal Hall building will have been reinforced with: 45+ truckloads of concrete; 250,000 lbs of steel reinforcing bars (i.e. rebar); and 100,000 lbs of steel bracing. The building will also deliver a major sustainability enhancement with a new window and upgraded envelope system, and electrification of the heating and cooling system estimated to reduce the building's annual Green House Gas emissions from 160 tonnes to an estimated 11 tones CO^2 (i.e. a 90%+ reduction).

6.0 Analysis

6.1 Discussion

Current Status of Construction

Phase – 1 Seismic Upgrades is now approximately 85% complete. The concrete shear walls for the tower building have been poured. The remaining structural work includes the connections of the existing concrete floor system to the new concrete shear walls and the seismic reinforcements on the east side of the building.

Phase 2 – Building Envelope and Major Building Systems is now approximately 80% complete. Installation of new window frames and windows on the ground floor and main floor of the east administration area is complete. New window frames and new windows for the second and third floors of the west tower is in progress. This will result in a major improvement in the thermal performance of the building. The building's air source heat pump, which is the primary heating and cooling system for the building, has been lifted onto the roof and the final connections are in progress. Other main building systems such as sprinklers, plumbing, lighting, building system controls, etc are being worked on now and will be completed in conjunction with Phase 3 – Interior Modifications.

Phase 3 – Interior Modifications is now approximately 30% complete. Occupancy in the ground floor offices and in the main floor Council Chamber and Administration areas is currently operational. The interior modifications for the Tower side of the Municipal Hall is in progress.

Schedule

At the September 13, 2021, Council Meeting, Council received a report titled "Update on Municipal Hall Seismic Upgrades & Renewal Project" ("the 2021 Council Report"). The 2021 Council Report was prepared before the August break and was based on information as of the beginning of July 2021.

The 2021 Council Report advised that the Project was anticipated to be completed around March 2022 with total funding of $19.7M. Based on the latest information from the District's construction manager (Scott Construction), the Project team now anticipates completing the Project by end of August 2022 and with additional funding requirements of $1.5M.

Despite the Project team's best efforts, the Project has been substantially delayed due to the following main factors:

- supply chain issues from Covid and worsened by the flooding in BC;
- lack of trades availability; and
- the worsening of the Covid-19 pandemic, including the Delta and Omicron variants.

The flooding and new Covid variants were not foreseen when Staff and Scott Construction prepared the projected completion date and anticipated costs required to complete the Project. Both the flooding and new Covid variants have significantly impacted the Project schedule and cost as explained below.

Supply Chain Issues

Supply chain issues continue to impact the Project with delays in manufacturing, international shipping and regional goods distribution. The Project has been dealing with significant supply chain issues since the beginning of the Covid pandemic (with the first Covid case a few months after the Project started construction in August 2019). These supply chain issues were exacerbated by the November 2021 Provincial Emergency resulting from the successive storms and flooding in the Fraser Valley and BC interior. The flooding resulted in the closure of every major highway across southern BC, and Metro Vancouver being landlocked from the rest of the Province. All rail service going to and from the Port of Vancouver was also halted. This created delays for shipments of essential goods and materials that are continuing to impact the Project at this time. The recovery effort and reopening of highways lasted months and heavily impacted goods distribution, with the Coquihalla Highway only recently reopened to regular traffic on January 19, 2022.

Trades Availability

The Project has been affected by the lack of trades willing to work on the North Shore. This has been a problem on the North Shore for many years, but was also exacerbated by Covid - most recently the Delta and Omicron variants, continued high levels of construction activity, and the flooding in the Fraser Valley. Staff also understand that some trades personnel have left the industry during the pandemic, and in some cases trades have cancelled their contracts for more lucrative work. This has further impacted the District's ability to attract trades to work on the Project.

Covid: Delta and Omicron

The most recent anticipated completion date and projected cost was prepared in July 2021, and took into account the Covid situation at the time. In July 2021, new Covid cases in BC were around 40 per day and Dr. Bonnie Henry was still planning to proceed to Step 4 (i.e. the final Step of the Province's 4 Step Covid Restart Plan) on September 7, 2021. Step 4 was described as a return to pre-pandemic life with "normal social contact", "increased capacity on large organized gatherings (i.e. concerts)", and "fully re-opened offices and workspaces".

The Covid situation in BC changed significantly in the months following July 2021.

- In late July, the Delta variant case counts surged, and on August 20, Dr. Henry announced that BC would not advance as expected to Step 4 of the Covid Restart Plan.
- On August 26, the case count for the Delta variant peaked at 889 (i.e. 20 times the case counts during the beginning of July 2021).
- The Delta variant had a significant impact on the Project team and trades as it came at a time when overall vaccination rates were lower, and the Delta variant resulted in stronger symptoms and longer periods of workforce absenteeism.
- The highly transmissible Omicron variant followed Delta, with an all-time high of 4,072 cases per day on December 31, 2021 (i.e. 100 times the case counts at the beginning of July 2021), with the Province indicating that many positive cases were still being unreported.
- Shortly after the December 31, 2021 case count peak, in early January 2022, Dr. Bonnie Henry advised businesses to prepare for *"as many as a third* [of their] *workforce at any one time*" becoming ill with Covid-19 and not able to come to work.

Compounding Effect

The impact of the above factors is compounding, and so results in an overall impact that is greater than the sum of its parts. The combination of these factors has resulted in substantial delays to the Project. Those delays then increased costs, beyond inflation, with impacts that are difficult to mitigate, as explained below.

In a typical construction project, the project team lines up the trades and materials deliveries well in advance according to a pre-set schedule. Materials arrive generally on time, and each successive trade(s) moves in, completes their work, and allows the next trade team(s) to carry on. This is the most time effective and cost efficient schedule, and maintains the "critical path" for the Project.

Due to the compounding impact of the above factors, it has been very difficult to maintain the construction schedule.

- Covid absenteeism has affected all levels of the Project team, including trades, architects, engineers, consultants, and District staff. This extends the time required to complete construction, and achieve timely approvals required during the construction process.
- Supply chain disruption meant that deliveries were not on time, and in some cases suppliers were not able to find materials, and also were not able to provide an ETA – estimated time of arrival creating further delay. Where possible, the Project team sourced alternative products, but sometimes at a higher cost and with

additional time required for approvals from the Project team. Where possible, materials were pre-purchased earlier to maintain the schedule, but sometimes with additional storage costs or expedited delivery costs.

- Rescheduling of trades was required, because sometimes trades were ready but materials were not delivered on time due to supply chain issues. Other times, materials were ready but the trades were not able to attend at the last minute due to Covid infections.
- When trades needed to be rescheduled, the rescheduling could not be done back-to-back, as the trades had other previous commitments, resulting in further delays. While developers with more resources might be able to reschedule trades earlier, as a relatively small project, the District does not have that leverage.
- Alternative trades also could not be secured due to the lack of available trades generally.

The above led to gaps in the schedule, which creates delay and increased costs.

A recent illustrative example is the schedule for installation of the elevator in the Project. The Project team requested that the elevator manufacturer re-schedule their installation date from mid-February 2022 to mid-March 2022 due to some delays in the Project schedule. The elevator manufacturer advised that their next available date is end of May 2022. The end of May date means that the elevator installation cannot be completed until middle of July 2022. This is a significant delay to the critical path as the elevator is a requirement for completion of the Project.

The elevator has already been purchased and is currently in storage. As the elevator is proprietary technology, only the manufacturer's team can install the elevator, and it is not possible to source other trades. The manufacturer also has limited staff available. While the District has used all efforts to request an earlier date, the District's leverage is limited as the Project's elevator is a single elevator with only five stops (floors), compared to a large commercial building project that might have 8 elevators and 40 stops.

Delays also create direct financial costs, for example, in the "General Conditions" costs for the Site Superintendent, Safety Officer, Project Manager, site trailers, storm water management, insurance, etc, which range from $80,000 to $100,000 per month. With the schedule delay from March 2022 to the now anticipated completion date of end of August 2022, the estimated cost impact for increased General Conditions is in the region of $500,000.

The trades shortage has also resulted in increased costs. In a normal competitive bid environment, the Project team is able to select the bid that has the best overall value. The Project team has had instances where no trades were willing to provide a quote. The Project team then needs to

amend the tender or find alternative procurement methods, creating delay and additional cost.

In some cases, the Project team only received one bid in response to a tender. If time allows, the Project team can retender; however, the Project team sometimes needs to accept the single bid, even though it is a higher price than normal because: 1. there are no alternatives available; and 2. the Project needs to maintain the critical path. In other cases, the Project team had to procure based on a higher "time and materials" basis instead of a fixed price, because trades would not commit to pricing in this uncertain environment, and there was no alternative to meet the critical path.

In addition to the above delays and cost impacts, there has also been substantial inflation in BC and Canada. Stats Canada announced on January 19, 2022, that Canada's Consumer Price Index increased at 4.8% on a year over year basis in December 2021. This is the fastest rate of increase for CPI for 30 years, since 1991.

While CPI has increased, the Project team's experience is that inflation for commercial construction has been even higher. This is evidenced by the Project's tenders coming in significantly higher than originally estimated by the Project team. This has also been seen in many of the District's other tenders and RFPs, and other municipalities' experiences. Some materials like wood, steel and glass have experienced double and triple digit percentage cost increases in the past few years.

It is true that a typical construction project will often encounter some of the above issues; however, the magnitude and frequency that has been recently experienced on the Municipal Hall Project is beyond what would reasonably be anticipated back in July 2021.

In conclusion, the above factors have led to the revised anticipated completion date of end of August 2022 and anticipated costs for completion as set out below.

Anticipated Costs for Completion

The abovementioned delays, inflation and associated cost impacts have resulted in a higher projected cost to complete the Project. The Project team is currently projecting an additional $1.5M in required funding to complete the Project. The Project team and Chief Financial Officer recommend that the $1.5M be funded from the District's Capital Facilities Fund, in particular, by deferring some of the 2022 Capital Facilities Asset Preservation Projects from the proposed 2022 budget. This would take the total approved funding to $21.175M (from the previous approved funding of $19.675M.

By way of background, as referred to in the September 1, 2021, Council Report titled "Municipal Hall Seismic Upgrades & Renewal Project", in July 2019, the District obtained a construction cost estimate shortly before commencing construction. That 2019 cost estimate was used to develop

a total project cost estimate of $22.3M, and took into account the latest design, partial tendering of contracts, and constructability advice from the District's independent construction manager.

Staff have been, and continue to use every available opportunity to mitigate the cost impacts, and value engineer where possible including the following:

- re-engineering or reducing scope for remaining portions of the work to minimize costs while achieving the necessary performance;
- pre-purchasing items where possible;
- identifying lower cost solutions or alternative products that can be substituted without compromising essential elements of the Project;
- ensuring that only the necessary items required for opening are purchased at this time, and deferring less critical items into the future; and
- identifying work that can be coordinated and managed by internal staff to reduce third party costs.

6.2 Sustainability

The Project provides significant sustainability benefits in terms of reduced GHG emissions, the retention and renewal of an existing building rather than demolition, and social sustainability through the major enhancements in public safety and business continuity for the community.

6.3 Public Engagement and Outreach

As this report is to be received for information, no specific public engagement and outreach has been conducted for this report.

7.0 Conclusion

Upon completion of the Municipal Hall Seismic Upgrades and Renewal Project, the District will have achieved:

- within a 5 year period, a new Municipal Precinct, with an essentially new seismically upgraded Municipal Hall that will safely serve the community for decades, a recently opened post-disaster standard Police Services and Municipal Hall Building (PSMH); and a Fire Hall No.1 that has a seismically upgraded roof and apparatus bay;
- replacement of all end of life Municipal Hall building operating systems with modern, energy efficient systems;
- new Municipal Hall building envelope with modern, high thermal efficiency windows;
- 90%+ reductions in GHG emissions;
- the sensitive restoration and sustainable renewal of a recognized heritage building;

- business continuity for the community by significantly improving the structural integrity and safety of the District's key municipal buildings (Police, Fire and Municipal operations);
- significant safety improvements through the removal of all known Hazardous Materials in the Municipal Hall building;
- mitigation of the risk of damage to the adjacent PSMH Building in the event of a major seismic event; and
- an up to date and flexible office environment with reduced operating costs and reduced capital costs for now and the future.

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