

TO: FINANCIAL MANAGEMENT COMMITTEE (FMC)
FROM: GENERAL MANAGER ENGINEERING
SUBJECT: **SU: MAJOR ENGINEERING PROJECTS – AS OF JUNE 2024**
PURPOSE: To provide an update on select Engineering Projects.

RECOMMENDATION

THAT the report titled “SU: Major Engineering Projects – As of June 2024” dated July 16, 2024, be received for information.

1.0 POLICY SECTION

The advancement of these projects aligns with the community pillar of the Burnaby Strategic Plan and is further supported by the Burnaby Transportation Plan and various Asset Management Plans.

2.0 BACKGROUND

The Engineering Department has identified the following projects for regular Committee updates. These projects were selected to represent a broad cross section of the engineering annual work plan and correspond with public interest.

1. Marine Drive: Greenall Avenue to Strathearn Avenue
2. Sidewalk Expansion Program - Alpha Secondary School
3. Sidewalk Expansion Program - 6th Street
4. Burnaby Lake Pedestrian Bridge Overpass
5. SFU Evacuation Route
6. Burnaby Lake Southeast Greenway

Throughout a project lifecycle, engineering projects progress through several phases. In the interest of annual reporting, these phases can be summarized into design and construction.

2.1 Design

In this phase, the design is developed to a level of detail suitable for construction. General tasks include preliminary design, environmental and regulatory permitting, interested parties' engagement, detailed design, and construction procurement.

2.2 Construction

In this phase, the plans developed in the design phase are carried out by the successful contractor. Throughout construction, the City monitors construction progress and liaises with interested parties.

Upon completion of a successful project, the new assets are handed over to the Infrastructure and Public Works divisions to operate and administer the programs and/or services.

3.0 GENERAL INFORMATION

The following is a visual representation of the schedules of major Engineering projects identifying the development phases outlined in Section 2.0:

Project Name	2024				2025				2026				2027				2028				Est. Construction Complete
	Q1	Q2	Q3	Q4																	
Marine Drive: Greenall Avenue to Strathearn Avenue																					Q4 2026
Sidewalk Expansion Program - Alpha Secondary School																					Q2 2026
Sidewalk Expansion Program - 6th Street																					Q1 2026
Burnaby Lake Pedestrian Bridge Overpass																					Q4 2025
SFU Alternate Access Route																					Q4 2024
Burnaby Lake Southeast Greenway																					Q4 2026

Design
Construction

3.1 Marine Drive: Greenall Avenue to Strathearn Avenue

Background and scope: This project will bring Marine Drive from Greenall Avenue to Strathearn Avenue to the urban street standard, including curb and gutter, sidewalk on both sides of the road, bus route pavement, new bus stops, intersection upgrades, new streetlights, boulevard, and street trees as required.

Phase 1 Section of Marine Drive from Boundary to Greenall (completed) has lane widths of 3.5m that meet TAC standards and Burnaby design criteria. Based on public feedback received during Phase 1, the lane widths for Phase 2 and 3 have been revised to 3.9m.

Solid waste and recycling collection will remain on Marine Drive due to the limited lane access for collection vehicles.

Schedule: The design phase of this project is complete apart from a recent traffic department request for a signal at Patterson Ave and pre-ducting at other intersections for future RRFB crosswalks. The construction phase is expected to start in Q3/Q4 2024. This project is on schedule.

Total estimated value including design and overhead: \$13,100,000.

Spent to date: \$202,000.

Percentage completion to date: 25%

3.2 Sidewalk Expansion Program: Alpha Secondary School Sidewalk Improvements

Background and scope: Project scope includes new sidewalks, curb and gutter, front boulevard with street trees, utility upgrades, IT communication conduit, and streetlight upgrades.

Schedule: This project has been tendered, awarded and construction is set to begin June 2024. An Archaeology monitoring plan has been implemented which satisfies the requirements of the Indigenous Relations and Reconciliation department and the local First Nations.

Total estimated value including design and overhead: \$12,500,000.

Spent to date: \$454,000.

Percentage completion to date: 20%

3.3 Sidewalk Expansion Program: 6th Street

Background and scope: Project scope includes new sidewalks, curb and gutter, front boulevard with street trees, multi-use path from Burriss Street to Nursery Street, IT communication conduit, and streetlight upgrade.

Schedule: Construction initially commenced in Q4 2023; however, was delayed to allow for Provincial Heritage permits issuance. Project re-started April 15 except for the area along 6th Street between Nursery Street and Burriss Street to allow the First Nations the opportunity to conduct a Post Impact Assessment. This preliminary study will be undertaken to determine the potential presence of undocumented archeological sites within the area prior to proceeding with construction of this segment.

Total estimated value including design and overhead: \$6,000,000.

Spent to date: \$1,035,000.

Percentage completion to date: 35%

3.4 Burnaby Lake Pedestrian Bridge Overpass

Background and scope: The pedestrian-cyclist overpass and associated pathways will support multiple regional initiatives and strengthen the broader regional active

transportation network. This includes improving connectivity with Metro Vancouver’s Central Valley Greenway system and TransLink’s Major Bikeway Network. This project was identified as part of the City’s Transportation Plan.

Schedule: Preliminary construction activities on the abutments have started and design optimization for the bridge structure is ongoing, 60% design is complete, many improvements have been made upon the initial design and structural steel pricing has been initiated while design progresses to 90%. The project is expected to be completed in Q4 2025.

Total estimated value including design and overhead: \$19,000,000.

Spent to date: \$3,380,000.

Percentage completion to date: 20%

3.5 SFU Alternate Access Route

Background and scope: Design and construct a 4.0 metre paved emergency route to connect Simon Fraser University (SFU) and Mintara Restaurant parking lot in Burnaby Mountain Park. This emergency route will be designed to allow downhill evacuation for users of all ages, abilities, and ambulance usage. The project also includes the installation of a Fortis gas line from University Drive to the restaurant. Current design iterations consider limited ground disturbance to minimize archaeological and urban forest impacts.

Schedule: Tender closed on May 30 and the lowest bid amount was 25% higher than the consulting engineers estimate of \$2,000,000. Construction is expected to begin in Q3 2024. The project is expected to be completed in Q4 2024.

Total estimated value including design and overhead: \$2,500,000.

Spent to date: \$131,000.

Percentage completion to date: 10%

3.6 Burnaby Lake Southeast Greenway

Background and scope: The pedestrian-cyclist pathway will support multiple regional initiatives and strengthen the broader regional active transportation network. This includes improving connectivity with Metro Vancouver’s Central Valley Greenway system and TransLink’s Major Bikeway Network. This project was identified as part of the City’s Transportation Plan. The project consists of a feasibility study, followed by greenway widening, paving and culvert and drainage replacement and upgrades.

Schedule: Feasibility study is complete. Phase 1 base paving to be complete Q3 2024 contingent upon Metro Vancouver and BC Hydro permitting. Phase 2 culvert and drainage upgrades with final paving estimated completion Q4 2026.

Total estimated value including design and overhead: \$6,000,000.

Spent to date: \$207,000.

Percentage completion to date: 5%

4.0 COMMUNICATION AND COMMUNITY ENGAGEMENT

Not applicable.

5.0 FINANCIAL CONSIDERATIONS

Funding for these major Engineering projects is included in the 2024-2028 Capital Plan.

Respectfully submitted,

May Phang, P.Eng. General Manager Engineering

REPORT CONTRIBUTORS

This report was prepared by the following individuals:

- Louise Huang, P.Eng., Senior Engineer Project Management
- Fernando Imola, P.Eng., Engineer Project Management
- Amer Nawaz, P.Eng., Senior Engineer Project Management
- Chris Whitlock, P.Eng., Senior Engineer Project Management
- Ghazi Razvi, P.Eng., Senior Engineer Project Management
- Chris Stacey, P.Eng., Director Engineering Projects,
- Dakshin Gunawardana, Senior Manager, Engineering Business Operations