



transportation
investment
corporation

Monthly Status Report

Reporting Period: October 2021

1. Introduction

1.1 Project Overview

The Broadway Subway Project (“BSP” or “the Project”) is a 5.7-kilometre Advanced Light Rapid Transit (ALRT or SkyTrain) extension to the existing Millennium Line SkyTrain system from its current terminus at VCC-Clark Station to a new western terminus station at Arbutus Street and West Broadway. The Project scope includes:

- 700 m of elevated guideway extending west from the existing VCC-Clark Station
- 5 km of underground tunnel
- 6 new underground stations:
 - Great Northern Way – Emily Carr Station;
 - Mount Pleasant Station;
 - Broadway – City Hall Station – designed to integrate with the Canada Line Broadway-City Hall Station;
 - Oak – VGH Station;
 - South Granville Station;
 - Arbutus Station – designed to allow for a future phase of investment to connect rapid transit to UBC.

The Broadway Subway is scheduled to open in 2025.

Additional information and updates about the Project can be found on the Project’s website at <https://www.broadwaysubway.ca/>.

1.2 Project Delivery

Transportation Investment Corporation, a provincial Crown corporation, is delivering and overseeing this \$2.827 billion Project. The Project is being delivered under B.C.’s Community Benefits Agreement and the skilled trades workforce will be provided by B.C. Infrastructure Benefits Inc.

Broadway Subway Project Corporation (BSPC) has been selected as the design-build contractor.










The Broadway Subway Project is a key part of the rapid transit program in Metro Vancouver’s Mayors’ Council 10-Year Vision. The Vision is funded by the governments of B.C. and Canada, TransLink, and City of Vancouver. Once constructed, the Broadway Subway will be integrated with the regional transit network and operated and maintained by TransLink.

1.3 Project Goals

Based on the mandate and results of consultation, seven primary goals have been identified for the Project:

- **Transportation:** Fast, reliable, and efficient service that meets current and future capacity needs and integrates with the regional transit network and other modes of transportation.
- **Financial:** Affordable and cost-effective.
- **Environment:** Attracts new riders and reduces vehicle kilometres travelled.
- **Urban Development:** Supports current and future land use development along the Broadway Corridor and integrates with the surrounding neighbourhoods through high-quality urban design.
- **Economic Development:** Creates jobs and facilitates the efficient movement of goods and services during operation.
- **Social and Community:** Safe, secure, and accessible service that improves access to rapid transit for all, while managing impacts on heritage and archaeology.
- **Deliverability:** Constructible and operable.

2. Project Dashboard

		Objectives	Project Status	Comments
Project Delivery	Scope	Project delivered within the approved scope.		<ul style="list-style-type: none"> The delivery is within scope. The Project includes the delivery of a primarily tunneled extension to the existing Millennium Line SkyTrain system from VCC-Clark Station to a new station at Arbutus Street and is on track.
	Schedule	Project delivered within the approved schedule.		<ul style="list-style-type: none"> The start of piling activities were delayed at some construction locations. Recovery measures are being implemented by Broadway Subway Project Corporation.
	Budget	Project delivered within the approved budget of \$2.827 billion.		<ul style="list-style-type: none"> The project spending for the month of October 2021 was \$38.1 million and total Project spending to date is \$587.4 million. Total Federal Recoveries to date are \$148.2 million. The Project is forecast to be delivered within budget.
	Safety	Take every reasonable step to ensure that work is performed safely and in compliance with all applicable safety regulations, and in accordance with government policy.		<ul style="list-style-type: none"> The health and safety plan is being implemented. Regular project site visits are being performed to oversee health and safety performance. A communicable disease plan is being implemented. There has been one lost time injury for the Project. Lost Time Injury Frequency Rate (LTIFR) for the Project is 0.49, this is less than Worksafe BC average of 2.98.
	Quality	Implement and maintain an effective Quality Management System.		<ul style="list-style-type: none"> Quality auditing of select work activities and processes continues.
	Environmental	Ensure work is performed in an environmentally responsible manner.		<ul style="list-style-type: none"> Site specific environmental workplans are being followed. Weekly environmental monitoring reports being submitted. On-site quantitative noise monitoring initiated. Updated contaminated sites management plans for GNW and MP, and BCH submitted. Province led audits of environmental program initiated.
	Design and Construction	Provide design and technical oversight, coordinate and manage activities on site, and conduct compliance reviews.		<ul style="list-style-type: none"> Design and Construction activities ongoing as per the recovery schedule. Excavation, waterline installation, piling and utility work is progressing.
	Community Benefits	Work collaboratively with BC Infrastructure Benefits Inc. (BCIB) to successfully implement the Community Benefits Agreement (CBA).		<ul style="list-style-type: none"> Ongoing coordination with BCIB on permitting and future BCIB resource requirements.
Partners / Stakeholders	Indigenous Groups	Continue to build and maintain a positive collaborative working relationship.		<ul style="list-style-type: none"> The Indigenous Groups continue to engage in relation to the Project and cultural recognition. Continued Project-specific agreement discussions with Indigenous Groups.

	Third Parties	Continue to build and maintain positive relationships with Project Partners and other third parties.	●	<ul style="list-style-type: none"> Ongoing third party engagement for successful implementation.
	Public and Stakeholder Engagement	Continue to build and maintain positive relationships with the community and other stakeholders.	●	<ul style="list-style-type: none"> Ongoing engagement with local businesses, stakeholders, residents, and the public continued.

Status	Description
●	Managing critical issues, negotiating resolution; action required immediately
●	Managing some issues, negotiating resolution; action required in the near term
●	On track; no action required

3. Project Documents and Achievements to Date

Project Delivery	Project Planning and Development	<ul style="list-style-type: none"> Business Case released (2018). Cost Report released (2018). Project Overview released (2018). Risk Report released (2018). Strategic Options Whitepaper released (2018).
	Environmental	<ul style="list-style-type: none"> Environmental technical studies complete (2017-2018). Environmental Socio-Economic Report complete (2020). BSPC Construction Environmental Management Plan finalized (2021). Environmental Workplans complete (2021).
	Design and Construction	<ul style="list-style-type: none"> Geotechnical studies complete (2016-2017). Reference concept design complete (2018). Traffic modelling complete (2017-2019). Geotechnical Subsurface Baseline Report complete (2019). Geotechnical investigations commenced (2020). Building abatement complete (2021). Building demolitions at station sites complete (2021). Piling complete at Mount Pleasant Station and Broadway City Hall (2021).
	Province/Other Works	<ul style="list-style-type: none"> Tunnel Boring Machine power – BC Hydro (2019). Propulsion Power Substations including upgrade to dedicated power at VCC-Clark Station – BC Hydro (2019). Utility relocate at Main Street – TELUS (2019).

Partners/ Stakeholders		<ul style="list-style-type: none"> • Utility relocates at Great Northern Way – TELUS/FortisBC/BC Hydro (2019). • Civil construction and utility relocate at Arbutus and Cambie – TELUS (2020). • Trolley overhead relocations of bus routes 14, 16, and 17 – Coast Mountain Bus Company (2020). • Trolley overhead removals of trolley infrastructure on Broadway – Coast Mountain Bus Company (2020). • Utility relocate at Cambie – FortisBC (2020). • Electrical duct utility relocate at South Granville and Arbutus – City of Vancouver (2021).
	Community Benefits	<ul style="list-style-type: none"> • BCIB Contractor and BCIB Subcontractor Agreements in the RFP (2019). • Received BSP appendix to CBA (2019/2020). • Execution of the BCIB Contractor Agreement (2020). • Granted subcontractor permits (2020-2021). • BCIB labour supply ongoing for the Project (2021).
	Third Parties	<ul style="list-style-type: none"> • Memorandum of Understanding – City of Vancouver (2017). • Memorandum of Understanding – TransLink (2018). • Canada Line Amending Agreement – InTransit BC Phase 1 (2019). • South Granville Station Integration Agreement – PCI (2019). • Vancouver Municipal Agreement – City of Vancouver (2020). • Metro Vancouver Accommodation Agreement (2020). • Broadway Subway Project Support Agreement – TransLink (2020). • Canada Line Amending Agreement – InTransit BC Phase 2 (2020). • Integration Agreement – TransLink (2020). • Great Northern Way Station Integration Agreement – PCI (2020).
	Indigenous Groups	<ul style="list-style-type: none"> • Capacity Agreement for the Environmental and Socio-Economic Review (2018). • Contracting and employment requirements finalized (2020).

	<p>Public and Stakeholder Engagement</p> <ul style="list-style-type: none"> • Phase 1 and 2 engagement (led by TransLink and City of Vancouver) <ul style="list-style-type: none"> ○ Phase 1 engagement (December 2016 – February 2017). ○ Phase 2 engagement (May 2017 – July 2017). • Broadway Subway Project Engagement (Province-led) <ul style="list-style-type: none"> ○ Local business survey (July 2019 – December 2019). ○ Community engagement (October 2019 – December 2019). ○ Opened Community Office (Fall 2019). ○ Established 24/7 construction information line (December 2019). • Station Design Advisory Process (BSPC-led) <ul style="list-style-type: none"> ○ First engagement occurred (November-December 2020). ○ First engagement summary report released (2021). ○ Second engagement (April 29-May 12, 2021).
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4. October Highlights and Three Month Lookahead

4.1 Safety

Scope:	<ul style="list-style-type: none">• Manage relevant Project health and safety management systems.• Oversee Project goals, objectives, and performance metrics.• Ensure health and safety roles and responsibilities are clearly defined.• Plan each Project activity to ensure the safety of workers and the public.• Coordinate health and safety activities with all relevant stakeholders.• Measure health and safety performance.• Ensure compliance with WorkSafeBC, municipalities, and government agencies.• Monitor management systems for continual improvements.
Monthly Highlights:	<ul style="list-style-type: none">• Weekly Project site visits performed to observe compliance and areas of improvement.• There has been one lost time injury and three medical treatment injuries for the project. Lost Time Injury Frequency Rate (LTIFR) for the Project is 0.49, this is less than WorkSafe BC average of 2.98.
Three Month Lookahead:	<ul style="list-style-type: none">• Monitor changes to COVID-19 requirements and revise associated plans.• Provide health and safety support to involved parties.• Perform regular Project site health and safety inspections.• Conduct a Project health and safety audit in January 2022.

4.2 Quality

Scope:	<ul style="list-style-type: none">• Establish quality management Project objectives and performance measures.• Manage Project quality management activities.• Monitor relevant quality management performance metrics.• Outline relevant quality management processes and activities.
Monthly Highlights:	<ul style="list-style-type: none">• BSPC quality audits on Design Management, Traffic Management, Construction Management, and Systems Management.• Performance of Quality Management System as per Project Agreement.
Three Month Lookahead:	<ul style="list-style-type: none">• Audits on Systems Quality Management and Communications, Community, and Business Relations Quality Management.• Continue quality system audits and surveillances.

4.3 Environmental

Scope:	<ul style="list-style-type: none">• Oversee delivery of measures to manage risk identified in the Environmental and Socio-Economic Review (ESR).• Review environmental submissions including the Construction Environmental Management Plan (CEMP) and Environmental Work Plans (EWPs).• Monitor CEMP implementation through review of weekly environmental monitoring.
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	<ul style="list-style-type: none"> Support engagement with Indigenous Groups on CEMP implementation.
Monthly Highlights:	<ul style="list-style-type: none"> Contaminated site management information for all stations received. Weekly meetings between the Province and BSPC environmental team. CEMP implementation and weekly/monthly reporting. Archeology monitoring/ site specific archaeology impact assessment 80% complete. Permits for COV water management and Disposal at Sea advanced. Auditing of environmental program initiated. Site-specific noise monitoring underway.
Three Month Lookahead:	<ul style="list-style-type: none"> On-site environmental surveillance during construction (monthly). Submissions for water management permits (ground water declarations) for remaining station locations planned for fall 2021. Monitoring volumes of contaminated soils from station locations requiring disposal. EWP to support Tunnel Boring Machine installation and operation Reporting on quantitative noise monitoring.

4.4 Design and Construction

Scope:	<ul style="list-style-type: none"> Provide technical input to the procurement processes. Develop a design concept, technical requirements/specifications, and related technical studies for the Project. Conduct Project related traffic operations modelling, data collection, and other related engineering services. Conduct compliance reviews of work by BSPC. BSPC Design and Construction Activities include: <ul style="list-style-type: none"> Non-Systems Design Systems Design Enabling Works including site preparation, building demolitions and utility relocations Construction of 6 Stations Elevated Guideway Construction Underground Guideway Construction by tunnel boring machine Systems Installation Testing and Commissioning
Monthly Highlights:	<ul style="list-style-type: none"> Continuing Non-Systems and Systems Design. Numerous traffic diversions are being implemented throughout the corridor to accommodate construction. Piling is complete at Mount Pleasant and Broadway City Hall, underway at Oak-VGH and South Granville. Total piling 52% complete. Utility work is continuing throughout the corridor. Excavation continuing at Great Northern Way (71% complete) and Mt. Pleasant.
Three Month Lookahead:	<ul style="list-style-type: none"> Non-Systems and Systems Design continues. <u>Elevated Guideway</u> Install foundations for guideway columns and bents.

	<ul style="list-style-type: none"> • Modify QLT parking lot to be able to construct guideway foundations and columns within the footprint of the parking lot. • Utility relocations has begun. <p><u>Great Northern Way – Emily Carr:</u></p> <ul style="list-style-type: none"> • Continue excavation and piling for Tunnel Boring Machine laydown area and station construction at Great Northern Way. • Suspend various utilities within the excavation. <p><u>Mt. Pleasant:</u></p> <ul style="list-style-type: none"> • Girder and decking install. • Bulk excavation. <p><u>Broadway - City Hall:</u></p> <ul style="list-style-type: none"> • Shallow excavation, girder, and decking install. • Bulk excavation. <p><u>Oak – VGH:</u></p> <ul style="list-style-type: none"> • Piling, shallow excavation, girder, and decking install. <p><u>Granville:</u></p> <ul style="list-style-type: none"> • Piling, shallow excavation, girder, and decking install. <p><u>Arbutus:</u></p> <ul style="list-style-type: none"> • Start piling program. • Shallow excavation, girder, and decking install.
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4.5 Indigenous Groups

Scope:	<ul style="list-style-type: none"> • Consultation and engagement with Indigenous Groups on the Environmental and Socioeconomic Review and other Project materials as well as cultural recognition at stations.
Monthly Highlights:	<ul style="list-style-type: none"> • Share Project updates and materials with Indigenous Groups, , including environmental management plans. • Continue discussions with Indigenous Groups on art and cultural recognition. • Reduce barriers to Indigenous candidate registration.
Three Month Lookahead:	<ul style="list-style-type: none"> • Ongoing information sharing, issues identification and resolution, and identification of Project-related opportunities for Indigenous Groups. • Engagement with Indigenous Groups related to art and cultural recognition at stations. • Work with Indigenous Groups to identify training programs that support Project employment and update labour forecasting.

4.6 Third Parties

Scope:	<ul style="list-style-type: none"> • Engage with TransLink, the City of Vancouver, PCI, InTransit BC, and other third parties during the Project implementation phase. • TransLink Agreement. <ul style="list-style-type: none"> ○ Broadway Subway Project Support Agreement. • Municipal Agreement. <ul style="list-style-type: none"> ○ Vancouver Municipal Agreement with the City of Vancouver.
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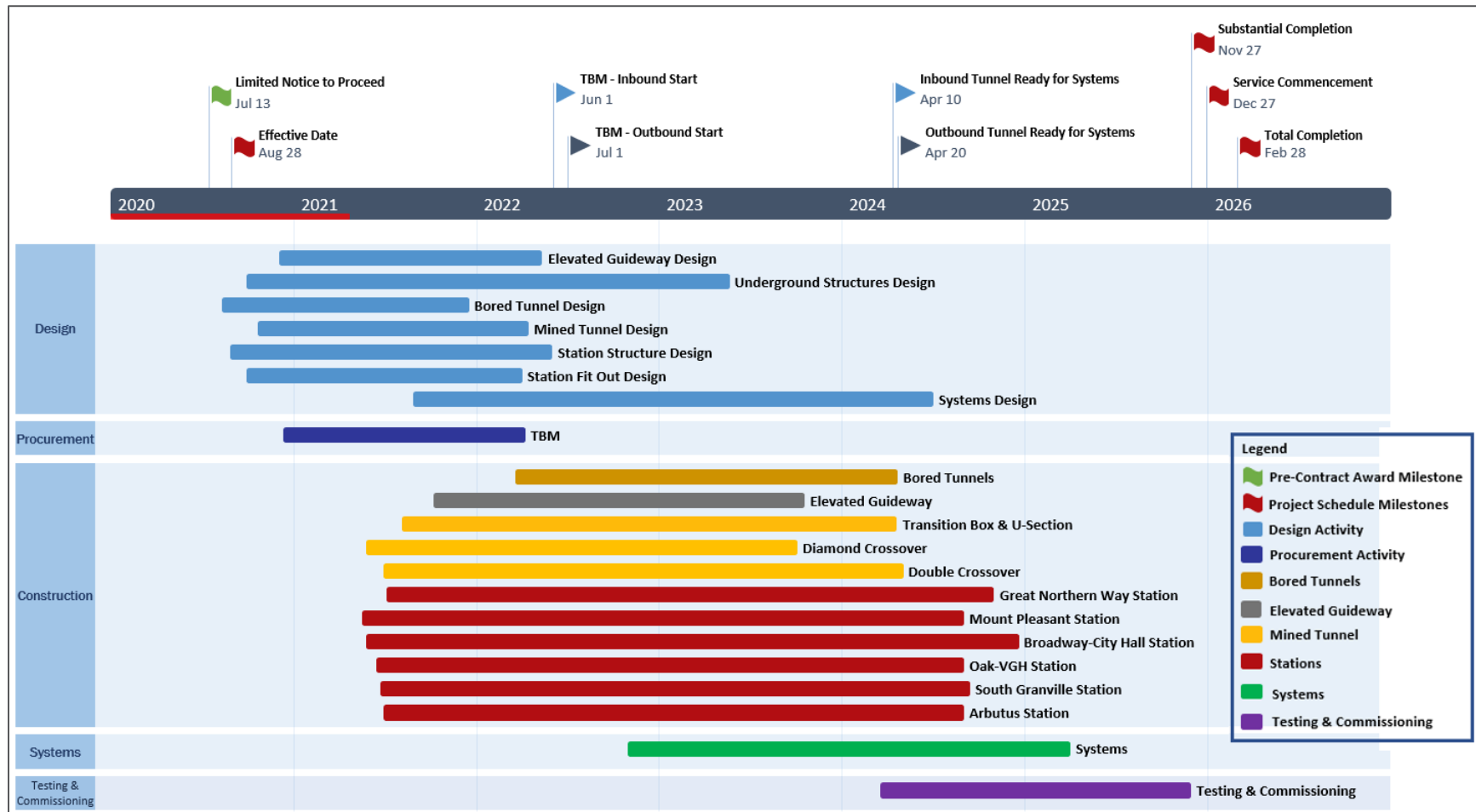
	<ul style="list-style-type: none"> • Agreements with InTransit BC and TransLink for technical integration of the new Millennium Line Broadway-City Hall Station with the existing Canada Line Broadway-City Hall Station. <ul style="list-style-type: none"> ○ Canada Line Amending Agreement – InTransit BC Phase 1 (between TransLink and InTransit BC). ○ Canada Line Amending Agreement - InTransit BC Phase 2 (between TransLink and InTransit BC). ○ Integration Agreement with TransLink. • PCI Agreements. <ul style="list-style-type: none"> ○ South Granville Station Integration Agreement with PCI. ○ Great Northern Way Station Integration Agreement with PCI. • Accommodation Agreement with Metro Vancouver.
Monthly Highlights:	<ul style="list-style-type: none"> • Continued to engage third parties to ensure successful implementation of executed agreements.
Three Month Lookahead:	<ul style="list-style-type: none"> • Finalize design coordination with PCI. • Oversight of integration. • Coordination of interface between BSPC and third parties.

4.7 Public and Stakeholder Engagement

Scope:	<ul style="list-style-type: none"> • Manage ongoing public and stakeholder communications and community and business relations.
Monthly Highlights:	<ul style="list-style-type: none"> • Distributed construction notifications, responded to public and stakeholder enquiries, and met with businesses and stakeholders – all materials available on website. • Held initial meeting of the traffic advisory group. • Over 10,000 members of public receiving Project notifications • Responded to 119 public inquiries.
Three Month Lookahead:	<ul style="list-style-type: none"> • Provide progress updates on traffic deck construction and utility relocations. • Celebrate start of construction of the elevated guideway and completion of the first traffic deck. • Regular meetings with the traffic advisory and Arbutus Schools Traffic Liaison groups; establish Health Precinct advisory group. • Ongoing meetings and correspondence with local businesses, residents, and key stakeholders, construction notifications, and responses to public enquiries.

5. Schedule

The following schedule depicts the estimated deliverables, milestones, and timelines from the design to commissioning phase of the Project.



6. Project Photos



Figure 1: Great Northern Way-Emily Carr Station: Excavating the transition to the face of the portal tunnel



Figure 2: Mount Pleasant Station: Shallow excavation for decking install



Figure 3: Broadway City Hall Station: Installation of piles for traffic decking



Figure 4: Oak VGH Station: Installation of piles for traffic decking



Figure 5: South Granville Station: Relocation of utilities and the installation of piles for traffic decking



Figure 6: Arbutus Station: Relocation of utilities and installation of a temporary water pipe