
**CITY OF VANCOUVER
DEVELOPMENT, BUILDINGS, & LICENSING**

**DEVELOPMENT PERMIT STAFF COMMITTEE
MEETING
February 10, 2021**

**FOR THE DEVELOPMENT PERMIT BOARD
February 22, 2021**

BROADWAY SUBWAY STATIONS (ADVICE ONLY)

MLH/BDC/AEM/KI

Present:

J. Greer (Chair), Development Services
J. Olinek, Urban Design & Development Planning
J. Turecki, Engineering Services

Also Present:

M. Lee-Hunt, Rapid Transit Office
S. Brown, Rapid Transit Office
K. Spaans, Urban Design & Development Planning
J. Grottenberg, Special Projects Branch
C. Lyford, Park Board
A. Maness, Landscape
B. Casidy, Development Services
K. Imani, Development Services

PROPONENT:

Broadway Subway Project Corporation
Suite 2300, Bentall 5, 550 Burrard Street
Vancouver, BC, V6C 2B5

PROPERTY OWNER:

Transportation Investment Corporation (TI Corp)
Suite 1750 – 401, West Georgia Street
Vancouver, BC, V6B 5A1

ARCHITECT:

IBI Group Professional Services (Canada) Inc.
Suite #700 – 55 St Clair Ave W,
Toronto, ON, M4V 2Y7

ARCHITECT:

DIALOG BC Architecture Engineering Interior
Design Planning Inc.
Suite 406 – 611 Alexander Street
Vancouver, BC, V6A 1E1

EXECUTIVE SUMMARY

● Proposal: To develop six new underground SkyTrain stations and transit plazas as part of the Broadway Subway Project. Stations locations are as follows: GNW- Emily Carr, Mount Pleasant, Broadway City Hall (interchange station integrated with the existing Canada Line), Oak – VGH, South Granville and Arbutus.

Note: The project is being delivered by the Province, therefore does not require a development permit and instead follows the Design Advisory Process (DAP). The Province of British Columbia is leading the procurement and delivery of the Broadway Subway Project (BSP) therefore a development permit is not required. Instead, the BSP moves through a shadow process called the Design Advisory Process (DAP), the same process undertaken by the City for the review of the Canada Line Stations.

See Appendix A All Stations Recommendations and Considerations
 Appendix B Station Specific Recommendations and Considerations
 Appendix C Architectural and Landscape Drawings – Great Northern Way Station
 Appendix D Architectural and Landscape Drawings – Mount Pleasant Station
 Appendix E Architectural and Landscape Drawings – Broadway – City Hall Station
 Appendix F Architectural and Landscape Drawings – Oak – VGH Station

Appendix G Architectural and Landscape Drawings – South Granville Station

Appendix H Architectural and Landscape Drawings – Arbutus Station

Appendix I Proponents Design Rationale

Appendix J Public Engagement Report

● **Issues:**

1. Urban integration, overbuild, and response to critical Municipal Guidelines principles;
2. Interface with and quality of the public realm; and,
3. Response to context and neighbourhood character.

DEVELOPMENT PERMIT STAFF COMMITTEE RECOMMENDATION: SUPPORT

THAT the Board SUPPORT the subway station designs as submitted, the plans and information forming a part thereof, thereby endorsing the development of the Broadway Subway Station Project, subject to the following recommendations:

1.0 Prior to the City's receipt of Project Co.'s Design Advisory Process (DAP) submission #2, revised drawings and information shall be submitted to the satisfaction of the Director of Planning, clearly indicating:

1.1 design development to improve urban integration and facilitate future overbuild of the station sites to ensure that they contribute to the urban character of their contexts, and provide for the future evolution of Broadway neighbourhoods following the Broadway Plan process. The following strategies must be integrated into the design of the stations:

- i. absolutely minimise the extent of the station footprint as practical, especially station infrastructure located below grade (such as foundation structure, servicing and ventilation shafts) as well as fire and life safety equipment in order to minimise the structure requirements to span the station extents by future development overbuild; and
- ii. where future development is contemplated relocate rooftop equipment (such as condensers) so that it does not significantly encumber or limit the development potential of future overbuild above the station. Where this is not possible on opening day, make reasonable provisions to futureproof relocation to below grade rooms or vertically on the flanking elevation of the station exterior.

Note to Proponent: At Broadway City Hall station, ensure considerations for the future development of the Office Accommodation Program (OAP) are incorporated per the direction provided by the City's REFM department, most notably the provision for structure to support development above and removal of rooftop condensers, knock-out panels temporary service parking and emergency exit relocation.

For stations where future development is required, provide a detailed code compliance report outlining an adequate fire separation strategy between the station and future development including any other fire and life safety requirements (i.e. fire protection of condensers, sprinklering requirements, alarm system(s)).

1.2 design development to improve the utility, expression, and civic experience of the public realm outside all stations, including enhanced seating, weather protection and landscape treatment. Specific attention should be given to the following:

- i. the treatment of the ventilation grilles in plaza spaces where they cannot be made flush with grade;

Note to Proponent: Every effort should be made to ensure that ventilation grilles within the public realm are made flush with grade. Where this is demonstrated to not be possible, the vents should be elongated and raised to a comfortable seating height, wrapped in a material that while durable also provides an inviting surface to sit while ensuring compliance with accessibility standards.

- ii. provision of continuous weather protection extending the length of station facades fronting Broadway, (or in the case of GNW-Emily Carr Station, Great Northern Way), and along the cross street aspect(s).

Note to Proponent: Weather protection should adequately shelter queuing areas, seating and bicycle racks, incorporate lighting to address CPTED concerns and drain so as to connect to and support green infrastructure per the Vancouver Municipal Agreement requirements.

iii. Provision high quality landscape design strategies as follows:

- a) incorporating green planting areas that express and contribute to stormwater management practices within the public realm;
- b) screening visible equipment with high-quality, architecturally integral, and durable fencing, walls, and landscaping appropriate for an urban context;

Note to Proponent: Every effort must be made to limit the visual and physical impact of mechanical and electrical equipment on the performance of the public realm, and where relevant, the continuity of the streetwall. Galvanized steel chain link fencing is not supported.

- c) Provision of a legible wayfinding strategy; and
- d) Confirmation by way of annotations, diagrams, and/or supplemental detail drawings that all parts of the plaza comply with standards for universal design and accessibility.

Note to Proponent: Specifications and material samples required to confirm the type and finish of fencing and screening materials proposed. See also: request for large scale elevations Urban Design Condition 1.3 (iii).

At Arbutus station in particular, attention to landscaping treatment is require to mitigate the impact of the bus loop until the extension to UBC is complete. See also Recommendation B.2.5.

Staff strongly encourage design development the stations that would result in larger plaza spaces. Also refer to Urban Design Recommendation 1.3.

1.3 design development to the station buildings, with the objective of improving their presentation to the plaza and streetscape, and compatibility with their individual community context and neighbourhood compatibility as follows:

- i. integration of a public art and cultural recognition program in consultation with the Musqueam, Squamish, and Tsleil-Waututh Nations on and within the stations and at the public realms intended to amplify and celebrate Urban Indigenous works, and contribute to Cultural Redress;
- ii. provision of a second entrance door at stations where a single entrance is currently provided (Mount Pleasant, Oak-VGH and South Granville) to improve physical and visual access at important, high traffic urban corners, and experientially expand the plaza spaces. Where a second entrance cannot be provided on opening day, provisions should be made in the design of the stations for a second entry to be added in future without the need for significant modifications; and

Note to Proponent: Specific attention should be given to ensuring structure is providing to support a future door, electrical service is provided to power the door

mechanism and grading in the plaza at the exterior of the future door aligns with the station slab elevation to allow for future access.

- iii. provision of a revised material palette that better reflects the character of the surrounding context, with due consideration given to the expression and / or materiality of adjacent high value and/or or heritage buildings. The individual character of each station area should register in the materiality, colour, module, texture, finish, and / or application of cladding systems.
 - a) maximizing and shaping glazing units to provide a context-specific response to each station site, including grading and slope considerations; and
 - b) specifying glazing systems that more closely match those used elsewhere throughout the Skytrain network (i.e. spider fittings), that will complement glazing systems of future overbuild developments. Also, refer to over build integration as noted in Recommendation 1.1.

Note to Proponent: The intent and objectives of the Municipal Guidelines is to provide for unique station expressions which reinforce the adjacent community and context. Provide of large-scale colour, rendered elevations and perspectives clearly demonstrating the application of a high-quality material palette and detailing are required for staff review. The following design strategies for glazing are recommended:

- 2.0 That the Recommendations and considerations set out in Appendix A and B to be reviewed, acknowledged and where possible, incorporated prior to the City's receipt of Project Co.'s of Design Advisory Process submission #2.**

TECHNICAL ANALYSIS AND APPLICABLE PLANS, POLICIES AND AGREEMENTS - OVERVIEW:

The Broadway Subway Project Stations are not required to strictly comply with City of Vancouver Bylaws, guidelines and policies, due to the nature of the project type and existing agreements with the Province that supersede Municipal governance. See section Applicable Plans and Policies and Agreements for more information.

Development overbuild of the station sites will need to comply with all applicable existing and future City of Vancouver bylaws, policies and guidelines, as well as site or area specific requirements such as (but not limited to) connection to the City of Vancouver Neighbourhood Energy Utility, and the Rainwater Management Bulletin.

GREAT NORTHERN WAY STATION

• Technical Analysis

	CD-1 (402) ZONING for Reference Only		PROPOSED		
Floor Area ¹	N/A		Station	397.7 sq.m	
			Emergency Exit	35.2 sq.m	
			Potential Future Retail (CRU) ²	58.8 sq.m	
			Potential Future Retail (Kiosk) ²	22.9 sq.m	
			Total	514.6 sq.m	
Height	CD-1 (402) – Sub Area 1	45.72 m	Top of Future Guardrail	9.2 m	
			Top of Parapet	8.0 m	
Parking	Public Authority	0	Public Authority	0	
Bicycle Parking	Class A	Class B	Class A	Class B	
	Public Authority	0	Public Authority	40	12
Loading	Class A	Class B	Class C	Class A	Class B
	Public Authority	0	0	0	0

The station and below grade structures are constructed within both city streets and on zoned land. For those portions of the station located on zoned parcels, zoning requirements do not apply due to the unique nature of the project, which is instead governed by the Vancouver Municipal Agreement, the Project Agreement, the Municipal Guideline and the Design Advisory Process. (See Design Advisory Process section, Page 21).

The zoning principles for those structures located on zoned lands were applied only for the purpose of assessing the proposed structures located at and above grade. Though the potential future retail floor area is located below grade, it is included for information purposes. See note 2 below.

¹**Floor Area Submission:** Drawings Submitted by proponent contain incomplete dimensions for the proposed building and its location from property lines (See Recommendation Conditions A.1.6 and A.1.7).

²**Future Retail Area:** The retail floor area (“CRU Allowance Area” and “Kiosk Allowance”) is located one level down from grade at the concourse floor level. Separate development and building permits are required for this use. In addition, separate loading spaces may be required (See Recommendations A.1.8).

- **Legal Description**

Lot: 7

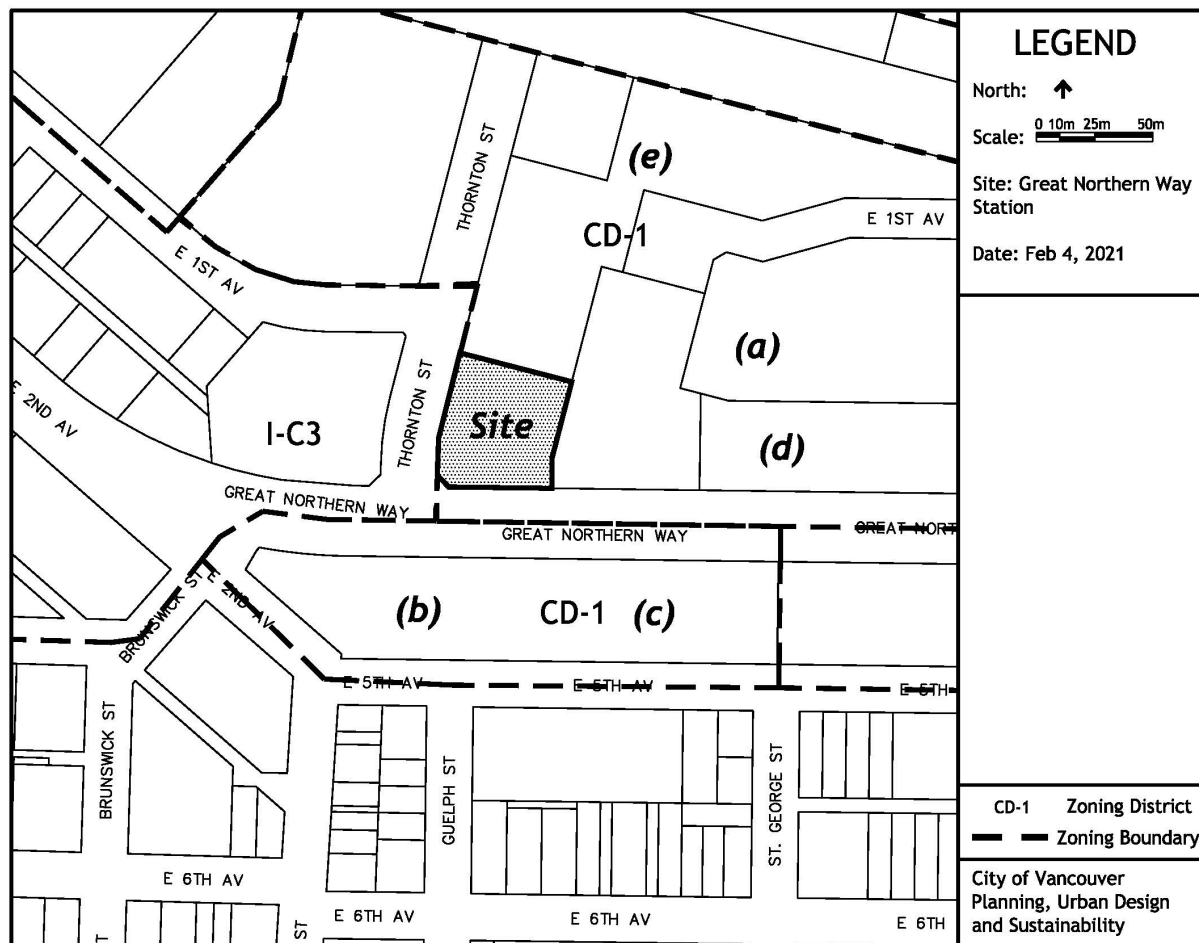
District Lot: 264A

Plan: EPP58103

- **Site:** The site is located at the northeast corner of the intersection of Great Northern Way and Thornton Street. This station entry house sits within the block bounded by Great Northern Way, Thornton Street and Carolina Streets and the BNSF Railyard.

- **Context:** Significant adjacent developments include:

- Emily Carr University of Art and Design Campus, 520 E 1st Avenue;
- St Francis Xavier School, 428 Great Northern Way, 3-storey elementary school;
- St. Francis Xavier Parish, 438 Great Northern Way; 2-storey place of worship;
- The South Flatz, 565 Great Northern Way, a 7-storey mixed-use office building; and
- Centre for Digital Media, 577 Great Northern Way, 4-storey mixed-use university building



MOUNT PLEASANT STATION• **Technical Analysis**

	C-3A ZONING for Reference Only		PROPOSED	
Floor Area ¹	N/A		Station	404.3 sq.m
			Emergency Exit	14.4 sq.m
			Potential Future Retail ²	<u>22.9</u> sq.m
			Total	514.6 sq.m
Height	9.2 m		Top of Mechanical Screen	8.0 m
			Top of Parapet	6.2 m
Parking	Public Authority	0	Public Authority	3
Bicycle Parking	Class A	Class B	Class A	Class B
	Public Authority	0	Public Authority	12
Loading	Class A	Class B	Class A	Class B
	Public Authority	0	Public Authority	0

The station and below grade structures are constructed within both city streets and on zoned land. For those portions of the station located on zoned parcels, zoning requirements do not apply due to the unique nature of the project, which is instead governed by the Vancouver Municipal Agreement, the Project Agreement, the Municipal Guideline and the Design Advisory Process. (See Design Advisory Process section, Page 21).

The zoning principles for those structures located on zoned lands were applied only for the purpose of assessing the proposed structures located at and above grade. Though the potential future retail floor area is located below grade, it is included for information purposes. See note 2 below.

¹**Floor Area Submission:** Drawings Submitted by proponent contain incomplete dimensions for the proposed building and its location from property lines (See Recommendation Conditions A.1.6 and A.1.7).

²**Future Retail Area:** The retail floor area is located one level down from grade at the concourse floor level. Separate development and building permits are required for this use. In addition, separate loading spaces may be required (See Recommendation Condition A.1.8).

• **Legal Description**

Lots: A and B (Explanatory Plan 4173) of Lots 1 and 2

Block: 28

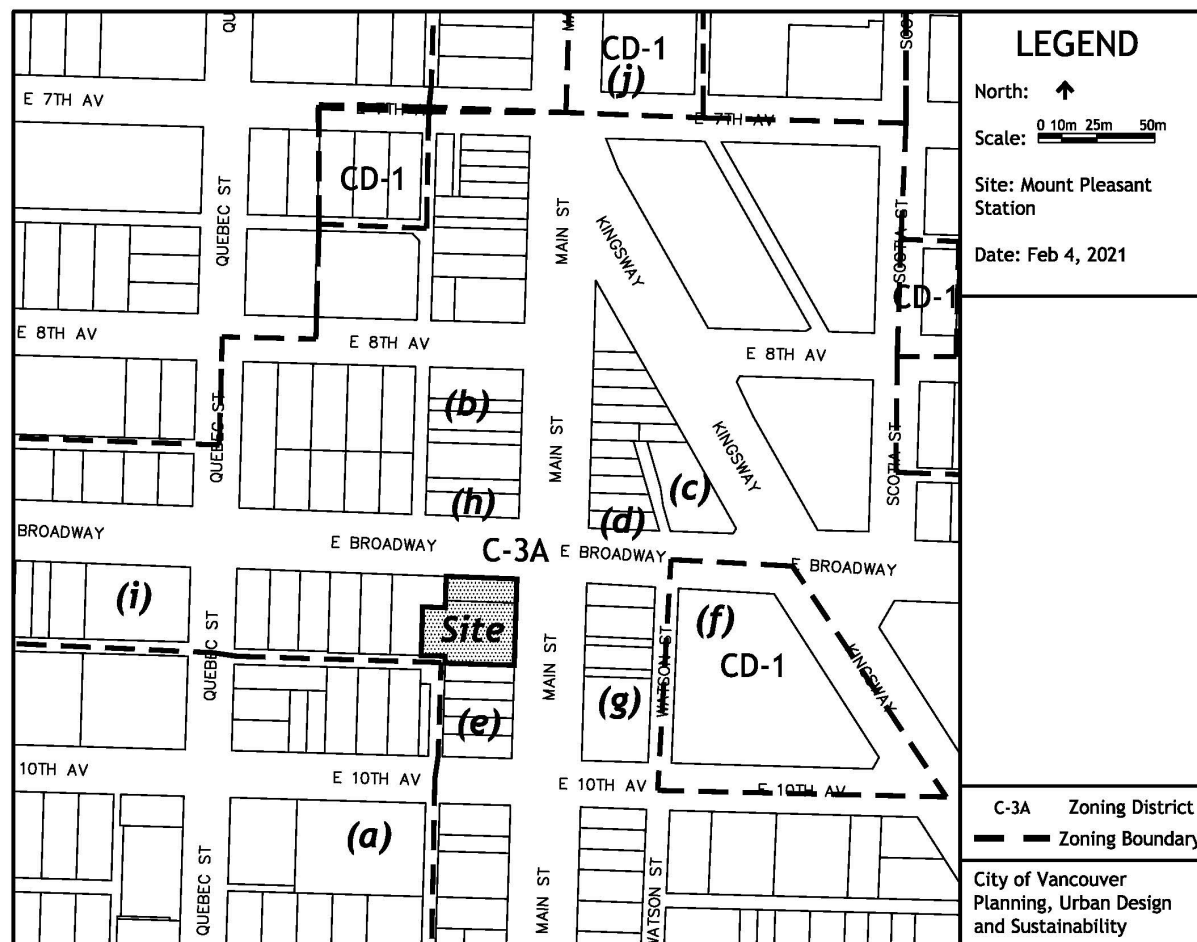
District Lot: 302

Plans: 462 and BCP46427

• **Site:** The site is located at the southeast corner of the intersection of Broadway and Main Streets. This station entry house sits within the block bounded by Broadway, West 10th Avenue, Main Street and Quebec Street.

• **Context:** Significant adjacent developments include:

- (a) Ukrainian-Greek Orthodox Church, 154 E 10th Avenue, 2-storey place of worship, Heritage Site: B(M);
- (b) Crosbie Block, 156 E 8th Avenue, 2-storey mixed-use building, Heritage Site: (B);
- (c) Vernon Block, 245 East Broadway, 2-storey mixed-use building, Heritage Site: (C) (M);
- (d) Bank of Montreal, 2490 Main Street, 1-storey financial institution use building; Heritage Site: (C);
- (e) Belvedere Court, 2545 Main Street, 4-storey mixed-use building, Heritage Site: (B);
- (f) The Independent, 288 East Broadway, 21-storey mixed-use complex;
- (g) The Hub, 205 E 10th Avenue, 4-storey mixed-use residential building;
- (h) Lee Building, 151 – 189 East Broadway, 7-storey mixed-used building, Heritage Site: (B)
- (i) OnQue, 2511 Quebec Street, 4-storey mixed-use residential building; and
- (j) Ellsworth, 209 E 7th Avenue, 10-storey mixed-use residential building.



• Technical Analysis

	C-3A ZONING for Reference Only			PROPOSED	
Floor Area ¹	N/A			Existing Station	267.6 sq.m
				New Station Addition	244.4 sq.m
				New Emergency Exit	24.0 sq.m
				Potential Future Retail ²	54.7 sq.m
				Total	590.7 sq.m
Height	9.2 m			Top of Concrete Wall	7.1 m.
				Top of Metal Roof	6.1 m.
Parking	Public Authority	0		Public Authority	8(6 new)
Bicycle Parking	Class A	Class B		Class A	Class B
	Public Authority	0	0	Public Authority	20 12
Loading	Class A	Class B	Class C	Class A	Class B Class C
	Public Authority	0	0	Public Authority	0 0 0

The station and below grade structures are constructed within both city streets and on zoned land. For those portions of the station located on zoned parcels, zoning requirements do not apply due to the unique nature of the project, which is instead governed by the Vancouver Municipal Agreement, the Project Agreement, the Municipal Guideline and the Design Advisory Process. (See Design Advisory Process section, Page 21).

The zoning principles for those structures located on zoned lands were applied only for the purpose of assessing the proposed structures located at and above grade. Though the potential future retail floor area is located below grade, it is included for information purposes. See note 2 below.

¹**Floor Area Submission:** Drawings Submitted by proponent contain incomplete dimensions for the proposed building and its location from property lines (See Recommendation Conditions A.1.6 and A.1.7).

²**Future Retail Area:** The retail floor area is located two levels down from grade at the BSP concourse floor level. Separate development and building permits are required for this use. In addition, separate loading spaces may be required (see Recommendation Condition A.1.8).

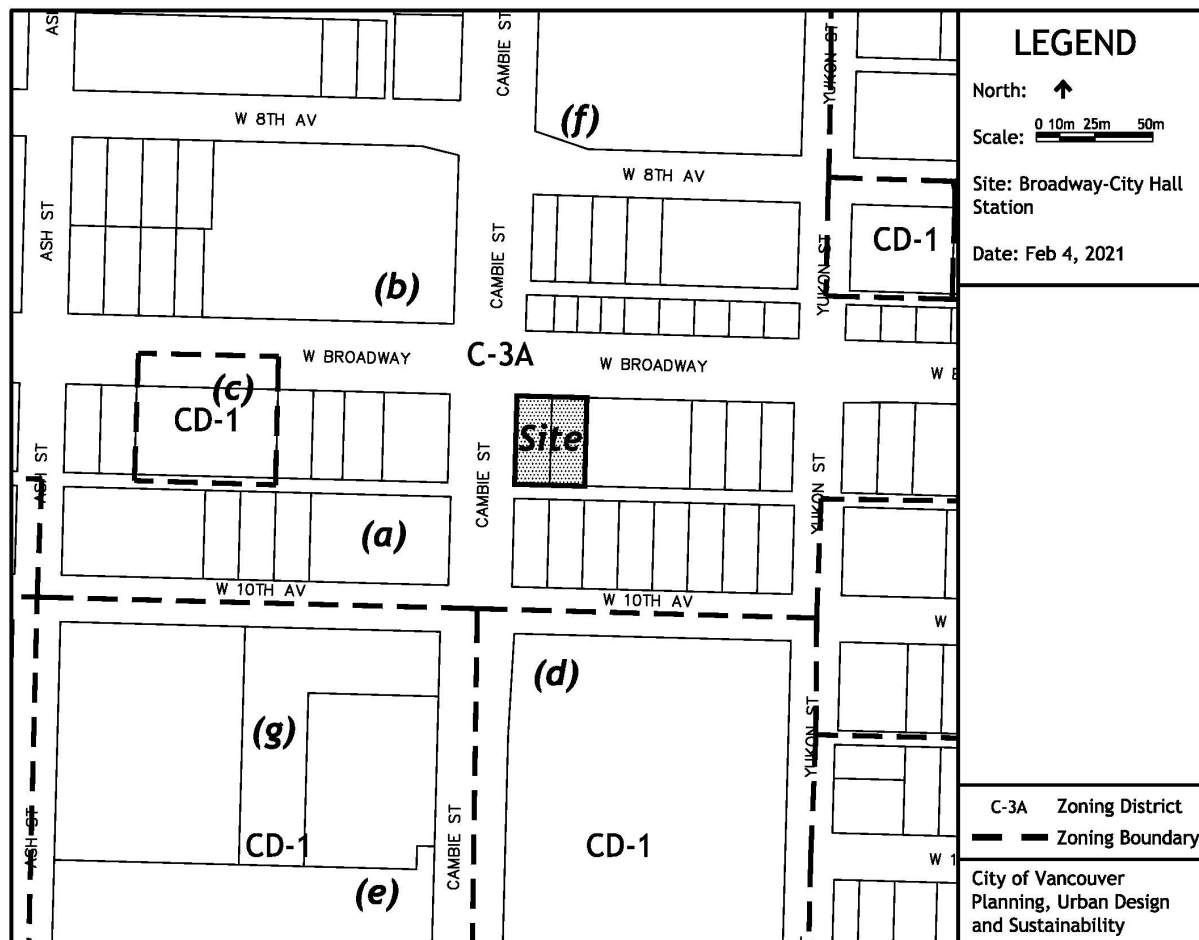
- **Legal Description**

Lots: 1 and 2
 Block: 360A
 District Lot: 526
 Plan: 1277

- **Site:** The site is located at the southeast corner of the intersection of Broadway and Cambie Streets. This station entry house sits within the block bounded by Broadway, West 10th Avenue, Cambie Street and Yukon Streets. This block is owned by the City of Vancouver and has been identified as a potential development site for an expanded City Hall development.

- **Context:** Significant adjacent developments include:

- City of Vancouver (Development and Building Services Centre), 515 W 10th Avenue, 4-storey mixed-use office building;
- Cross Roads Building, 507 West Broadway, 10-storey mixed-use complex;
- Neelu Bachra Center, 550 West Broadway, 7-storey mixed-use office building;
- Vancouver City Hall, 453 W 12th Avenue, 12-storey civic building, Heritage Site, (A)(M);
- City Square Mall, 555 W 12th Avenue, 3-storey shopping centre, Heritage Site, (A)(M);
- The Rise, 485 W 8th Avenue; 7-storey mixed-use building; and
- Cambridge Court, 2628 Long Life Place, 7-storey residential building



OAK – VGH STATION**• Technical Analysis**

	C-3A ZONING for Reference Only		PROPOSED	
Floor Area ¹	N/A		Station	434.5 sq.m
			Emergency Exit	27.9 sq.m
			Potential Future Retail ²	71.5 sq.m
			Total	533.9 sq.m
Height	9.2 m		Top of Mechanical Screen	8.0 m
			Top of Parapet	6.5 m
Parking	Public Authority	0	Public Authority	3
Bicycle Parking	Class A	Class B	Class A	Class B
	Public Authority	0	Public Authority	12
Loading	Class A	Class B	Class A	Class B
	Public Authority	0	Public Authority	0

The station and below grade structures are constructed within both city streets and on zoned land. For those portions of the station located on zoned parcels, zoning requirements do not apply due to the unique nature of the project, which is instead governed by the Vancouver Municipal Agreement, the Project Agreement, the Municipal Guideline and the Design Advisory Process. (See Design Advisory Process section, Page 21).

The zoning principles for those structures located on zoned lands were applied only for the purpose of assessing the proposed structures located at and above grade. Though the potential future retail floor area is located below grade, it is included for information purposes. See note 2 below.

¹**Floor Area Submission:** Drawings Submitted by proponent contain incomplete dimensions for the proposed building and its location from property lines (See Recommendation Conditions B.2.6 and B.2.7).

²**Future Retail Area:** The retail floor area is located one level down from grade at the concourse floor level. Separate development and building permits are required for this use. In addition, separate loading spaces may be required (See Recommendation Condition A.1.8).

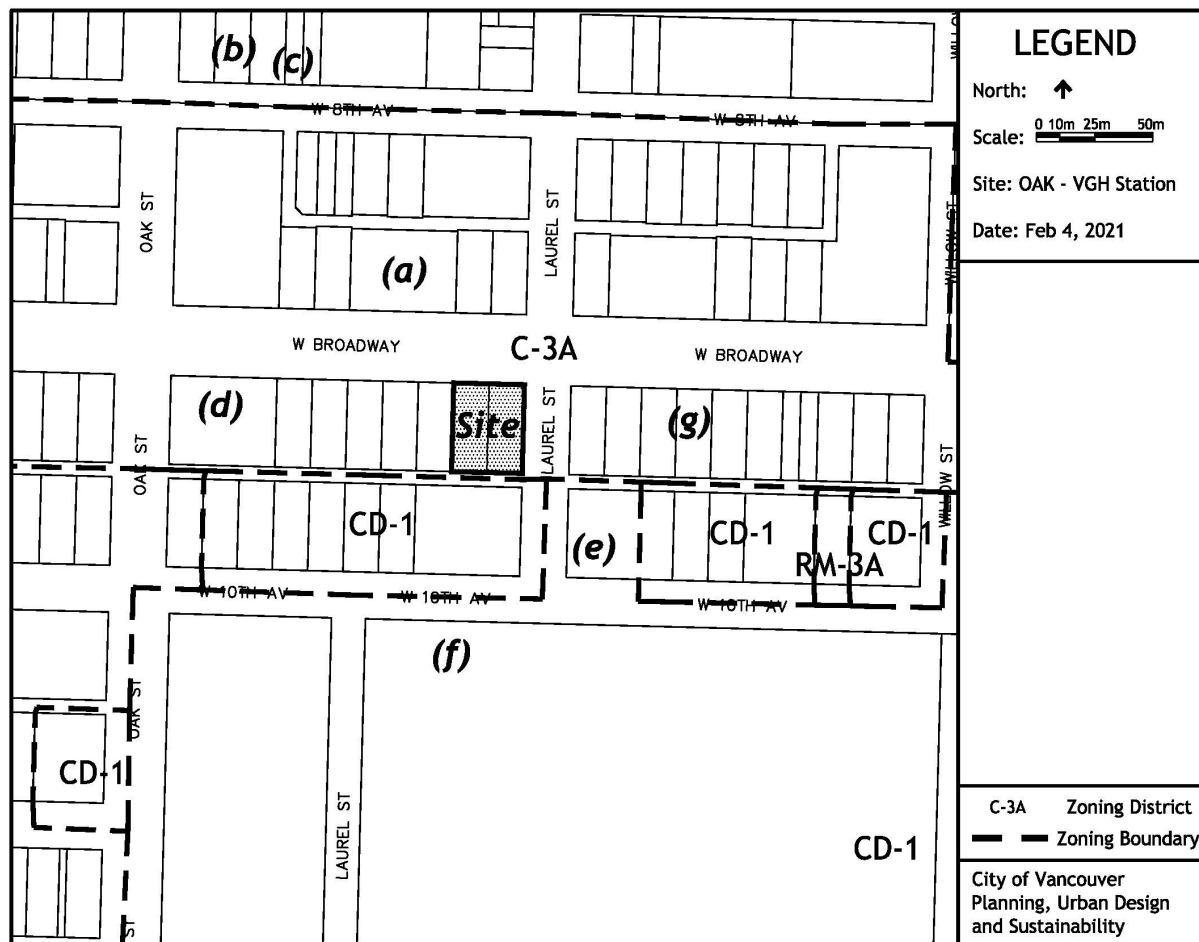
- **Legal Description**

Lots: 9 and 10
 Block: 356
 District Lot: 526
 Plan: 590

- **Site:** The site is located at the southwest corner of the intersection of Broadway and Laurel Streets. This station entry house sits within the block bounded by Broadway, W 10th Avenue, Oak Street and Laurel Street.

- **Context:** Significant adjacent development includes:

- Broadway Medical Building, 943 West Broadway, 9-storey mixed-use office building;
- Taylor House, 977 W 8th, 3-storey residential house, Heritage Site: B(M);
- 967 W 8th, 2-storey residential, Heritage Site: C(M);
- 988 West Broadway, 11-storey mixed-use office building;
- The Mary Pack Arthritis Centre, 895 W 10th Avenue, 3-storey medical building;
- VGH Medical Campus; 920 W 10th Avenue; and
- Park Inn - 888 W 8th Avenue, 7-storey hotel (site currently anticipated for redevelopment)



SOUTH GRANVILLE STATION**• Technical Analysis**

	C-3A ZONING for Reference Only	PROPOSED
Floor Area ¹	N/A	Station 194.0 sq.m Emergency Exit 10.4 sq.m Potential Future Retail ² <u>55.2</u> sq.m Total 259.6 sq.m
Height ³	9.2 m	N/A
Parking	Public Authority 0	Public Authority 0
Bicycle Parking	Class A Public Authority 0	Class A Public Authority 0
	Class B 0	Class B 0
	Class C 0	Class C 0
Loading	Public Authority 0	Public Authority 0

The station and below grade structures are constructed within both city streets and on zoned land. For those portions of the station located on zoned parcels, zoning requirements do not apply due to the unique nature of the project, which is instead governed by the Vancouver Municipal Agreement, the Project Agreement, the Municipal Guideline and the Design Advisory Process. (See Design Advisory Process section, Page 21).

The zoning principles for those structures located on zoned lands were applied only for the purpose of assessing the proposed structures located at and above grade. Though the potential future retail floor area is located below grade, it is included for information purposes. See note 2 below.

¹**Floor Area Submission:** Drawings Submitted by proponent contain incomplete dimensions for the proposed building and its location from property lines (See Recommendation Conditions A.1.6 and A.1.7).

²**Future Retail Area:** The retail floor area is located one level down from grade at the concourse floor level. Separate development and building permits are required for this use. In addition, separate loading spaces may be required (See Recommendation Condition A.1.8)

³**Height:** South Granville Station is incorporated into the first floor of the mixed-use development at 1477 West Broadway (formerly 1489 West Broadway) approved under DP-2019-00704.

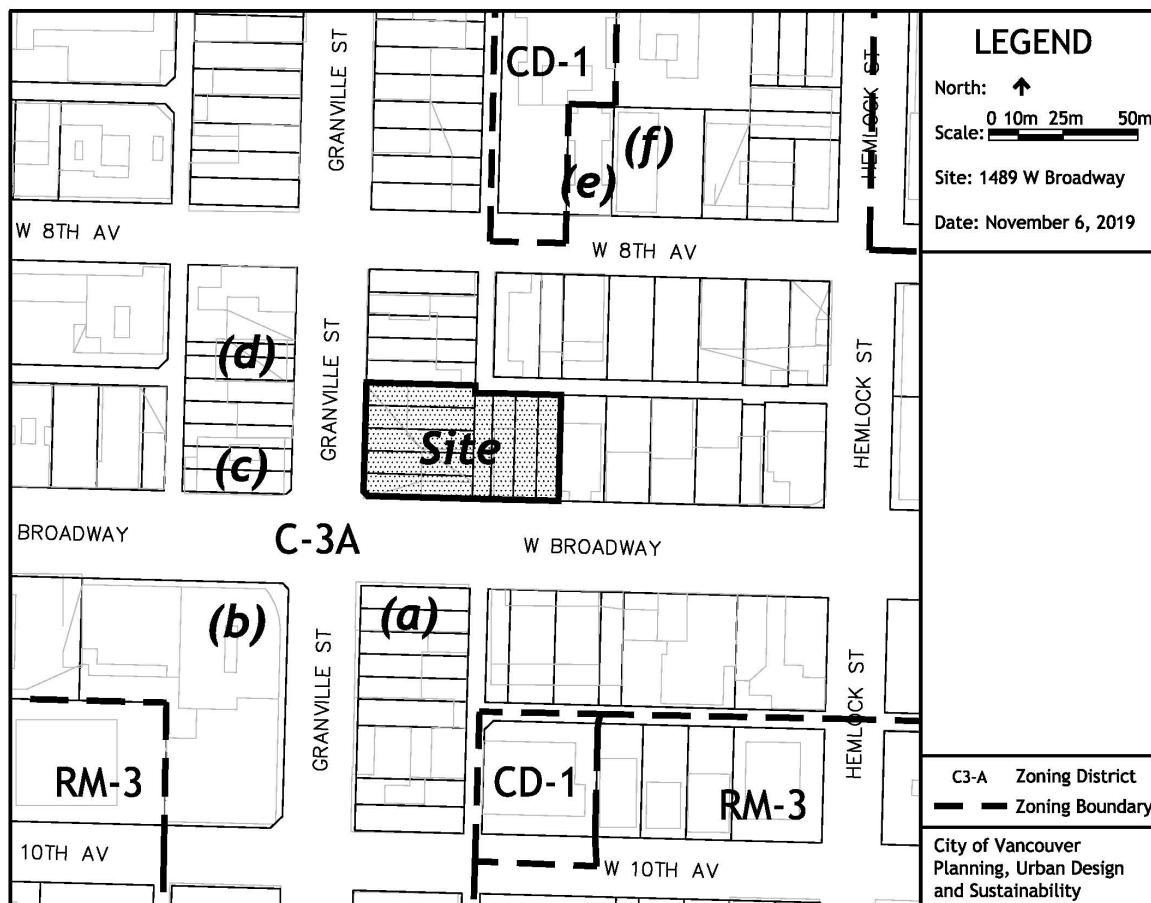
- **Legal Description**

Lot: 1
 Block: 311
 District Lot: 526
 Plan: EPP98876

- **Site:** The site is located at the northeast corner of the intersection of West Broadway and Granville Street. This station entry house will be integrated into the mix-use development at 1477 West Broadway, which currently under construction, and sits within the block bounded by Broadway, W 8th Avenue, Granville Street and Hemlock Streets.

- **Context:** Significant adjacent developments include:

- Dick Building, 1484-1490 West Broadway, 3-storey mixed-use building, Heritage Site: A(M);
- 1508 West Broadway, 9-storey mixed-use building;
- The Clock Tower, 1501 West Broadway, 5-storey mixed-use building,
- Edwards Block, 2421-2425 Granville St, 4-storey mixed-use building, Heritage Site: B;
- Creswell Apartments, 1455 W 8th Ave, 3-storey residential building, Heritage Site: C; and
- 1443 W 8th Ave, 2-storey residential building, Heritage Site: C,



ARBUTUS STATION**• Technical Analysis**

	C-3A ZONING for Reference Only		PROPOSED		
Floor Area ¹	N/A		Station	429.7 sq.m	
			Emergency Exit	15.3 sq.m	
			Potential Future Retail ²	45.2 sq.m	
			Total	490.2 sq.m	
Height	9.2 m		Top of Parapet	5.8 m	
Parking	Public Authority 0		Public Authority	3	
Bicycle Parking	Class A	Class B	Class A ³	Class B	
	Public Authority 0	0	Public Authority 0	12	
Loading	Class A	Class B	Class C	Class A	Class B
	Public Authority 0	0	0	0	0

The station and below grade structures are constructed within both city streets and on zoned land. For those portions of the station located on zoned parcels, zoning requirements do not apply due to the unique nature of the project, which is instead governed by the Vancouver Municipal Agreement, the Project Agreement, the Municipal Guideline and the Design Advisory Process. (See Design Advisory Process section, Page 21).

The zoning principles for those structures located on zoned lands were applied only for the purpose of assessing the proposed structures located at and above grade. Though the potential future retail floor area is located below grade, it is included for information purposes. See note 2 below.

¹**Floor Area Submission:** Drawings Submitted by proponent contain incomplete dimensions for the proposed building and its location from property lines (See Recommendation Conditions A.1.6 and A.1.7).

²**Future Retail Area:** The retail floor area is located one level down from grade at the concourse floor level. Separate development and building permits are required for this use. In addition, separate loading spaces may be required (See Recommendation Condition A.1.8)

³**Class A Bicycle Parking:** The proposed bicycle parkade holds an unspecified number of bicycles.

• **Legal Description**

Lots: Lot 20, West ½ of Lot 19, Lot F and Lot 2 (except the Vancouver and Lulu Island Railway ROW, as shown on miscellaneous Plan 218)

Block: 325

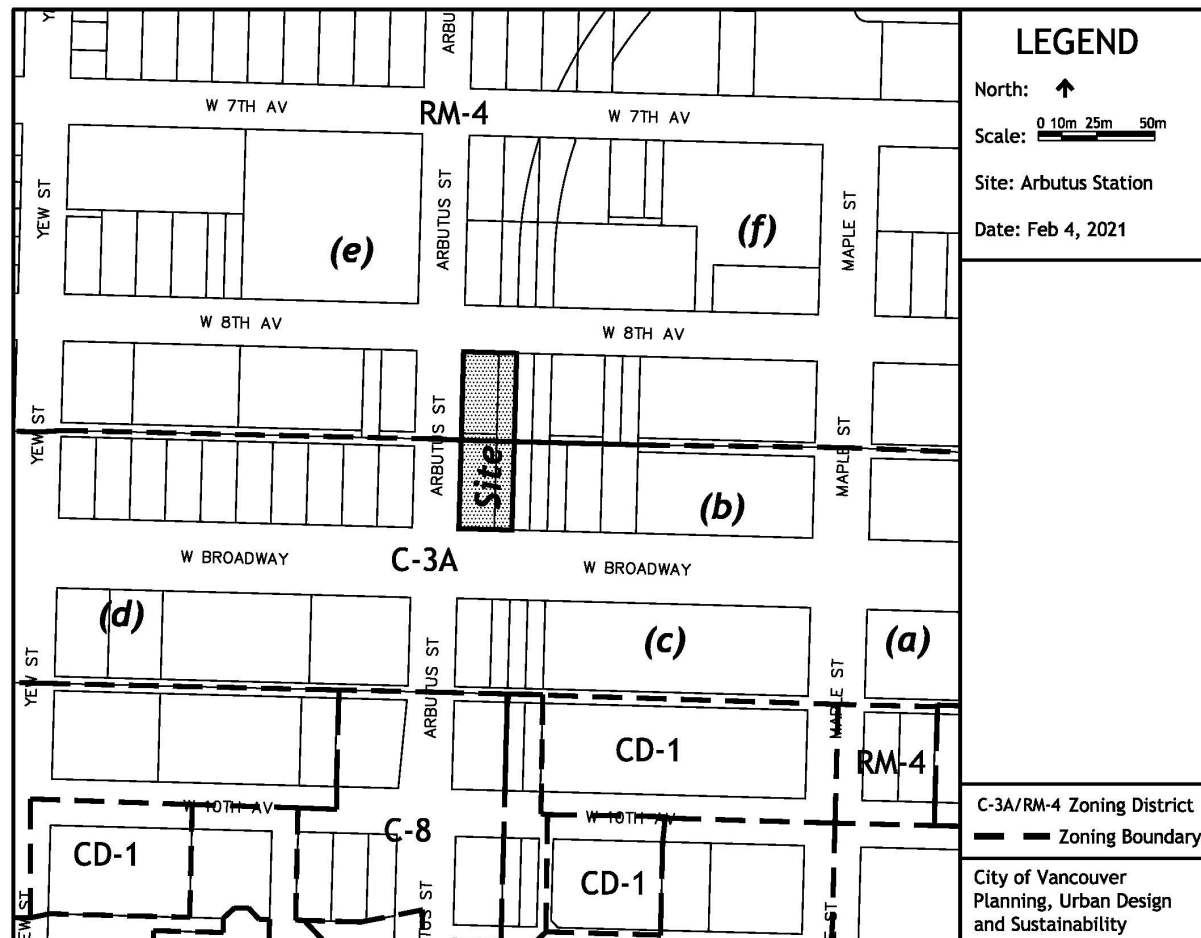
District Lot: 526

Plans: 590 and LMP34535

• **Site:** The site is located at the northeast corner of the intersection of West Broadway and Arbutus Street. This station entry house sits within the block bounded by Broadway, W 8th Avenue, Arbutus Street and Maple Streets.

• **Context:** Significant adjacent developments include:

- (a) Pulse, 2528 Maple Street, 7-storey mixed-use residential building;
- (b) Mainframe Building, 2025 West Broadway, 5-storey mixed-use office building;
- (c) Pinnacle Living on Broadway, 2080 West Broadway, 7-storey mixed-use residential building;
- (d) Regent Medical Building, 2184 West Broadway, 6-storey mixed-use office building;
- (e) St. Augustine School, 2154 W 7th Avenue, 3-storey elementary school; and
- (f) St. Augustine Parish, 2028 W 7th Avenue, 2-storey place of worship, Heritage Site: A



• **Station Plaza Programme Table**

Table L-10.7.1
Station Plaza Programme

Programme Requirements	Dimensions (m)	Great Northern Way	Mount Pleasant	Broadway-City Hall **	Fairview-VGH	South Granville	Arbutus	Notes
Bike Racks	0.8 x 2.5	Min. 12	Min. 12	Min. 12	Min. 12	N/A	Min. 12	
Bike Parkade	varies	1	0	1 in CoV development	0	0	1	Minimum capacity 34 spaces
BCRTC Parking	5.5 x 2.5	2*	2	2**	2	N/A	2	One service space to accommodate GMC Savanah Van or equivalent
Transit Police Parking	5.5 x 2.5	1*	1	4 + 2 exist**	1	N/A	1	
Station Identification & Community Information Monolith***	0.2 x 0.7	1	1	existing	1	2**	1	Edge mounted T-Marker attached to PCI SG Development
Automatic Assured Receptivity Unit (AARU)	5.0 x 9.0	0	1	0	1	0	1	
TransLink Commercial Fibre Optics Communication System Vault (FOCS)*	1.5 x 1.5	1	1	1	1	1	1	
Setback to Broadway PL (Minimum)		N/A****	6.0m	N/A	6.0m	N/A	2.0m	6.0m setback where the entrance is orientated to Broadway
Setback to Flanking Str. PL		N/A****	6.0m Main Str.	N/A	3.0m (Min.) Laurel Str.	N/A	0.0m Arbutus	

* In Development - Interim Provision TBD

** Interim on City of Vancouver Parking Lot

*** See TransLink Station Signage Design and Implementation Manual – "T Marker: Monolith" [Ref TM.m.4/TM.m.3]

**** For Setbacks at Great Northern Way Stations, See Appendix A GNW Integration Scope of Work Drawings

+ Locate FOCS vault as close as possible to property line of the nearest road right-of-way to facilitate future connection to communication utilities

++ See TransLink Wayfinding Standards Manual – "T Marker: Edge mounted" and Appendix A South Granville Station Integration (Scope of Work) Drawings

Table L – 10.7.1 is part of the Broadway Subway Project requirements and has been agreed upon between the Province and Project Co. in the Project Agreement.

• **Station Setbacks Comparison Chart**

		Mount Pleasant	Oak – VGH	Arbutus
Project Agreement Setbacks	Setback to Broadway PL (Minimum)	6.0 m	6.0 m	2.0 m
	Setback to Flanking St PL	6.0 m	6.0 m	0.0 m
Municipal Guidelines - Optimal Setbacks	Setback to Broadway PL (Minimum)	9.0 m	7.4 m	9.5 m
	Setback to Flanking St PL	9.0 m	5.9 m	5.4 m
Setbacks Achieved in IDR 1	Setback to Broadway PL (Minimum)	6.0 m	6.0 m	2.0 m
	Setback to Flanking St PL	6.3 m to edge of vents/ 10.6 m elsewhere	4.1 m	0.0 m

Note: This table focuses on station sites along Broadway, which have not yet been constructed or integrated into an approved development. As a result, the Broadway City Hall and South Granville Stations are absent. Further, the Great Northern Way station is unaffected by setbacks proposed along the Broadway corridor.

• Background:

The Broadway Corridor is a regionally important corridor that connects the largest university (UBC) and the largest hospital (Vancouver General Hospital) in Western Canada. In 2011, there were 125,000 people living within the Corridor (including UBC) with a further 70,000 expected by 2045. With more than 105,000 jobs along the Corridor in 2011, Broadway is the second largest job centre in the Province, and a key source of employment for residents throughout Metro Vancouver. The demand for job space in the Corridor is high already and with roughly 30,000 new jobs anticipated by 2045. Rapid transit for Broadway has been prioritized in City and regional plans for over twenty years. Two studies in which one was led by TransLink and the City and another led by TransLink and the Province with the City as a partner agency, have explored rapid transit options for the Corridor and both concluded that a SkyTrain extension is the right choice for Broadway. In 2014, the Mayors' Council on Regional Transportation approved "Transportation Investments: A Vision for Metro Vancouver" which prioritized rapid transit to UBC to be delivered in two stages, the first of which is the Millennium Line Broadway Extension (MLBE) – a primarily tunneled SkyTrain extension under Broadway from VCC-Clark to Arbutus Street - to be delivered within the next ten years. The MLBE to Arbutus will provide significantly decreased travel time and increased reliability to transit users, support economic growth, offer significant benefits to the existing rapid transit network, reduce greenhouse gas emissions and improve affordability for residents around Metro Vancouver. The MLBE to Arbutus is key to the City achieving its liveability, transportation and environmental objectives.

• Applicable Plans and Policies and Agreements:**Design Advisory Process (DAP)*****Transportation Investments: A Vision for Metro Vancouver***

- Approved by Mayors' Council – February 2014

Transportation 2040

- Endorsed – October 2012

Climate Emergency Action Plan

- Endorsed – November 2020

Broadway Plan

- Council consideration of draft plan – anticipated for late 2021

Supportive Policies Agreement (SPA)

- Initial enactment – June 2018

Millennium Line Broadway Extension Principles and Strategies

- Endorsed – May 2018
- Broadway Subway Project Municipal Guidelines Approved – January 2020

• Response to Applicable By-laws and Guidelines:***Broadway Subway Project Municipal Guidelines***

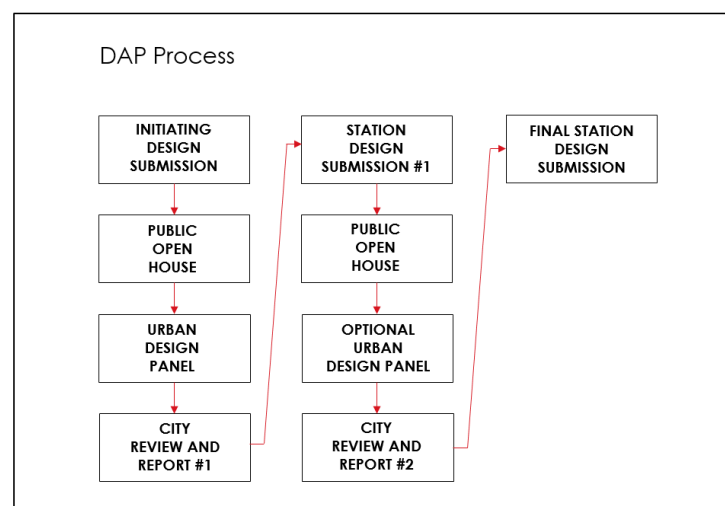
The Municipal Guidelines were built off the direction provided by the Principles and Strategies. The intention of these Municipal Guidelines is to provide proponent teams with guidance on the City's preferences during the bidding process. These guidelines are meant to be aspirational and the City recognizes that not all guidelines will be achievable at every location. There will inevitably be trade-offs between guidelines based on station location and surrounding destinations, future transit user characteristics, availability of space, budget and schedule. They are intended to complement the procurement package and will:

- Demonstrate how the City's Principles and Strategies could be applied;
- Supplement some of the elements that have been incorporated into the Project Agreement (PA) by illustrating how some other projects have expressed these elements;
- Highlight the City's preferences for elements that were not directly incorporated into the PA; and
- Prepare proponent teams for the Design Advisory Process (DAP) with the City

Design Advisory Process

The Design Advisory Process (DAP) is the process by which the City of Vancouver will provide comments with regard to the design and urban integration of the Stations included in the Broadway Subway Project. The DAP applies to above ground portions of the Stations, including Station entrances, adjacent Station Plazas and emergency egress and ventilation locations at grade. Right of Way and public realm improvements outside of the station property lines will be addressed through a separate but coordinated streetscape design process.

The DAP does not apply to the interior of the stations (i.e. entry, concourse, platforms, washrooms and elevator(s)). The DAP simulates the City of Vancouver development permit process, and takes into consideration City policies and guidelines, as well as the public engagement program. The DAP does not apply to integrated, associated or adjacent development, and is separate from any development permit requirements related to adjoining development or over-build of Stations by non-transit development. The image below outlines the steps of the DAP to be followed by Project Co.



Transportation Investments: A Vision for Metro Vancouver

In February 2014, the Minister of Transportation and Infrastructure asked the Metro Vancouver Mayors' Council on Regional Transportation to confirm its transportation vision and to clarify the costs, priorities and phasing for investments and actions. In response, the Mayors' Council established a Subcommittee on Transportation Investment, which has been working with support from TransLink, from Metro Vancouver and from staff from municipalities around the region to define this Vision, to establish spending priorities, and recommend new funding mechanisms capable of supporting those priorities.

This Vision calls for rapid transit between Commercial Drive and the University of British Columbia. The first 10 years of the Vision targets implementing the first phase: extending the Millennium Line westward from its current terminus at VCC-Clark to Arbutus, with frequent B-Line bus connections continuing to UBC from Arbutus. The Partnership section of this Vision outlines the basis by which the region and municipalities will formalize these partnerships. This Agreement will outline the reciprocal commitments by TransLink and the City of Vancouver in respect to land-use assumptions and actions, investment in connecting municipal infrastructure, and direct financial contributions. This project also depends upon funding partnerships from other governments and the private sector. This funding will also be pursued as a matter of priority to ensure early implementation can occur.

Transportation 2040

A transportation vision for the City of Vancouver:

By 2040, we envision a city with a smart and efficient transportation system that supports a thriving economy while increasing affordability; healthy citizens who are mobile in a safe, accessible, and vibrant city; and a city that enhances its natural environment to ensure a healthy future for its citizens and the planet.

Transportation 2040 is a long-term strategic vision for the city that will help guide transportation and land use decisions and public investments for the years ahead. It provides a blueprint for us to move forward, build upon our past successes, and rise to meet new and emerging challenges. The plan sets long-term targets and includes both high-level policies and specific actions to achieve this vision.

Climate Emergency Action Plan

In January 2019, Vancouver City Council unanimously declared a climate emergency in response to growing concerns about the climate crisis facing the planet. This declaration set a course for Vancouver to build on efforts under the Greenest City Action Plan and accelerate local climate action to align with global efforts to limit warming to 1.5°C. The 1.5°C goal is set in the Paris Agreement and represents a level of global warming that would limit the most devastating impacts of climate breakdown and avoid overwhelming society's capacity to adapt.

In April 2019, Vancouver City Council unanimously approved the Climate Emergency Response report. The Climate Emergency Response included 53 near-term actions that accelerated the City's previous climate work (referred to as "Accelerated Actions"), and six new objectives for this decade (referred to as "Big Moves"), intended to achieve a 50% cut in carbon pollution by 2030. Significant progress has now been made implementing the Accelerated Actions, and planning the new actions necessary to achieve the Big Move targets.

The Climate Emergency Action Plan provides the road map to achieve the following four Big Move targets in ways that also bring financial, health and economic benefits to Vancouver. In total, there are 19 actions in the CEAP to support Big Moves 2, 3, 4, and 5:

- Big Move 2: By 2030, two thirds of all trips in Vancouver will be made on foot, bike or transit.
- Big Move 3: By 2030, 50% of the kilometres driven on Vancouver's roads will be by zero emissions vehicles.
- Big Move 4: By 2030, the carbon pollution from buildings will be cut in half from 2007 levels.
- Big Move 5: By 2030, the embodied emissions from new buildings will be reduced by 40% compared to a 2018 baseline.

Broadway Plan

The Broadway Plan is an on-going comprehensive planning and engagement process for the area of Broadway between Clark Drive and Vine Street. The 30-year plan will focus on opportunities to integrate new housing, jobs, and amenities around the new Broadway Subway. A draft report of the Broadway Plan is anticipated to be presented to City Council in late 2021.

Supportive Policies Agreement (SPA)

The 10-Year Vision calls on parties to enter into one or more Project Partnership Agreements whenever the region is making a major investment involving significant cost and risk, the success of which depends on higher degrees of coordination, collaboration and mutually supportive actions by multiple partners. Per the Vision, the Project Partnership Agreements are to be signed and held between TransLink and the project host municipality and are required prior to funding approval for major projects.

Each Project Partnership Agreement is implemented via multiple project agreements, with a key component being the Supportive Policies Agreement (SPA). In 2018, the City of Vancouver and TransLink executed the Broadway Subway SPA, which committed the City and TransLink to a range of specified actions related to land use, housing, transit, transportation demand management, cycling and walking. A key intent of the SPA was also to ensure collaboration between the City, TransLink, and other relevant agencies, to help achieve the best possible land use/transportation outcomes related to the project.

Millennium Line Broadway Extension Principles and Strategies

The Station Design and Urban Integration Principles (Principles) and Construction Impact Mitigation Strategies (Strategies) were approved unanimously by Vancouver City Council on May 16, 2018. They were developed from past experiences of rapid transit projects within the City of Vancouver, best practices from other jurisdictions and refined through extensive engagement with over 11,000 stakeholders and members of the public. The Principles and Strategies identify the goals that the City will endeavour to achieve through the Millennium Line Broadway Extension (MLBE) and related City activities. The Principles will be used to guide City input on important elements both inside and outside of the stations as well as related City activities in the Broadway Corridor (Land Use and Transportation Planning, development reviews, etc.). The Strategies will help to minimise the impacts of construction and will guide the development of construction and traffic management plans for the project.

• Conclusion:

Policy work and guidance for the project include both Municipal and Regional input. Agreements between the City of Vancouver, the Province and Project Co further establish technical requirements and project delivery responsibilities, beyond standard City policies, plans and bylaws.

URBAN DESIGN PANEL (DRAFT MINUTES)

A mandatory step in the DAP was a non-voting session in which the City of Vancouver Urban Design Panel (UDP) reviewed the Initiating Station Design Submission(s) and public engagement report developed by Project Co. and provided comments and observations to Project Co., the Province and City of Vancouver staff.

The Urban Design Panel's recommendations and City Staff comments have been compiled into a report provided to Project Co. who will then address what considerations can and possibly cannot be incorporated. Project Co. is required to provide the City with an updated drawing package in March 2021 reflecting further design development of the stations.

The Urban Design Panel reviewed this application on January 13, 2021 and provided the following comments:

EVALUATION: Workshop (Non-voting)**Introduction:**

Development Planner, Michelle Lee-Hunt, began by noting this UDP session will focus on the design and urban interface of the six new stations for the Broadway Subway Project.

The project is being procured and delivered by the Province, which means a development permit is not required. Instead, the project moves through a shadow process called the Design Advisory Process or DAP. Ms. Lee-Hunt noted this is the same process undertaken by the City as was followed for the review of the Canada Line Stations.

As such, the City's portion of the presentation focuses on the advice that has been provided to the consultants responsible for designing and constructing the Project, hereto known as Project Co. Although there will not be a vote of support or non-support, as always, Staff look to the panel to provide guidance that can further shape the design of the project.

Project Co will provide further detail on project limitations, but please note that there are number of technical requirements established by TransLink who will ultimately operate and maintain the system. Land Acquisition and financial considerations have also played a part in shaping the project.

Once the Urban Design Panel's recommendations have been received, their comments along with those of staff will be compiled into a report provided to Project Co who will then address what considerations can and possibly cannot be incorporated.

Project Co is required to provide the City with an updated drawing package in March reflecting their further design development of the stations.

Ms Lee-Hunt mentioned that the Panel has been provided with the municipal guidelines document along with the UDP presentation materials. Guidance contained in this document is advisory and based on the Council Approved Principles and Strategies for the Broadway Subway Project. The Municipal Guidelines document was developed by CoV staff and provided to Project Co to communicate the city's interests and priorities. The document is intended as an urban design framework to facilitate integration of the stations with their context and future development.

From the City's perspective, the prime objective of this project is for transit to act as a catalyst for urban transformation and support development which in turn, delivers jobs, housing and community amenities

TransLink, through the Province, has set functional and technical requirements for the station designs that

in turn, has defined the interior configuration, circulation, equipment placement, material and furniture selection. And for that reason, the UDP session won't delve into the interior layout of the stations.

From a City building perspective, there are reasons that integration with development is so important and there are also significant consequences of not doing so. The stations themselves are designed as 100 year buildings and will be a foundational aspect of our communities for years to come. If stations are not overbuilt, they will remain as standalone buildings and the City needs these parcels functioning at their full potential in order to deliver on housing, job space and community amenities.

While the stations are located within an existing context and community character, Broadway is evolving and will continue to evolve over time. It's imperative that the stations respond to the context they exist within on opening day and provide for a future high performing public realm.

What is required by future development applications in order to build above and beside the stations, in terms of structural span, offsets to and sprinklering requirements for rooftop equipment will determine whether or not overbuild will be feasible.

The form of development we will see on Broadway will be determined by the upcoming Broadway Planning Process. Although we are not at the point when we can comment on future height and density changes, we are evaluating current and future proposals on Broadway in light of this future planning process.

System infrastructure-the mechanical and electrical equipment required for the stations and trains to function- can have a significant impact on the public realm. This is especially true in a constrained ROW such as the Broadway corridor.

For example, there are a number grilles for the tunnel ventilation system. They can land in the utility strip as flush grates but in some cases, where they are closer to the station CoV expressed early an interest to Project Co that they be integrated into the transit plaza.

Vents can be incorporated into stations or buildings within benches or public art. Note a larger size of vents is associated with transit infrastructure, ie 2.5mx10m typical. Other equipment, whether located on station rooftops or behind stations near the alley, is typically protected and screened by an enclosure or fencing. In the case of Mount Pleasant Station, where alleys are valued by the neighbourhood and often activated, the treatment of this equipment is especially important.

One of the principles that the City conveyed to Project Co was that it is important for their facilities to both anticipate and accommodate transit infrastructure in the public realm.

The City foresees these stations will become major activity hubs, with significant movement of people in and out of the stations. The City therefore asked Project Co to ensure adequate space was provided in front of the stations in the transit plaza.

City staff undertook our own explorations to understand where enhanced setbacks were required in order to provide a high functioning public realm.

At transit priority streets, the City typically requests 7.5m from back of curb to accommodate a utility strip, bus shelter and a larger sidewalk for higher pedestrian and passenger volumes.

Ms. Lee-Hunt noted that many of the panel members will be familiar with the sidewalk space outside of the Crossroads building at Broadway and Cambie and this is what the City considers a functionally appropriate setback.

It is important to note that while the Subway will replace the Blaine, the local bus routes will continue to run on Broadway, and some people may find it more convenient to take the bus. The City is undertaking a

separate but coordinated process to re-design the streetscape at the station blocks which will ultimately determine where the curb line is located, once the street is rebuilt following the construction of the below grade components of the stations.

In addition to right-sizing the plazas outside the stations, the City asked Project Co to think about these spaces in terms of areas for movement and repose.

Ms. Lee-Hunt noted that the images shown will be familiar to the Panel having reviewed the municipal guidelines document, further clarifying That the precedent images were meant to inspire design thinking that could be applied to the treatment of the transit plazas, albeit at a different scale.

The precedent images represent examples that while small, are high performing urban spaces that differentiate zones of movement through subtle changes in paving colour or texture, sympathetic treatment of edge conditions, manage rainwater while providing a green expression and strategies around planting that also frame site elements.

Ms Lee-Hunt continued by recounting that the City asked Project Co to think about the treatment of the space outside the stations in terms of being an urban room, with amenities scaled to suit the size of the space. To further enhance visibility, provision for lighting so that spaces outside the stations are illuminated year round through all seasons and weather conditions. Lighting can also serve to accentuate the architectural form and quality of the stations as well as highlight landscaping and site furniture.

The subway stations are all located at prominent intersections on Broadway, and how they punctuate the corner, condition is a key urban design decision. Thinking about the permeability of the station from these urban corners, and how the treatment of the entrance can serve to both visual and experientially expand the perception of the plaza space outside the stations. Additionally, how weather protection can create a sense of enclosure and definition of the entry, as well as providing a needed provision in our climate, specifically.

Ms. Lee-Hunt noted that all of the stations follow a similar program, and that it is important that there is a certain standardization of materials, signage and design approach. In the field of transit and corridor design, these similar components and treatments are known as elements of continuity. From a design perspective, elements of continuity define a cohesive language for the transit system, and create a sense of predictability, familiarity and ease of use for transit customers. A discussion on how elements of continuity in transit design should exist in balance with elements of distinction and put forth a proposal that is both appropriate to and reflective of the distinct urban context in which it exists was the focus of the following slides.

Noted in the consideration of context, is that the Broadway Subway Project was conceived as an extension to the Millennium Line, as it connects to VCC-Clark Station. Although primarily elevated stations, the Millenium line is characterized by its distinctive architecture and stations which serve as reference points within their neighbourhoods.

Context specific design includes a consideration of the palette of materials characteristic of a specific community. Looking at the various materials used in heritage or other high value buildings to determine appropriate cladding for the station exterior, for example, that is reflective of the existing neighbourhood character.

The City asked that an integrated approach to public artwork be considered in the station design- for example, works that elevate the finish of the station, such as the tiled mosaic as a wall finish shown within the presentation.

Ms. Lee-Hunt clarified that the public art for the transit stations will be managed through a separate coordinated process and that there is a separate consultant onboard who will select the artwork and the placement of the artwork within the stations. A selection committee and evaluation panel has been created

to evaluate the works as well as a technical team to assist with integration.

The Province is working with Musqueam, Squamish and Tsleil-Waututh nations in relation to cultural recognition and Indigenous art for the Project. Indigenous art will be featured at the Arbutus Station plus additional stations, still to be determined in consultation with these nations.

Ms. Lee-Hunt outlined that the review of the stations that followed had been broken up into two parts. Firstly, stations where development was not currently known and anticipated to take place at a future date once the station was built (Mount Pleasant, Oak-VGH and Arbutus)

Mt. Pleasant Station

The context surrounding the proposed station includes a mix of low and midrise development, heritage buildings as well as newer more recent development.

Brick cladding, weather protection and murals are also characteristic of the area.

Ms. Lee-Hunt relayed that what the City has heard from the community in the early stages of the Broadway plan, is that Main Street is by far the most valued high street to people in Vancouver in terms of context specific design, the City relayed to Project Co in the Municipal Guidelines about the Mount Pleasant station area was the importance of:

- Typified by laneways, some of which are activated by festivals other events;
- The role that murals and public art contribute to the overall graphic of the community;
- And that Mount Pleasant is home to a diverse community that values art and cultural activities, as noted in the Mount Pleasant Community Plan.

Arguably more so than any other station area, a destination, where people come to dine, shop and socialize

Mount Pleasant is a location where the City anticipates future overbuild of the station. Provision for overbuild has been made in the following ways:

- Space and clearance provided for a line of future columns away from the foundation extents, for future development to span over the station.

With development, Ms. Lee-Hunt noted, the condition at Main Street will change. The colonnade as shown, will not be there on opening day and will instead be built with future development.

Ms. Lee-Hunt also noted also, that pending public engagement and the Broadway Planning Process, the idea of an active transportation link running alongside the west of the station has been proposed, which would take cyclists and pedestrians from 10th avenue to the station entrance

OAK VGH STATION

Ms. Lee-Hunt continued with the next station for review by the panel: Oak-VGH. The context surrounding Oak – VGH station, forms the health precinct.

To the north, leading to the Laurel street land bridge, buildings here are characterized by a mix of medical offices, hotels, and retail spaces.

There is a considerable slope north to south on the Laurel street frontage.

The City expects to see a high degree of change on Broadway in this area, with a number of new

developments being considered in close proximity to the station.

The City relayed to Project Co that accessibility was a key consideration as many passengers arriving to the station may have mobility, visual or auditory challenges.

The City wanted the design of the public realm to reinforce the connection of this station to south false creek via the Laurel Street land bridge.

Ms. Lee-Hunt noted that Oak VGH Station is almost identical to Main Street station in terms of the entry, transit plaza and equipment placement, however overbuild will only be possible from the west, and in a much more limited way due to some of the underground constraints.

ARBUTUS STATION

Next, Ms. Lee-Hunt introduced Arbutus Station. At this station site in particular, the City felt there was the opportunity for more robust and extensive green infrastructure, in part to mitigate the impact of the bus loop.

Through some initial studies, the City's take was that there is limited development potential of this site, for a number of reasons, including:

- The required setbacks to reclaim width for the greenway;
- The potential for the future streetcar (which would further constrain development).

And the fact there is really no development potential until the time that the bus loop is able to be decommissioned.

For those reasons, the City initially conceived of this station as a standalone station, seeing an opportunity for form-making, for example, with a roof expression sympathetic to the adjacent greenway.

As with many of the other stations in the project, there will be a mezzanine level above the station to house the station's rooftop equipment.

Ms. Lee-Hunt clarified that one thing that is different about this station as compared to the other stations, is that Arbutus is showing the screening of this equipment following the edge of the roof of the station in line with the streetwall façade of the conceptual future development, versus around only the perimeter of the equipment.

Additionally, Project Co will speak more about the cantilever required for overbuild.

Part two of the presentation covered stations where development over the station was known or planned. As the panel would have (or already had) the opportunity to review these stations in more detail during a future urban design panel session for the development, the introduction of these station areas was briefer.

BROADWAY CITY-HALL STATION

Ms. Lee-Hunt reminded the Panel that this will be an Interchange station with the existing Canada Line. The City owns the land around this station and will be developing it as part of the City Hall precinct under the Office Accommodation Program. The site for the station will be next to the existing Canada Line station and is expected to anticipate development in this area, some of which is under construction.

Ms. Lee-Hunt noted a change in materials between the new station enclosure and the existing Canada Line station with respect to the cladding and glazing system.

GREAT NORTHERN WAY – EMILY CARR STATION

Ms. Lee-Hunt noted that this station resides in the campus of Emily Carr University with the Central Valley Greenway located around the station. The station is surrounded by existing midrise and the campus precinct itself, and the campus precinct is filling out with development per the false creek flats structure plan.

Overbuild of the station planned here, currently working with a developer looking at overbuild options and scenarios from the False Creek Flats structure plan. Of note are the dual aspect entrance doors at this station as well as the enhanced landscaping treatment in and around the pedestrian realm.

Ms. Lee-Hunt reiterated that when this project comes in, the Panel will see this project in more detail.

SOUTH GRANVILLE STATION

Ms. Lee-Hunt noted that this project would be familiar to panel members at it has recently come to the panel for review. The context of South Granville is as a shopping high street and gateway to the south Granville District. This is the station with the highest degree of integration with development in the project currently.

Advice from the Panel on this application is sought on the following:**1. Overbuild and Integration Potential**

Do the proposed station designs provide optimal conditions for overbuild and integration with future development (With a focus on Mount Pleasant, Oak-VGH and Arbutus Stations, which will not be integrated with development on opening day or shortly thereafter)?

2. Interface with Public Realm

Please provide feedback on the quality of the public realm at each station, with particular consideration given to the public plaza, as well as the relationship between station infrastructure and the public realm, and its impact on/ integration with the streetscape (With particular focus on setbacks, ventilation grilles, emergency exits, equipment).

3. Reflecting Neighbourhood Character

Does the station design sufficiently respond to the surrounding context and reflect individual neighbourhood character in terms of materiality, fit, finish and landscaping?

Applicant's Introductory Comments:

The applicant noted they incorporated feedback from the open house in late November into the design and that they have also worked with the City and the Province to make the project as successful as possible.

The main comments from the public open house feedback included:

- increase and improve entrances and increase transparency of the station enclosures.
- allow for paving contrast for passenger and cyclist wayfinding. Look at different cladding colours.
- consider green initiatives; look at adding rainwater management retention system. Include public amenities such bike racks, seating and lighting.

The applicant relayed the project vision and principles, stating the idea is to create transit that is accessible to everyone. The concept is to create a family of stations using simple elegant forms.

The module of family stations will be incorporated in the construction and in the materiality. The overall experience is to connect plaza to platform. The creation of family station will still allow room for future

developments. The applicant highlighted it was important to ensure the design provides a safe environment that is comfortable for passengers. The applicant noted they used elements of continuity on each station to enhance the idea of a family stations.

All the entrances are transparent to enhance interaction from inside to outside. The applicant noted some of the stations have specific elements that are a little different from others such as the artwork.

The applicant noted the design of the stations had to work with location and site. There are three form-making options at each station, minimal, partial, to open. This is to accommodate services from the ground level, fire protection, while still allowing transparency from the public realm to the stations.

The applicant noted it was important to ensure station entries are operational, important elements are in full view and vertical separations are defined. Individuals should be able to see the elevators, fare gates, escalators and stairs. The electrical equipment closure is in the back to ensure all stations have clear sight lines, passage movement that is safe and accessible, and to allow for more public space and plaza in the front.

The strategy to allow for setbacks is to allow setbacks for sidewalks and clearance for buffer from sidewalk to the station, but also provide transparency from the main street to side streets to the station. When considering setbacks, it is important there is an allowance for future columns to be built. Setbacks and forms, and module are paid attention to for present and future development strategies.

When considering the plaza, the applicant kept in mind that there is a lot of movement back and forth from station therefore ensured there is enough buffer from plaza to station.

The applicant's intent was to design the paving so the entrance to the station is clear. At all stations the applicant stated they made sure the utility strip is around and away from the station, defining the curb line.

When considering materiality, materials that are low maintenance and durable are preferred. The applicant looked to using local materials as much as possible. Slip resistance is very important for paving and flooring material. The applicant looked to keep materials as consistent as possible amongst the stations for maintenance purposes.

Storm water management from the rainwater will run off the canopy of the roof and plaza. Using planters for roof drainage at the emergency exits. Areas of drainage will use a transferring system so that the water is not running to the station entrance.

Public lighting and artificial lighting is very important to this project for wayfinding and safety and comfort of individuals. The applicant looked to incorporate most lighting fixtures in the roof to avoid vandalism. Luminaires will be high-quality LED. The applicant is looking at illuminating the plaza where possible.

The applicant stated that artwork is part of the vibrancy of the public realm and will be located in areas where it is visible and low maintenance. There will be a separate program for indigenous art work at some of the stations. Public artwork will be part of the wayfinding so that it is very visible.

Vents are very important for the technical requirement of these stations. The applicant noted that they would try to integrate with the streetscape and stations as much as possible. The applicant intends to integrate vents with the station entrances as much as possible, but when not possible at the entrances have them integrated with planters and, as a last resort, will have at sidewalks.

Panel's Consensus on Key Aspects Needing Improvement:

- With regard to the character of the plaza spaces, consider more planting, benches and

integrated seating and enhanced landscaping features,
Consider ways to further minimizing the impact of the vents as they have a tremendous impact on the station plaza and streetscape generally

- Reconsider disguising the vent as a focal point where located in a more open space, with art or more seating.
- The project should go back and reflect on the unique community character and identity of each neighbourhood and provide a high performing public realm outside of the station.

Mount Pleasant

- This station is recognized as being contextually unique, particularly in terms of the lane activation culture of Mount Pleasant.
- Consider a CRU to help animate the station on the Main Street facade, and ensure overbuild which will positively contribute to the public realm.
- Consider adding some glazing to the active laneway connection; many panelists would like to avoid seeing the active lane covered with overbuild.

City Hall

- Consider increasing the station's presence in the civic heart of the City, creating more of a meeting place. Also, consider matching the materiality of the existing station design in terms of glazing and cladding systems. The fencing provided outside of the station seemed out of place and should be removed if possible.

OAK VGH

- Consider ways to have more planting and stepped seating along Laurel, as for individuals coming up the hill on Fairview it can be strenuous.

ARBUTUS

- Do not overbuild this station, instead the station design should have a more sympathetic response to the greenway
- Strongly encourage a more direct at grade connection to the greenway.
- Further, design development to the exit stairs on the plaza adjacent to the liquor store as their current orientation creates a division or barrier in the open space.
- Champion the public realm, bring in some unique character, which may not happen with the architecture. Do not always want to rely on public art to create uniqueness at station areas.

GNW:

- The station at Emily Carr is well done and will be incorporated into a future building, this is a great site for some future public art.

South Granville:

- Overall the South Granville station is well done.

Related Commentary:

The Panel commended the applicant team and City staff for the excellent presentations and well prepared booklets. The development principles were well defined and expressed. The overall design is an appropriate response.

Some panelists noted they appreciated the idea of system wide repetition, adherence to an architecture and language that responds to the consistency of series of stations, this will help with the recognition of these ground stations and visibility of the station. From this perspective the restraint of the design is a positive

Other panelists liked different design options that allow the station to have character and visibility. The materials, palette, transparency, and form makes the station fit the area. They also mentioned they were encouraged to see a provision for a second entry door at several of the stations, and that equipment could be relocated to facilitate development.

Others noted the architecture was too quiet and the designs could be taken to the next level to allow for some individuality and a unique expression of each station as well as to respond to the future conditions more. Presently the buildings are modular, quiet, still and do not really breathe. Consider some colour for interest and legibility.

Panelists noted that the he greenway needs to have a significant relationship with the station.

Regarding, neighbourhood character some panelists felt the overall the approach was good to the architectural palette constituted an appropriate response and that the public art helps reflect the neighbourhood character and individuality of each station.

Other panelists felt the stations and public realm rely too heavily on the public art and there is a disconnect between the design and the City's objectives. A panelist referred the applicant to the Mount Pleasant Area plan as a starting point for material selection for the Mount Pleasant station and plaza design.

In terms of interface between the station and public realm, panelists agreed more could be done to bring out the character of the station area, perhaps through additional seating, planting or more extensive weather protection (covering waiting areas and bike racks), as well as distinguishing elements in ways that make them more identifiable within each station area. Regarding the canopy design, it was advised that the form-making exercise should not limit the overall size or extent of weather protection

There was concern with overbuild and integration, and the panel advised that the applicant consider how overbuild and any required structure impact the station and plaza space. The overbuilt concept could be scaled back from the "maximum" shown to allow for building articulation. Some panelists noted they would like to see an articulated roof form where overbuild would be challenged or is not anticipated. A panelist noted generally the vent shafts in the plaza spaces look massive and complicate the overbuild potential.

Regarding Arbutus Station, several panelists commented that it is working hard to do what it needs to do on a small footprint, and leaves little opportunity for an overbuilt scenario. Any future overbuild will require a heroic cantilever and result in limited frontage.

Additionally, some panelists noted they would like more information on how the parking scenario could be managed or its treatment enhanced behind the station.

It was also noted that signage is important to keep in mind, as wayfinding is a key consideration of station design.

In terms of sustainability, a panelist recommended the applicant consider including other measures that could enhance this aspect, i.e. carbon studies and to consider an approach to the design where sustainability is more embedded.

Overall, the panel was happy to see progress on this much needed transportation infrastructure project. In general, panelists thought the consideration of the public realm was light and hoped there was an opportunity for improvement, as well as through the City-led streetscape design process.

Applicant's Response: The applicant team thanked the panel for their comments.

City Response: The City thanked the panel and noted that future development at station sites would be

brought to the panel for review, and development was anticipated at these sites despite the remaining challenges to overbuild. The City additionally clarified that the streetscape design process did not include the plaza space outside of the station, which would fall to the applicant in terms of urban realm enhancements

<<END OF UDP MINUTES>>

INTERDEPARTMENT REVIEW STATEMENTS**ENGINEERING SERVICES – STREET DESIGN**

Streets Design Branch reviewed the BSP station designs to ensure they complied with the technical requirements and guidelines with respect to off-site Streets infrastructure, streetscape elements and accessibility. In particular, we reviewed the designs to ensure they complied with the City's approved standard surface treatments on public property, including proposed street trees, boulevard treatments, and other hardscape materials related to the public realm. We also reviewed the design to ensure it complied with the City's Engineering Design Manual, Construction Specifications, Standard Detail Drawings and other relevant standards for off-site infrastructure such as sidewalks, lane crossings, landscaping, lane, adjacent roads.

ENGINEERING SERVICES – TRANSPORTATION AND DATA MANAGEMENT

The Traffic and Data Management Branch is responsible for integrating signal design of the station blocks following station construction. Our review focuses on the accessibility and safety of all transportation modes while ensuring station design elements will not limit the installation of future signal equipment.

ENGINEERING SERVICES – TRANSPORTATION PLANNING

The role of Transportation Planning is to look at the network implications of the station designs, and how well the stations can be accessed by all modes of travel, particularly for sustainable modes. Walking, rolling, cycling, and bus connections, accessibility, and end-of-trip facilities are some of TPL's main focus areas.

ENGINEERING SERVICES – DEVELOPMENT WATER RESOURCES MANAGEMENT BRANCH

The Development Water Resources Management Branch (DWRM) is focused on reviewing the proposed plans for rainwater and groundwater management at each station. Rainwater management with green infrastructure practices are preferred as these are proven solutions with generally lower life cycle costs than traditional grey infrastructure systems. Appropriate groundwater management strategies will be necessary during construction and may be required long term at many stations. DWRM provides support for water ingress risk analysis at the BSP Stations

ENGINEERING SERVICES – STREET ACTIVITIES

Street Activities provides detailed review, recommendations and conditions for horticulture, furnishings and public spaces in public realm adjacent to development sites to ensure consistency with City of Vancouver standards and guidelines including the Boulevard Gardening Guidelines, Plaza Design Guidelines, and public realm plans.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

The Crime Prevention Through Environmental Design (CPTED) recommendations are contained in the Recommendations section noted in Appendix A attached to this report.

CITY DESIGN STUDIO

The City Design Studio is a group of urban designers with combined disciplines as architects, landscape architects and planners. We provided a review of the station building design, landscape design, station block design, and the interface of these elements with the public realm. Our focus is to ensure that the station designs support the future of Broadway as a Great Street, anticipate the evolution and activation of the station areas, and set the stage for the quality walking and cycling experience and connectivity and that will contribute to the success of the new Broadway Line.

PLANNING DEVELOPMENT SERVICES – LANDSCAPE

The landscape on private property around the stations should be as substantial and diverse as possible. Trees should be considered wherever there is the opportunity, with layers of shrubs and groundcover. The landscape should blend into the neighbourhood characters of each station, creating a transition between the public and private realms. The landscape programs around the stations should include as much common open spaces as possible, with benches and recreational opportunities for commuters and residents alike and be supportive as reasonable of other City objectives such as rain water management and urban forestry.

PARKS – URBAN FORESTRY

DAP is mainly focused on private property and plaza space, including street trees immediately adjacent to the plaza which are anticipated to tie into a green infrastructure mitigating the treatment of runoff from the station plaza. Other street trees located elsewhere on the station blocks are anticipated to be addressed through the subsequent street design process. All new trees must be provided with soil volumes in keeping with their mature sizes, as outlined in the City of Vancouver Engineering specifications. Where possible, soil cells are preferred under hard-scape, however structural soil will also suffice where soil cells are not feasible. In some cases, it may be preferable to create fewer, high-quality planting sites with adequate soil resources for larger trees, rather than many trees with crowded canopies and/or unsupported rooting environments. Integration of Green Infrastructure may be feasible for new tree planting, but will pose challenges when incorporating with existing mature trees. On Broadway frontages where a choice must be made between north and south side, north side is the preferred tree position for the sake of solar access.

ENVIRONMENTAL PROTECTION BRANCH

The Broadway Subway Project team undertook an Environmental and Socio-Economic Review (ESR) to understand potential environmental and socio-economic impacts and develop ways to mitigate the impacts. This process provided opportunities for consultation with Indigenous groups, the public, stakeholders, and government agencies on the scope of the review.

The ESR identified that potential effects, similar to other urban development projects, are well understood and can be effectively mitigated. It also determined that the project will have an overall positive benefit on environment, health and affordability in the region.

The scope of the ESR included:

- Noise
- Vibration
- Air Quality/GHG
- Contaminated Sites/Excavated Materials
- Archaeological and Heritage Resources
- Transportation and Access
- Housing and Property
- Electric and Magnetic Fields
- Aquatic Resources
- Vegetation and Wildlife

The contractor is required to develop and implement a Construction Environmental Management Plan (CEMP), including specific measures to mitigate effects on environmental and socioeconomic conditions, which the Province will oversee.

Examples include:

- Advance notice to residents identifying upcoming construction activities and timing.

- Measures to manage dust and emissions from construction vehicles and equipment.
- Site/activity specific measures to minimize construction noise and vibration, where possible.
- Where feasible, measures to minimize light spill during construction.
- Pre-construction vibration monitoring including building condition assessments.
- Noise and vibration monitoring during construction.

PROCESSING CENTRE – BUILDING

The Office of the Chief Building Official and the City's Fire Chief have been in discussions with the proponent team on the Construction Approval Process (CAP). This process has been defined in the Vancouver Municipal Agreement (VMA) between the Province of British Columbia and the City of Vancouver.

Pursuant to the VMA, the City's Fire Chief, the Province and the Operator will work together to develop a sprinkler system concept that can be installed in every Station at the underground head house, concourse and platform levels that meets the objectives of each of the foregoing while mitigating the risk of vandalism and damage to Station equipment.

The current submission has not been fully reviewed for compliance with the Building By-law requirements and other applicable building code standards. The proponent team is responsible for ensuring that the design of the building meets the Building By-law requirements or code criteria accepted by the City of Vancouver. Further, the proponent will submit the Building Code Compliance Report for each Station and the Building Code compliance drawing package for each Station to the City for information during the CAP.

To ensure that the project does not conflict in any substantial manner with the Building By-law, the designer should know and take into account the Building By-law requirements which may affect the building design and internal layout.

PLANNING DEVELOPMENT SERVICES – HERITAGE

The Royal Bank Building, formally addressed as 1489 West Broadway, was a four-storey commercial structure located at the northeast corner of West Broadway and Granville Street. Built in 1957 and designed in the International Style by architect E.P. Warren, the Royal Bank Building was valued for its association with the post-war development of the Fairview neighbourhood as well as for its style and its association with its architect. Due to the construction of the subway, its head house and station entry on the site as well as other technical constraints for construction and excavation, it was not feasible to save this structure.

The Royal Bank Building, located at one of the city's busiest corners, catered to its corporate image and its growth aspirations. The location, at the time, provided an ideal site for its new branch with proximity to a high volume transit and increased vehicular traffic generated by the opening of the Granville Street bridge in 1954. This post-war auto-oriented development was also exemplified in the provision of a two level parking garage at the rear. The Royal Bank Building featured a sleek curved-corner façade fronting both West Broadway and Granville, anchored by a dark green granite base. Vertical elements such as black metal-clad piers, balanced by the expression of banks of windows which collectively supported a sophisticated modernist approach. The building was evaluated by staff and determined to be worthy of consideration for addition to the Vancouver Heritage Register. However, in order to successfully integrate a transit station on this site in a safe, timely and feasible manner, several Provincial and Translink station design criteria's had to be met. This includes access to and egress from the transit head house, accommodation of additional volume of pedestrian/passenger traffic adjacent to site, and sightlines through transit station façade. As a result of Provincial/Translink requirements, the existing building could not be retained

Pursuant to the approved Development Permit Application DP-2019- 00704, arrangements have been made to address the means by which the memory and history of the bank and its significance can be illustrated through a graphic commemorative piece and a heritage plaque which will be located on-site.

NOTIFICATION

As part of the DAP framework, the public engagement process was undertaken by the Broadway Subway Project Corporation. In order to capture a broader population of users, residents and stakeholders, City staff reached out to four of the City's advisory committees: Seniors (SAC), Persons with Disabilities (PDAC), Transportation (TAC), and Children, Youth and Families Advisory Committees (CYFAC). A public outreach strategy was developed and the proponent team prepared a report summarizing the process, results and next steps, as contained in Appendix J attached to this report. Separate from the DAP, the Province is working with Musqueam, Squamish and Tsleil-Waututh nations in relation to cultural recognition and Indigenous art for the Project.

The Public Engagement Report contains input received from the public at the virtual open house hosted on the Broadway Subway Project website. The virtual open house was held from November 26 to December 9, 2020 and included a presentation video, display boards, image gallery, online survey, project timeline and an FAQ section. To initiate the public engagement process, the project team communicated through various platforms, including 1 newspaper ad, 1 poster, 7 social media posts, e-newsletter to 3013 subscribers, and emails to 1124 stakeholders. Further, the City of Vancouver's Broadway Subway Project webpage hosted information on the public engagement process and referred visitors to the virtual open house. A detailed list of the notification method is outlined in the Public Engagement Report (refer to Section 3 of Appendix J for further detail).

During the virtual open house period, a total of 2,171 visitors viewed the engagement site and 359 self-selected participants completed the online survey. Given this relatively small sample size and selection method, staff have focused on the qualitative aspects of comments received as opposed to extrapolating from the results a general representation of the general population. The results from the survey are summarized as follows:

- Majority of respondents indicated they thought the draft station designs were aligned (very aligned or extremely aligned) with the design philosophy (54%), system consistency (62%), and enhanced passenger experience (52%).
- Majority of respondents (56%) indicated that they are very satisfied and somewhat satisfied with the overall station designs.
- Respondents had the highest satisfaction with the draft designs for Great Northern Way-Emily Carr Station (61% very satisfied or somewhat satisfied) and Arbutus Station (56% very satisfied or somewhat satisfied).
- Respondents had the lowest satisfaction with the draft design for Broadway-City Hall Station (32% very dissatisfied or somewhat dissatisfied).

A total of 256 respondents provided comments as part of the online survey, which have been summarized by key themes, below. (see Section 4.2 of Appendix J for further details):

- Desire for the stations to better integrate with the local areas, with a less utilitarian look and feel.

Staff response:

While the stations are located within an existing context and community character, Broadway is evolving and will continue to evolve over time. It is imperative that the stations respond to the context they exist within on opening day and provide for a future high performing public realm. As a result, staff recommend implementing context specific design including the palette of materials characteristic of a specific community. Incorporating various materials used in heritage or other

high value buildings currently in place to determine appropriate cladding for the station exterior, for example, that is reflective of the existing neighbourhood character. Further, station designs should provide optimal conditions for overbuild and integration with future development to enable growth (particularly with a focus on Mount Pleasant, Oak-VGH and Arbutus Stations).

- Preference for at least two entrances at each station, particularly at Broadway-City Hall Station (due to anticipated volume), at Oak-VGH Station (with a land bridge to Laurel Street or direct access to the hospital), and at Great Northern Way-Emily Carr Station (to better connect with both Emily Carr University of Art + Design and Vancouver Community College).

Staff response:

Notwithstanding the technical and operational requirements for the stations, staff have encouraged second point of entry be provided at all locations. Where only one entrance is being proposed currently, staff recommend provision in the design of the curtain wall system for the easy addition of second point of entry in future.

- Support for Crime Prevention Through Environmental Design (CPTED) principles, particularly with respect to station lighting at night and anti-slip surfaces

Staff response:

To enhance visibility, staff recommend provision for lighting so that spaces outside the stations are illuminated year round through all seasons and weather conditions. Staff have reviewed the designs to ensure compliance with the City's approved standard surface treatments on public property, including boulevard treatments and other hardscape materials related to the public realm. Where alternative surface treatments have been proposed, staff have sought slip test results to ensure conformance.

Recommendation A.1.5 (iii) has been established to help improve CPTED issues.

- Desire for more cycling amenities, including bike lockers and covered/interior parking.

Staff response:

The subway stations are all located at prominent intersections on Broadway, some of which are located adjacent to cycling corridors. Staff are supportive of the provision of additional weather protection at station sites to further accommodate waiting areas and bike racks. Bike rooms are being provided at GNW, Arbutus and BCH station (planned as part of future development). At Mount Pleasant and Oak-VGH stations, it is anticipated that a bike room could be provided through future development adjacent to the station.

- Concerns about potential community impacts of the new Arbutus bus loop.

Staff response:

Although the proposed Arbutus bus loop is an interim measure, to be decommissioned after the UBC extension is complete, staff believe this site contains opportunity for more robust and extensive green infrastructure, in part to mitigate the impact of the bus loop. Further, staff recognize constraints for overbuild at Arbutus station encourage a more form-making approach, for example, with a roof expression sympathetic to the adjacent greenway.

Recommendation B.2.5 has been established to improve public realm interface at Arbutus station site.

- Suggestions to make the stations and exterior plazas larger to better accommodate anticipated future demand.

Staff response:

Although the City expressed a desire for larger plaza spaces outside of the station entries, due to project constraints, both technical, financial (land acquisition), increased setbacks were not possible. Through the Broadway Street re-design process, the City will look at ways to increase the public realm allocation at station blocks, however this would require trade-offs in terms of the number of vehicle lanes, on-street parking, accommodation of future bike infrastructure and station cross streets. Any proposed changes to Broadway will be subject to public consultation through the Broadway Planning and street redesign process.

- Support for use of stormwater retention, and suggestions for other green initiatives or sustainable designs.

Staff response:

Rainwater management with green infrastructure practices are preferred as these are proven solutions with generally lower life cycle costs than traditional grey infrastructure systems. Appropriate groundwater management strategies will be necessary during construction and may be required long term at many stations. Staff are recommending the proponent team to explore options for a green infrastructure at Arbutus station to mitigate the impacts of the bus loop, and at other stations to manage run-off from station areas. Where overbuild is anticipated at station sites, development will be required to meet or exceed current City standards for stormwater management.

ADVISORY COMMITTEE FEEDBACK

City staff met with seven advisory committees over the course of 2017 and 2018, which helped shape the Broadway Subway Project Station Design and Urban Integration Principles and Construction Impact Mitigation Strategies (Principles and Strategies) approved unanimously by Vancouver City Council on May 16, 2018. The Principles and Strategies identify the goals that the City will endeavour to achieve through the Broadway Subway Project and related City activities.

More recently, staff presented to four of these advisory committees as part of DAP engagement and found that their concerns are largely consistent. Although the DAP was intended to capture the space within the station site property, the committee concerns extended beyond the scope of DAP as many members advocated for the entire user experience on the new extension rather than just the above grade portions. The key concerns included:

- Weather protection: Children, Youth and Families Advisory Committee noted that the stations would benefit from more weather protection for people waiting outside the stations.
- Elevators: Significant concern was raised by both Seniors and Persons with Disabilities Advisory Committees (SAC and PDAC) regarding lack of planning for multiple elevators at all stations. While there may be sufficient elevator capacity with a single elevator within the first few decades of operations, their key concern is that people with mobility challenges are unable to use stations when that single elevator fails. The Transportation Advisory Committee also raised concern about the size of elevators and the ability to accommodate people with bikes alongside people with mobility aids.
- Oak-VGH Station tunnel: PDAC and SAC also raised concern regarding a lack of certainty around futureproofing for a tunnel at Oak-VGH Station that would provide improved connections to VGH and the hospital precinct. They indicated that they saw this as a missed opportunity as the grades up Laurel Street to the hospital are steep and will be challenging for many people using the hospital services.

Washrooms: PDAC and SAC also raised concerns regarding uncertainties over customer washrooms at Arbutus and Broadway-City Hall Stations and that there will be no washrooms open to customers at the other four stations without the assistance of a SkyTrain attendant.

The feedback provided by members of public, advisory bodies and city staff will be taken into consideration by the proponent team. A subsequent public engagement opportunity is anticipated as part of the DAP framework, to be conducted in a similar format (i.e., virtual open house), which is currently planned for spring 2021.

STAFF RESPONSE

The Staff Committee acknowledges the inherent limitations imposed by the DAP which has restricted the ability for staff to influence the ultimate form and design of the station sites, noting the following key challenges:

- As outlined in the Municipal Guidelines document, staff sought significantly larger setbacks than those provided at the station plazas. Larger setbacks would allow for a higher performing public realm including more passenger/pedestrian amenities and better landscaping considerations.
- With the exception of South Granville Station, staff were not permitted to influence the layout and configuration of the station entrance. Staff feel the configuration of the station entrance at South Granville station significantly facilitates the potential for development overbuild of the station site and is in keeping with the station typology appropriate to a densely populated urban condition and constrained right of way such as Broadway.
- Although the bus loop at Arbutus is an interim condition, there is no confirmed completion date for the extension to UBC and the impact to the community in the meantime is significant. Efforts should be made through landscaping and station design to mitigate the impact of the bus loop and provide a more sympathetic response to the Arbutus greenway and surrounding neighbourhood.

- The presence of rooftop condensers and equipment and large station footprint significantly impedes development overbuild potential of the station sites. Staff requested that no rooftop equipment be permitted on the stations and the presence of rooftop equipment was made evident only following the proponents bid submission and financial close.
- The proponent should not rely solely on a yet to be disclosed public art program to add visual interest, variety and contextual relevance to the project. These considerations should be “hardwired” in the design of the station architecture and concept for the station plaza.
- Due to the advisory nature of the Design Advisory Process, the City is unable to mandate that the conditions and considerations outlined in this report are met, as no development permit approval is required. It is of note that, considering the overall project budget, the financial implications of the design advice provided herein is minor, however, would greatly improve the overall design proposal.
- While outside the scope of DAP, City staff understand the frustration with the lack of certainty for multi-use washrooms at Broadway – City Hall and Arbutus Stations. However, we also understand TransLink’s pandemic related financial challenges and will continue to advocate for funding for these washrooms. Furthermore, staff believe that the single use washrooms, particularly at Oak-VGH Station, should be easier to access than today.
- While also outside the scope of DAP, City staff believe that all stations should be designed to accommodate multiple elevators from platform to concourse at some point in the future, even if only one is installed on opening day. The key consideration should not be capacity of the elevators based on projected ridership in 2045, but rather longer term capacity considerations and more importantly, providing additional elevators in case of breakdown to ensure consistent access for all transit users (e.g. people with disabilities, mobility aids, strollers, bikes and people carrying heavier or larger items). City staff will work with the development community to add additional elevators from concourse to ground level through future redevelopments.

DEVELOPMENT PERMIT STAFF COMMITTEE COMMENTS:

The Staff Committee has considered the advice and comments sought by this proposal and concluded that with respect to consideration of the Development Permit Board, the advice and commentary within this report captures a sufficient level of review of the Broadway Subway station designs. The Staff Committee also acknowledges the inherent limitations imposed by the Design Advisory process (DAP) which, in some instances, has restricted the ability for staff to influence the ultimate form and design of the station sites.

The ultimate success of these stations will rely on certain important design considerations and future design development such as careful consideration of plaza landscaping, station articulation, detailing and material selection to better meet this expected benchmark and satisfy the City's goals and objectives for the project. The stations form a foundational aspect of the Broadway Plan and street redesign process, and at this critical junction, station designs should imbue the very best aspirations for urban place-making while setting the framework for future high-quality development on the Broadway Corridor.



J. Greer
Chair, Development Permit Staff Committee



M. Lee-Hunt
Development Planner



B. Casidy
Project Coordinator

Project Facilitator: K. Imani

A All Stations Recommendations and Considerations**A.1 Recommendation - All Stations**

A.1.1 design development with regard to Site Furniture, including:

- i. where raised vents are necessary within the transit plaza, provide comfortable and welcoming seating along the length of the vent. Consideration should be taken to ensure the seating height and finish is comfortable and inviting, while complementing the station architecture and plaza design;

Note to Proponent: All proposed seating should meet BCBC Accessibility Handbook and City of Vancouver standards for size, back support and height.

A.1.2 compliance with accessibility standards with regard to Signage, including:

- i. all station markers should be at least 1.2m away from the pedestrian ramp per accessibility requirements;

A.1.3 compliance with City standards with regard to Plaza Paving, including:

- i. all poured in place concrete paving at station plazas should have saw cut joint, including at proposed "light and heavy sandblast bands" locations;
- ii. extend the coloured paving strips from inside the station to the transit plaza where it connects with the sidewalk. Incorporate a tactile attribute to these paving strips to enhance wayfinding for the visually impaired;
- iii. grade plaza seating and paving areas toward the landscaped element (trees and vegetation) for rainwater management benefits such as runoff volume reduction, enhanced water quality and peak flow attenuation, as well as to minimise irrigation demand by landscaped elements;

A.1.4 provision for treatment of Station Equipment, including:

- i. use architectural acoustic louvers to screen the AARUs;

Note to Proponent: Chain link fencing is not considered an appropriate screening material, especially when fronting a street or lane.

A.1.5 design development with regard to Station Interface, including:

- i. provide differentiation of all or a portion of the exterior cladding material at each station through the use of colour, texture, module or application to better reflect community context and integrate stations into their surrounding station area;
- ii. reduce or eliminate the use of fencing and where fencing is required for safety or security provide fencing of a high-quality durable material designed to complement the contextual character; and
- iii. incorporate exterior lighting to provide optimal lighting levels within the station plaza during all seasons and weather conditions. Provide a lighting strategy and plan that facilitates visibility, natural surveillance and addresses other CPTED considerations while complementing the architecture of the station design as well as highlighting landscaping features.

A.1.6 clarification on plans depicting property lines and rights of way including offsets to nearest property lines;

A.1.7 provision of fully dimensioned drawings;

A.1.8 revision of note on drawings for retail use as, 'Future retail use – under separate application';

Note to Proponent: Any future retail area will require separate applications for development and building permits. The proponent should note that provision of loading space may be required as loading from the street for this future use is not supportable. A future loading spaces should be located with the proposed emergency and service parking spaces. A service/loading connection at the rear of the building should be considered and potential for integration with future overbuild for service and loading access.

A.1.9 provision of bollards at all station entrances, except at South Granville where they are being provided by development;

Note to Proponent: Bollards should be designed to withstand vehicular impact and spaced to prevent ingress.

Considerations - All stations

A.1.10 design development with regard to Station Interface, including:

- i. explore increasing the space allocated outside of the station in the transit plazas in order to support a high quality/ high functioning public realm and provide for robust seating and landscaping features. Please refer to the Municipal Guidelines document which outlined the City's preferred setbacks. For references, through the City-led Street design process, the City hoped to achieve a 7.5m clear sidewalk from back of curb to edge of sidewalk, in addition to the transit plaza (12.5m total outside each station entrance; and
- ii. consider the use of spider clips and glass panels instead of a curtainwall glazing system, to better reflect the high quality materials used at existing stations as well as to better integrate with future development overbuild.

A.1.11 design development with regard to Landscaping and tree retention, including:

- i. provision of enhanced opportunities for planting and green expression within the station plazas, such as in planters integrated with benches and/or vents, or planters used to capture rainwater from canopies;
- ii. consideration of green roof system over station canopies to provide a green expression at the station entrances;
- iii. wherever possible, outside of the construction area, retain existing trees as long as possible until they are removed;

Note to Proponent: Standard dimensioned tree protection barriers for the retained trees must be illustrated on plans, complete with tree labels, coordinated with the provided Arborist Report.

- iv. wherever possible, protect trees and retain existing high-value trees; and
- v. coordinate with the Broadway street design process to provide replacement trees.

A.1.12 design development with regard to Weather Protection, including:

- i. provision of extended station canopy along the length of the station for a better civic experience and to contribute to continuous weather protection, including Broadway/GNW and the cross street(s);
- ii. canopy to extend over and shelter bicycle racks; and
- iii. canopy to extend over and shelter waiting areas and integrated seating within the transit plaza.

A.1.13 compliance with City standards with regard to Signage, including:

- i. coordinate placement of information and wayfinding stands adjacent to the station on Broadway and GNW with City standards.

B Station Specific Recommendations and Considerations**B.1 Station Specific Recommendations****B.1.1 Great Northern Way Station**

- i. provision for Weather Protection at the station area, including:
 - a) canopy design should incorporate elements of the architectural design of the future tower if possible / be an architecturally-interesting feature design as it will be highly visible by passing motorists and pedestrians. Project Co. should explore opportunities to work with property owner to improve the station's canopy design;
 - b) incorporate an architectural lighting strategy that provides for an enhanced character and sense of security at all hours and during all seasons and weather conditions; and
 - c) provide weather protection over all of the bicycle racks.

B.1.2 Mount Pleasant Station

- i. provision for treatment of Station Equipment, including:
 - a) Ensure placement of fire department connection and Fire Command Post (FCP) does not encumber future overbuild concept in terms of the placement of columns. Ensure these components will remain visible and accessible once columns are in place.
 - b) Ensure placement of fire department connection, FCP or any other station equipment or furniture does not preclude provision of future second entrance door on Main Street facade.
 - c) The screening of the AARUs should be in keeping with the character of the Mt Pleasant neighbourhood. Acoustical louvers or a solid concrete wall with the potential for a mural would be an appropriate choice, whereas chainlink fence is not appropriate for a valued shopping high street.
- ii. design development with regard to the Emergency Exit, including:
 - a) revise emergency exit door so that it exits to the street on the south side of the emergency exit enclosure. In its current placement, the door opening along Quebec conflicts with the sidewalk.
 - b) emergency exit must be accommodated in either 104 E Broadway or 108 E Broadway.

Note to Proponent: While 108 E Broadway appears configured to better accommodate the exiting, it is incumbent on this approval and the project that exiting is provided for future development. This may require knockout panels providing access from either future development sites.

B.1.3 Broadway City Hall Station

- i. design development with regard to the Emergency Exit, including:
 - a) revise emergency exit door so that it exits to the street on the south side of the emergency exit enclosure. In its current placement, the door opening along Yukon conflicts with the sidewalk.

- ii. design development with regard to the Station Interface, including:
 - a) revise proposed condenser location to below grade, and provide grille flush with sidewalk. This will also eliminate the need for the currently proposed access stairs. As already discussed with Province and the consulting team, this to preserve the potential for future integration of City's development on this City-owned site;
 - b) minimise or eliminate the impact of fencing around the station, including eliminating the fencing around the elevator enclosure; and
 - c) roofs to the south & east of elevator shaft to be designed as temporary structures, assuming that they can be replaced by City's future development. Knock-out slabs to extend to elevator structure.
- iii. provision for Knock Out Panels, including:
 - a) work with the City/REFM to locate knock out panel near the emergency exit to allow for a more direct path of travel to the south, as its current locations requires a hard right turn when ultimately incorporated into a city development; and
 - b) explore opportunities for an additional knock-out panel at the station level, to maximize potential for connectivity with future development by the City.

B.1.4 Oak – VGH Station

- i. design development with regard to the Station Interface, including:
 - a) minimise extent of station foundations so that required structure falls within the station footprint and doesn't extend into the City owned parcel, in order to minimise the span required by future development; and
 - b) the screening of the AARUs should be in keeping with the character of the Fairview neighbourhood. Architectural acoustical louvers would be an appropriate choice.
- ii. design development with regard to Vents - Transit Plaza or Private Property, including:
 - a) reduce the width of the vents located in the plaza and elongate as necessary to provide more space to the public realm. If vents must be raised (not flush with the sidewalk) incorporate comfortable, welcoming and integrated seating on the edge of the vents.
- iii. provisions for the VGH Tunnel Connection, including:
 - a) indicate location of knockout panel for future underground connection to VGH. Provide a section showing the possible width and headroom clearance of the tunnel given the likely construction requirements of the tunnel, elevation of the lane and proximity to underground station infrastructure.

B.1.5 South Granville Station

- iv. design development with regard to the Emergency Exit, including:
 - a) set back the emergency exit to avoid conflict of the door swing with pedestrians on the sidewalk.

Note to Proponent: Placement of emergency exit should provide for a 7.5m clear sidewalk from back of curb to face of building.

B.2 Station Specific Considerations

B.2.1 Great Northern Way Station

- i. design development with regard to Vents - Transit Plaza or Private Property, including:
 - a) the following areas are important to improve neighbourhood character and public realm, especially considering the potential impacts to residents given the anticipated construction activities in this area:
 - 1) consider including planting (potentially small-scale trees), around the vents outside canvas building to screen views of the grilles from the residential units above;
 - 2) consider modifying vents at this location so they are flush with grade; and
 - 3) consider modifying the geometry of the vents to follow the existing angles of the current public realm design.

B.2.2 Mount Pleasant Station

- i. design development with regard to the Station Interface, including:
 - a) reduce the width of the vents located in the plaza and elongate as necessary to provide more space to the public realm. If vents must be raised (not flush with the sidewalk), incorporate comfortable, integrated seating on the edge of the vents;
 - b) consider glazing or the provision of future glazing (i.e. knockout panel) on the west station wall to provide visible connections between the future laneway connection and inside the head house;
 - c) the station's west elevation should incorporate lighting and glazing adjacent to the pedestrian pathway to create a welcoming space and improve CPTED considerations;
 - d) consider locating the transit station service parking in the future active transportation corridor. Stalls as shown do not appear to be feasible from an access perspective as shown;
 - e) provide, or make a future provision for, a second entry from Main Street by opening up the north east corner of the station. Considerations should include: structure to support coiling grille, electrical supply to power door mechanism and matching grades immediately outside future door location with the station slab elevation;
 - f) bottom of glazing along Main Street façade should be lowered (increased) and angled to reflect the sloped gradient of the sidewalk. See Port Moody Skytrain Station for a precedent of angled glazed panels within the existing system;
 - g) minimise extent of station foundations so that required structure falls within the station footprint and does not extend into the active transportation connection, in order to minimise the span required by future development; and

- h) relocate the rooftop condensers to the west wall of the station. Group the wall-mounted condensers toward the south portion of the wall, allowing for placement of future columns to facilitate overbuild of the station. Screen with architectural acoustical louvers on three sides from grade to roof level.

B.2.3 Oak – VGH Station

- i. design development with regard to the Station Interface, including:
 - a) provide, or make a future provision for, a second entry from Laurel Street by opening up NE corner of the station. Considerations should include: structure to support coiling grille, electrical supply to power door mechanism and matching grades immediately outside future door location with the station slab elevation; and
 - b) relocate the rooftop condensers to the west wall of the station. Group the wall-mounted condensers toward the south portion of the wall, allowing for placement of future columns to facilitate overbuild of the station. Screen with architectural acoustical louvers on three sides from grade to roof level.

B.2.4 South Granville Station

- i. design development with regard to the Station Interface, including:
 - a) provide, or make a future provision for, a second entry from Broadway Avenue by opening up the north facade of the station. Considerations should include: structure to support coiling grille, electrical supply to power door mechanism and matching grades immediately outside future door location with the station slab elevation.

B.2.5 Arbutus Station

- i. design development with regard to Plaza Paving, including:
 - a) consider raising the grade of the service parking stalls to the level of the sidewalk, so that while not in use, this space can function as an extension of the public realm behind the station;
 - b) given that Arbutus is likely to remain a standalone station with no future development overbuild, and the significant impact of the bus loop (even as an interim condition) provide further design consideration of the station roof expression and landscape treatment through one or more of the following:
 - 1) incorporate a green roof over the station footprint;
 - 2) incorporate a green roof over station canopies; and
 - 3) further articulate the geometry of the roof form to provide a more sympathetic response to the greenway and/ or transit plaza; and
 - 4) provision of additional landscaping on the west and north sides of the station.
 - c) considering cantilevering the bus shelter canopy off of the façade station itself, instead of dropping columns within the queuing space, as the available plaza width is already quite narrow.