

TO: CHAIR AND MEMBERS
TRANSPORTATION COMMITTEE

DATE: 2016 January 06

FROM: DIRECTOR PLANNING AND BUILDING

FILE: 68000 20
Reference: Gilmore Urban Trail

SUBJECT: GILMORE URBAN TRAIL PROJECT – PROPOSED DESIGN AND IMPROVEMENTS

PURPOSE: To inform the Committee of proposed improvements to the Gilmore Urban Trail from Canada Way to Dawson Street.

RECOMMENDATION:

1. **THAT** the Transportation Committee receive for their information the proposed design and improvements to the Gilmore Urban Trail from Canada Way to Dawson Street.

REPORT

1.0 INTRODUCTION

On 2014 June 11, the Transportation Committee received for information a Council report approving an expenditure from Gaming Funds for the design of a portion of the Gilmore Urban Trail, as described in this report. The report also approved submission of funding applications to TransLink and the Province for the design and construction of the urban trail. The report noted that upon completion of the design and cost estimates, Council approval of tendering and construction of the project would be sought for construction in 2016.

The Gilmore Urban Trail is a 3.3 kilometre north-south section of the urban trail network that follows the Gilmore Avenue/Diversion/Way from William Street by Willingdon Heights Park to Sanderson Way at Electronic Arts (see *Sketch #1, attached*). It forms a part of the 11 kilometre Sea to River (S2R) Bikeway and connects to the Central Valley Greenway (CVG) (see *Sketch #2 attached*). The S2R provides an important link in the City between the Metrotown and Brentwood Town Centres, intersects with seven east-west urban trail routes and is the most popular north-south cycling route in the City. This corridor is also well used by pedestrians and transit users of the #129 bus.

The proposed Gilmore Urban Trail project improves the existing network between Canada Way and Still Creek Drive and addresses deficiencies in the existing trail from Still Creek Drive to Dawson Street. It is noted that a section of the urban trail route at the north end of the alignment,

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between Lougheed Highway and William Street, is being completed as a separate project as part of adjacent redevelopment.

The design work approved by Council is now complete and the City has been successful in applying for funding from the Province, TransLink and ICBC for this project. The purpose of this report is to inform the Transportation Committee of the proposed urban trail design, upgrades, signage and traffic configuration. A report is also being prepared for the Financial Management Committee which, in addition to describing the project and details of the funding sources, seeks expenditure authorization and approvals for a minor land exchange.

2.0 PROJECT SCOPE

This project has two major components:

1. Southern Component: Gilmore Highway 1 Overpass and Gilmore Diversion

The existing Gilmore Highway 1 Overpass and Gilmore Diversion leading up to it on either side, was designed primarily, if not exclusively for cars, and has been largely unimproved since the Highway's completion in 1964. Within this section, between Still Creek Drive and Canada Way, a 640-metre long section of urban trail has been designed within the existing road right-of-way on the west side of Gilmore Diversion. The proposed design includes necessary upgrades to pedestrian, cycling and transit facilities on the overpass and streets leading up to it to bring them into conformance with current design and safety standards.

2. Northern Component: Still Creek Drive to Dawson Street

The section of trail to the north, from Still Creek Drive to Henning Way, was constructed between 2000 and 2006. It is located on the west side, adjacent to Gilmore Avenue, which is supported on pilings and crosses the piling-supported Burlington Northern Santa Fe (BNSF) Railway. The unsupported (i.e., no pilings) trail subbase in this area has sunk below the road and rail line. To address long term subsidence and reduce maintenance requirements, upgrades to the existing trail are proposed where the trail intersects structures that are held up with pilings.

Construction of this project will also provide an opportunity to complete a 4.6 km 30–45 minute urban trail walking loop and include a small feature seating area at the intersection of Dominion Street and Canada Way, as noted in *Sketch #3, attached*. Sections of this walking loop were completed in the past fifteen years through works related to Discovery Place, BCIT, the CVG and the Willingdon Overpass. Adjacent or in close proximity to BCIT, Burnaby Hospital, Willingdon-Canada Way Business Centre, single and multi-family residents, the proposed urban trail works would create a recreational walking loop serving office workers, students and residents in the City's northwest sector.

The anticipated benefits of this urban trail project include:

- A safe accessible route separated from traffic by barriers or boulevards with street trees, and with safe controlled crossings at all intersections for pedestrians and cyclists;
- A path wide enough for pedestrians and cyclists to pass safely and comfortably and allow cyclists to be removed from traffic;
- Accessible transit facilities with safe crossings and a continuous sidewalk to connect to the pedestrian and bicycle networks; and
- Improved sight lines and safety for motor vehicles.

The City reviewed draft designs with first responders, ICBC, TransLink and Ministry of Transportation staff and held an onsite “walk-through” with the cycling-activist group, HUB. This consultation ensures that the needs of all users be met and that safety can be improved. The safety improvements were also an important consideration in receiving funding from the Province, TransLink and ICBC.

3.0 URBAN TRAIL AND FEATURE AREA DESIGN

Urban Trails in the City vary in width from 3.0 to 4.0 metres, depending upon the available right-of-way. The new link would be a 3.5 m wide asphalt urban trail with 1.2–1.8 m wide front boulevards, unless otherwise noted, on the west side of Gilmore Avenue. Linking with the existing urban trail on the west side of Gilmore Avenue/Diversion/Way is constrained by a relatively narrow right-of-way, steep grades and a crossing of Highway 1. The proposed design makes the most of the existing right-of-way by moving some curbs, introducing fencing where the separation between trail users and the roadway is quite narrow, swapping a small area of land with adjacent properties to create a more useable right-of-way, and making more efficient use of the existing road and overpass. For presentation purposes, the proposed works in the southern component are shown on the following five base maps, starting at Canada Way and ending at Still Creek Avenue. The northern component is captured on a single map on page 10 of this report). Photos of typical proposed elements have been included for illustrative purposes.

3.1 Southern Components

Canada Way to Fire Hall #7

Heading north from Canada Way, the section to Fire Hall #7 shown in **Figure #1** below, will link the existing urban trail segment in front of Fire Hall #7 to the trail south of Canada Way.

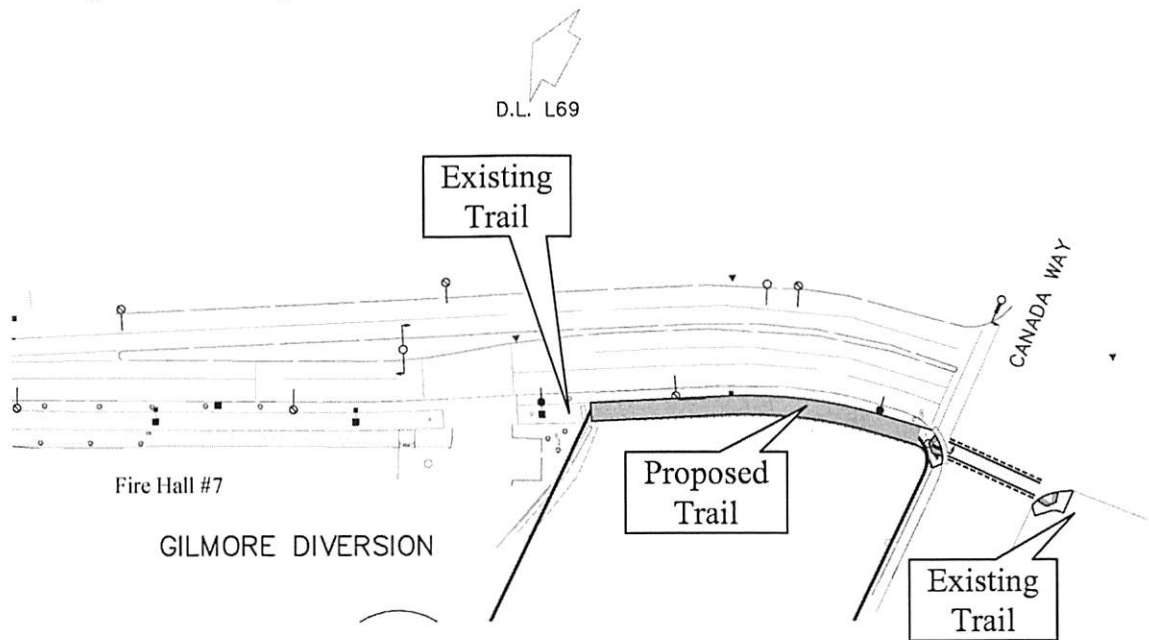
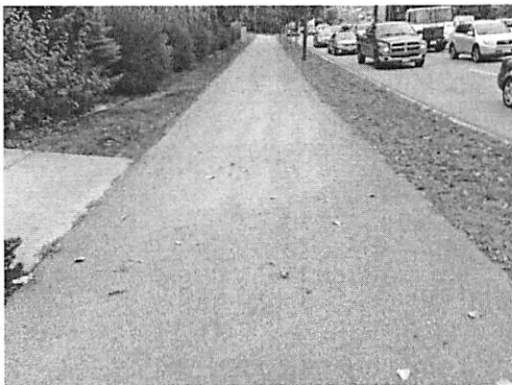


Figure #1: Proposed Urban Trail alignment on the west side of the Gilmore Diversion from Canada Way to Fire Hall #7.



Photograph #1: Typical 3.5m wide asphalt urban trail with 1.8m wide boulevard.

Dominion Street to Manor Street

From Dominion Street to Manor Street, a new portion of urban trail will be incorporated with a new bus pad and shelter. A proposed feature seating area, behind the bus shelter and just north of Dominion Street, would have views to Brentwood and the North Shore Mountains and would serve the pedestrian walking loop, cyclists and local residents.

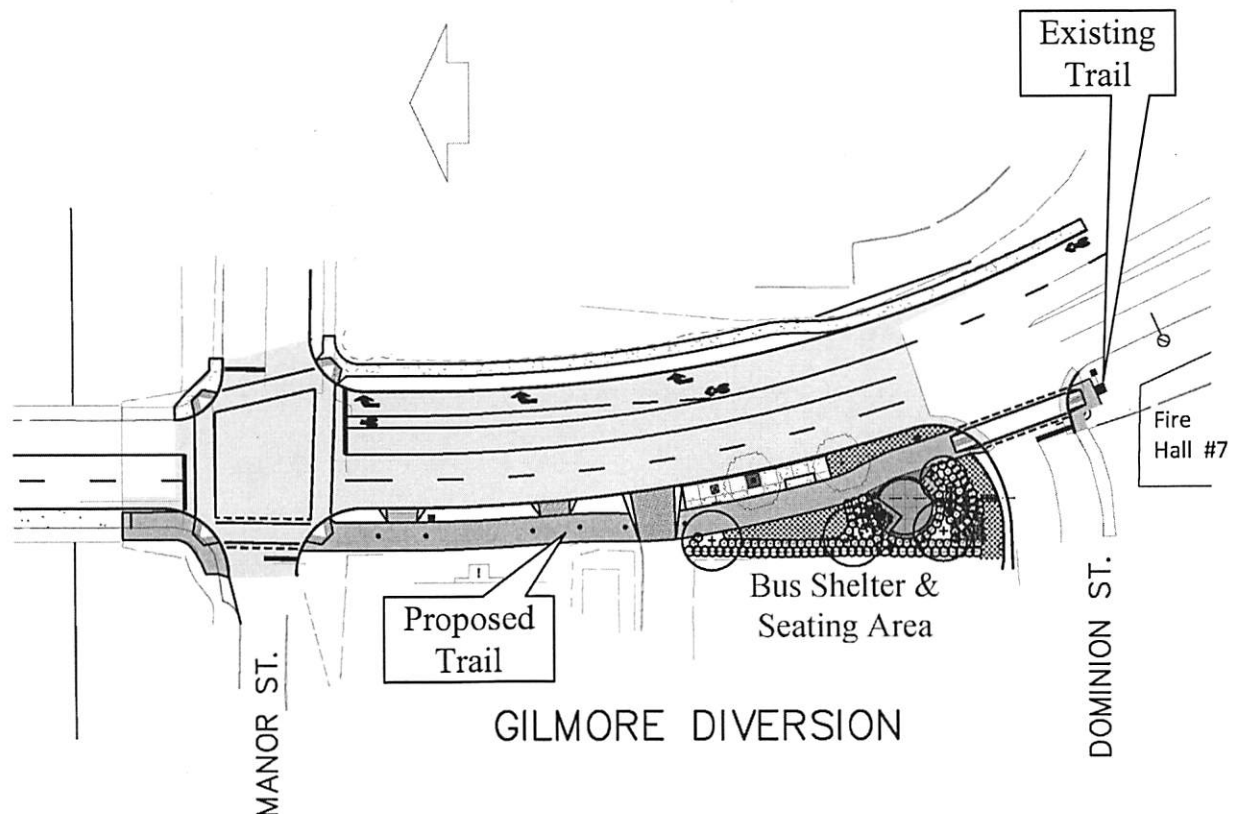


Figure #2: Proposed Urban Trail alignment on the west side of the Gilmore Diversion from Dominion Street to Manor Street.



Photograph #2: Typical bus shelter and pad with urban trail combining weather protection, visibility and accessibility provisions.

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Photograph #3: Typical feature seating area with arm chairs and interesting paving treatment assists pedestrians and provides respite.

Gilmore Overpass and North Abutment

A 3.5 m wide protected trail is proposed for the Gilmore Overpass, with a barrier between trail users and traffic, and higher guard rails on the outside of the overpass to meet current design standards.

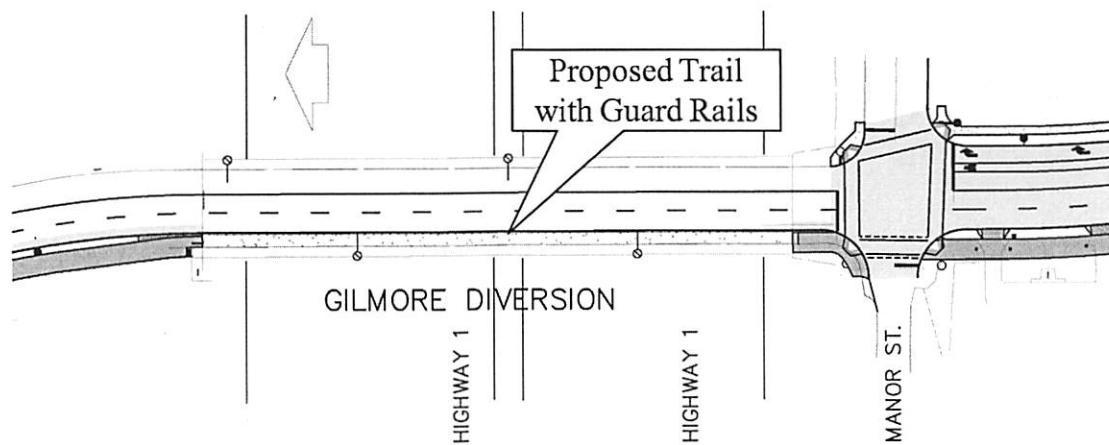


Figure #3: Proposed Urban Trail alignment on the Gilmore Overpass and North Abutment.



Photograph #4: Typical 3.5 m wide protected urban trail with 1.4 m high guard rails on either side (note that metal rails are proposed for both sides for Gilmore with a barrier curb rather than a no-post barrier as shown in the photo).

North Abutment to Myrtle Street

On the north side of the overpass, the road slopes to the north with a steep side slope down to the adjacent Canadian Linen site. To fit an urban trail on the side slope without incurring the cost of substantial retaining structures, the urban trail is proposed to be cut into the side slope of the overpass ramp closer to the edge of the road with bicycle fencing at the top of the side slope, on the outside of the urban trail. This would connect the overpass to Myrtle Street, north of the existing bus stop. The shelter at the bus stop would be moved into the statutory right-of-way, available for this purpose, on the adjacent Canadian Linen site.

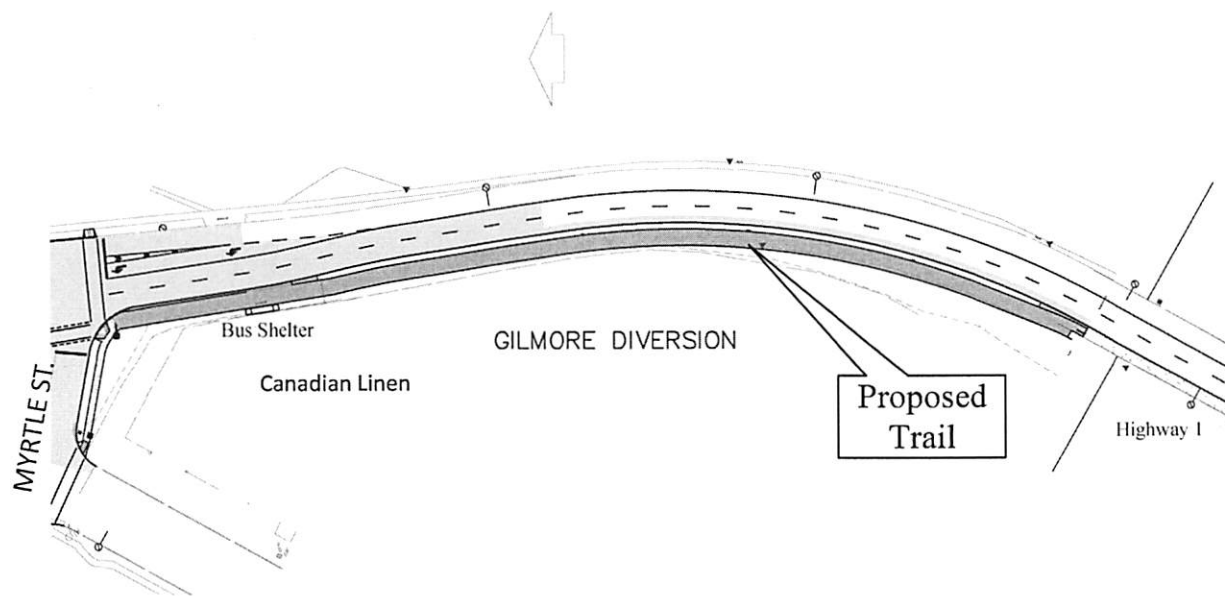


Figure #4: Proposed Urban Trail alignment on the west side of the Gilmore Diversion from the Gilmore Overpass to Myrtle Street.



Photograph #5: Typical 1.4m high bicycle fence at the curb with a 1.2m high handlebar rub and hand rail.

Myrtle Street to Still Creek Avenue

The block from Myrtle Street to Still Creek Avenue is the most complex location along the proposed urban trail with:

- An un-signalized intersection at Myrtle Street and Gilmore Diversion;
- Bus stops catering to residents and businesses on either side of the Myrtle Street and Gilmore Diversion intersection;
- A southbound slip lane from Gilmore Diversion to Myrtle Street that cuts across the pedestrian network;
- A sanitary pump station and associated valves, equipment and parking in the delta island formed by the slip lane;
- Truck turning requirements into the Myrtle Street industrial area;
- A driveway crossing into the slip lane for Budget Rent-a-Car; and
- A narrow right-of-way for the trail between the back of curb and property line at the Still Creek Avenue intersection.

The proposed trail would address each of these constraints and improve the overall conditions of the area making it safer, easier to use for all modes and more attractive.

At the intersection of Myrtle Street and Gilmore Diversion, it is proposed that the slip lane be closed, the turning radius be improved for trucks, and a new signal be provided to allow for a safe controlled crossing for trail users, transit passengers, and employees and visitors accessing nearby businesses. This new signal would also provide motor vehicles with a dedicated signal phase to reduce conflicts and improve sight lines. Closure of the slip lane would eliminate conflicts with pedestrians and cyclists and provide parking for the pump station and safe driveway access for the Budget Rent-a-Car. On the north side of Myrtle Street the urban trail would continue past the pump station as a 3.5 m wide asphalt trail with a 1.8 m boulevard. The boulevard would narrow to a 0.5 m wide paved strip with a 1.4 m high bicycle guard rail fence at Still Creek Drive, due to right-of-way constraints. The urban trail would then cross the Still

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Creek Drive intersection and connect to the existing trail and east-west Central Valley Greenway. To accommodate road improvements on the west side of Gilmore Diversion, it is proposed that the east side bus stop be moved to the north side of the Myrtle Street intersection and the radius on the north bound right lane be improved at Still Creek Avenue with associated pedestrian improvements.

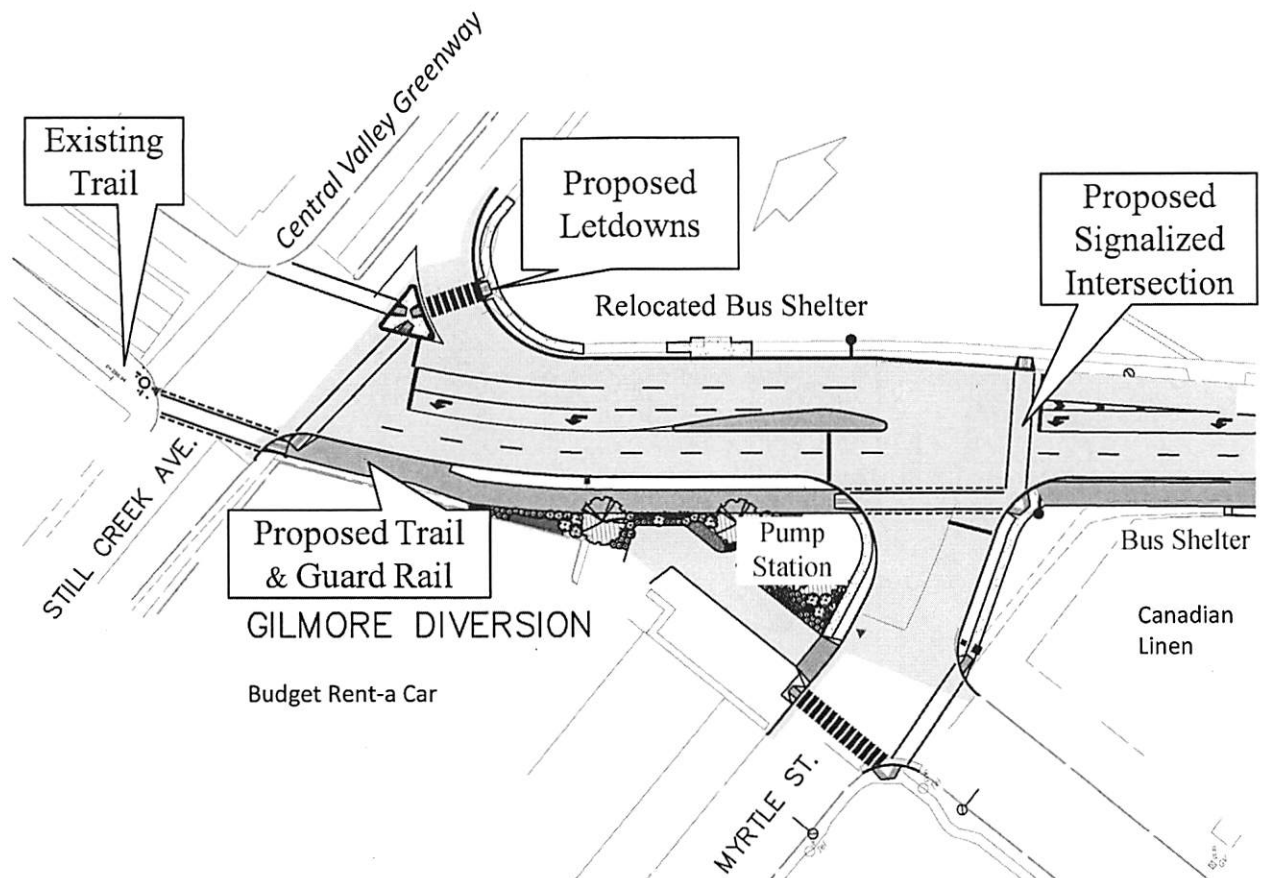


Figure #5: Proposed Urban Trail alignment on the west side of Gilmore Diversion from Myrtle Street to Still Creek Avenue.

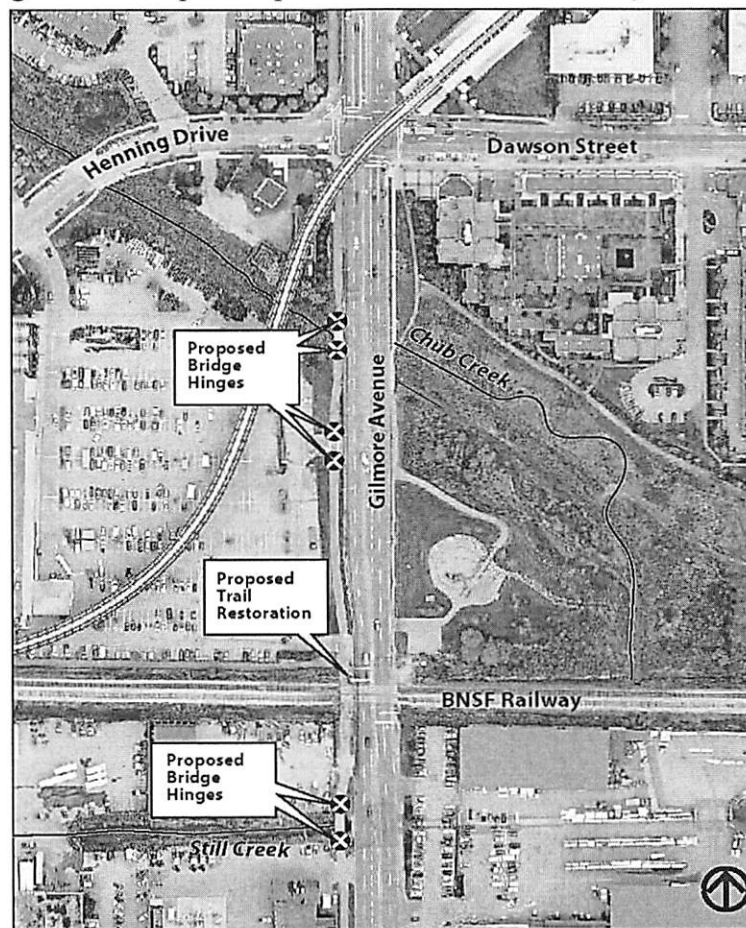


Photograph #6: Typical 4.0m wide cross bike at Still Creek Drive and Gilmore Diversion.

3.2 Northern Component: Still Creek Avenue to Dawson Street

The existing 4.0 m wide asphalt trail continues north to Dawson Street crossing Still Creek, the BNSF Railway, two Home Depot driveways and Chub Creek. The railway, two creeks and the northern driveway crossings are supported on piling structures to prevent them from settling. The trail on either side of them is built over soft peat soils. As the soils settle, the trail drops a little further each year creating holes and steep changes in grade.

To address the issue of created by settlement it is proposed to install hinged ramps on either side of the two stream crossings and northern driveway crossing into Home Depot so that as the ground subsides, no holes or abrupt changes in elevation occur in the trail surface. This approach is used successfully in this area on the road and in other areas of the City. At the BNSF Rail crossing, where there is no structure to attach hinges, it is proposed that the trail surface be restored and that the City continue discussions with BNSF Railway for future improvements to the railway crossing with subsequent reports to Council as necessary.



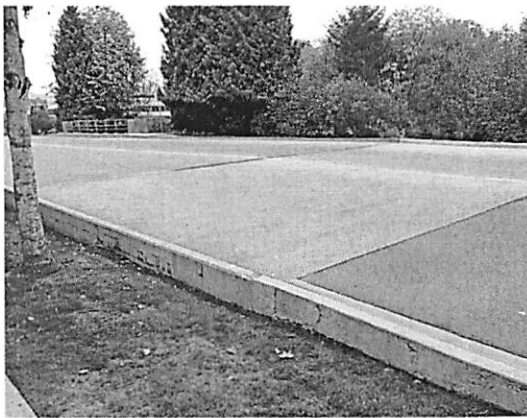
**Proposed Urban Trail improvements
from Still Creek Avenue to Henning Drive**



⊗ Improvement locations

Figure #6: Proposed Urban Trail improvements from Still Creek Avenue to Dawson Street.

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Photograph #7: Hinged ramp installed on Still Creek Drive to address soil subsidence issues at bridge over Still Creek in Willingdon Business Park just east of Gilmore Avenue.

3.3 Wayfinding Signage

To assist trail users, it is proposed that directional wayfinding signage be installed regularly on the route. Directional wayfinding signage has the name of the route on the sign to confirm that the user is on the correct route and includes popular destinations or important landmarks to assist in determining the distance and length of the journey, utilizing standard green and white guide signs. There are many benefits to including wayfinding signage. People are more likely to walk or cycle if they are confident of the time and distance required for the journey. Major destinations provide identifiable reference points. Trail users will use the wayfinding system with confidence if the wayfinding signs are located at regular intervals along the entire route and bring users to the destinations noted on the signage.

Installing wayfinding signage along the Gilmore Urban Trail and extending it in either direction along the S2R bikeway from the Trans Canada Trail to the Fraser Foreshore Urban Trail would create a north-south wayfinding system. The design proposes that a wayfinding system be installed from the Fraser River to Burrard Inlet to complete the Sea to River and Gilmore Urban Trail signage.



Photograph #8: Typical wayfinding signage indicating the name of the route, permitted modes of travel, major destinations and distances.

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3.4 Traffic Patterns


The design accommodates a traffic pattern change on the overpass and north approach to facilitate the trail works, as indicated in *Sketch #4, attached*. The centre line and two south bound lanes on the overpass are proposed to be shifted to the east by 2.4 m to create room on the west side of the overpass for the 3.5 m wide urban trail with guard rails on either side. The two north bound lanes would continue from Canada Way to Manor, where the outside lane would become a right-turn lane and the centre lane would continue north as a single 4.3 m wide lane for 345 metres, until Myrtle Street where it would resume as two lanes. Traffic modelling indicates that the design is expected to provide an acceptable traffic level of service for the anticipated life span of the overpass.

In addition to moving the centre line and constructing the trail, a new right-turn lane and separated sidewalk is proposed on northbound Gilmore Diversion at Manor, a left-turn bay is proposed northbound at Myrtle Street, the existing east side bus stop south of Myrtle is proposed to be shifted to the north side of the reconstructed intersection to reduce delays, and the delta island on the southeast corner of Gilmore Diversion and Still Creek Drive is proposed to be reconfigured to improve truck movements and to provide more room for pedestrians and accessible ramps.

4.0 GILMORE URBAN TRAIL COMPLETION

Completion of the works for this section of the Gilmore Urban Trail will create a continuous, safe and comfortable pedestrian and cyclist route from Lougheed Highway to Sanderson Way. Pedestrians will benefit through the completion of a 4.5 km recreational loop, cyclists by finishing Burnaby's most popular north-south route and transit users with the addition of new bus stop amenities and safer crossings. Movements will be easier for trucks, and the new road design will be safer for automobile traffic.

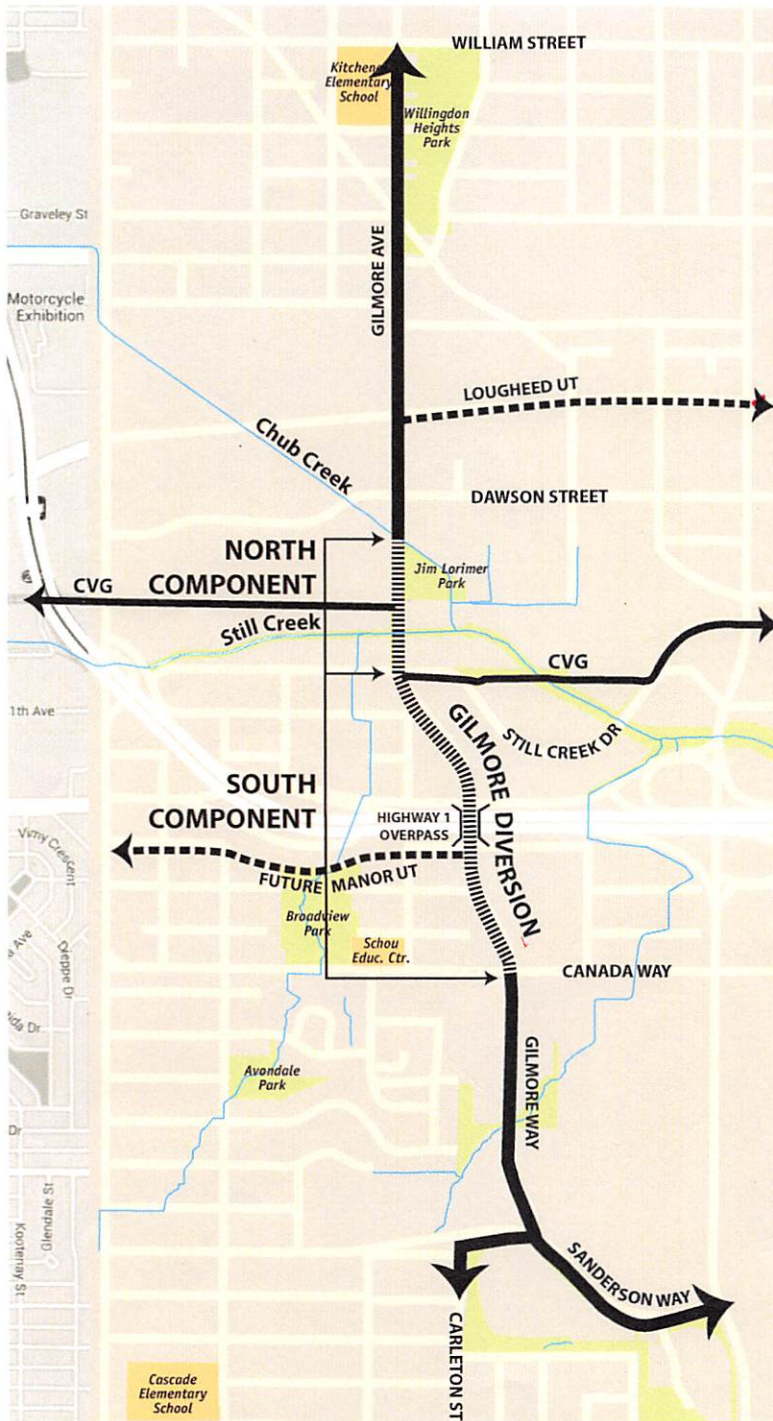
This report describes the design of a proposed 640 metre section of trail from Canada Way to Still Creek Avenue, improvements to the existing Urban Trail from Still Creek Avenue to Dawson/Henning Drive and a proposed wayfinding system. A report seeking Council authority for a land exchange of fronting property south of Manor Street (3020 Gilmore Diversion) to accommodate the proposed design and expenditure authorization for construction, is being forwarded to the Financial Management Committee for their recommendation. If Council approves proceeding with the project, tendering and construction would occur in spring and summer of 2016 and be completed by the end of the year. It is recommended that this report be received for information.


Lou Pelletier, Director
PLANNING AND BUILDING
IW:sa
Attachments

cc: City Manager

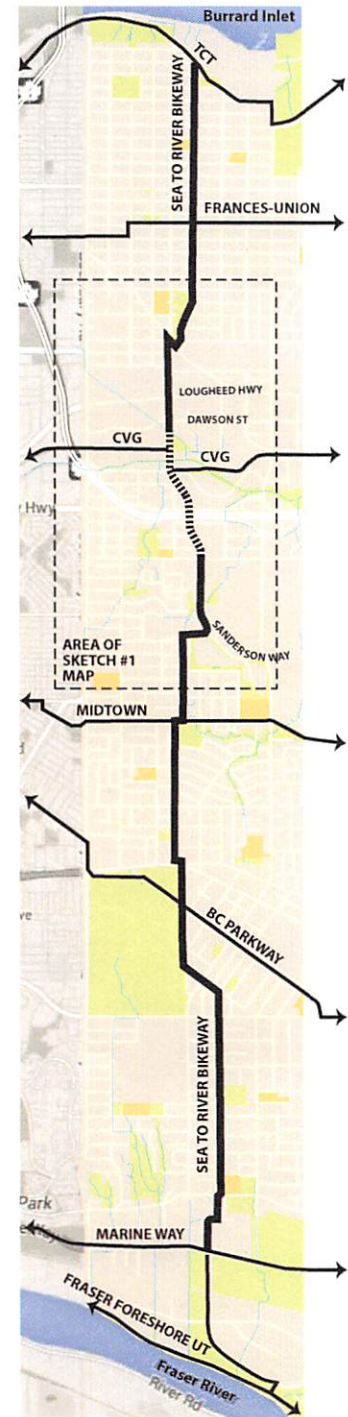
Director Engineering

Director Finance



Sketch #1
Gilmore Urban Trail Route

- Existing Urban Trail
- Proposed Urban Trail
- Subject section

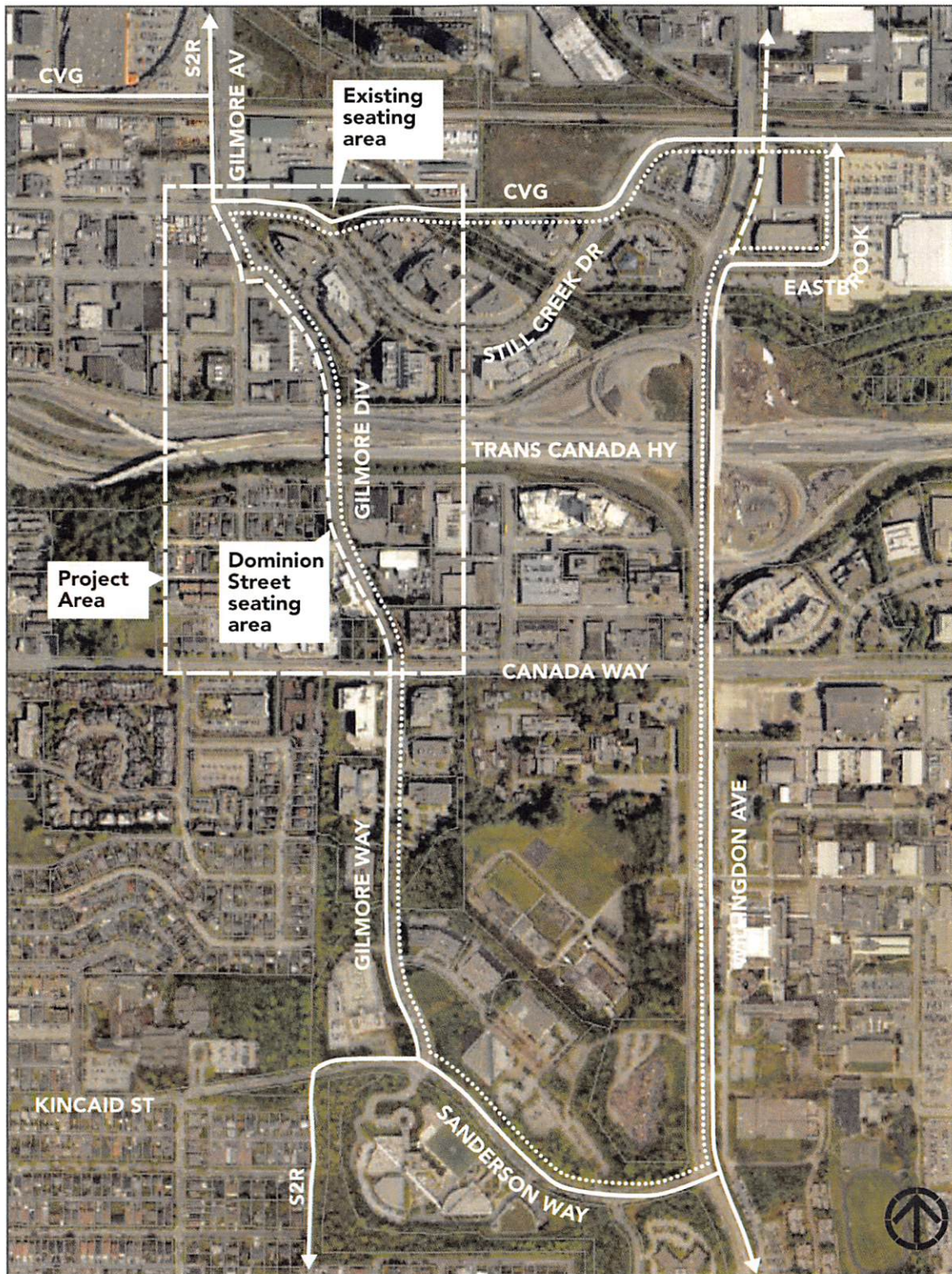


Sketch #2
Sea to River Bikeway Route



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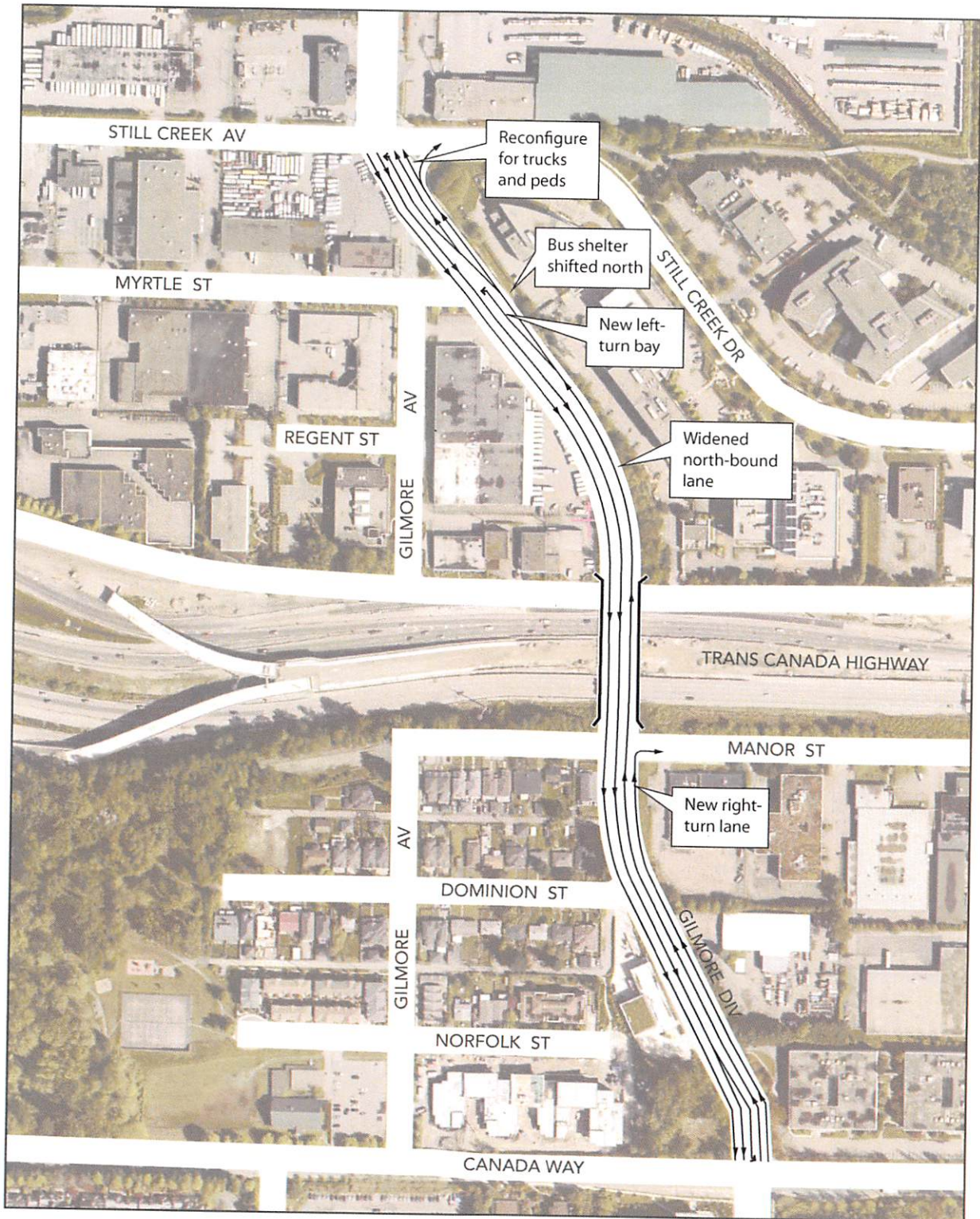
Willingdon Walking Loop

- Existing Urban Trail
- - - Proposed Urban Trail
- Walking loop



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Sketch #3



Sketch 4
Proposed traffic pattern from
Manor Street to Still Creek Ave

← Proposed traffic lanes