



Mountain Highway Interchange Project

Open House and Comment Period

January 19 – February 5, 2016

Summary Report

May 2016

Prepared by
Kirk & Co. Consulting Ltd.

Kirk & Co.

About Kirk & Co. Consulting Ltd.

Kirk & Co. is a recognized industry leader in designing and implementing comprehensive public and stakeholder consultation and engagement programs. Utilizing best practices, consultation and engagement programs are designed to maximize opportunities for input. Kirk & Co. independently analyzes and reports on public and stakeholder input.

The views represented in this summary report reflect the priorities and concerns of engagement participants. They may not be representative of the views of the public and other stakeholders because participants self-selected into the Mountain Highway Interchange Project open house and comment period, and therefore do not reflect a random sample.

Mountain Highway Interchange Project

January 19 – February 5, 2016

Summary Report – February 2016

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1. BACKGROUND

The Ministry of Transportation and Infrastructure and the Government of Canada are partnering in the design and construction of a new interchange at Highway 1 and Mountain Highway called the Mountain Highway Interchange. The project, an investment of \$36 million, is the first of three phases for the overall Lower Lynn Improvements totalling \$150 million.

The Mountain Highway Interchange will consist of the construction of on/off ramps in all four quadrants, signalization at both ends of the new structure to provide the safe movement of traffic on and off Mountain Highway, replacement of the existing two-lane Mountain Highway underpass with a new four-lane structure, a full intersection at Keith Road/Brooksbank Avenue/Mountain Highway, and a new realigned Mountain Highway. The design will include overall improvements and expansion of facilities for alternate modes of transportation.

The Mountain Highway Interchange is part of the Province's commitment to "Improving Highway Capacity and Reliability" in *B.C. on the Move: A 10-Year Transportation Plan*.

2. OPEN HOUSE AND COMMENT PERIOD: JANUARY 19 – FEBRUARY 5, 2016

2.1 PURPOSE

The first phase of public engagement for the Mountain Highway Interchange Project was held from January 19 to February 5, 2016. The Ministry of Transportation and Infrastructure held an open house on January 19, 2016, to provide information about the project and collect feedback from First Nations, stakeholders and the public regarding the Mountain Highway Interchange Project.

Engagement materials, including an online comment form and display boards from the public open house, were posted online on January 19, 2016. The open house materials also provided participants with an overview of all three phases of the Lower Lynn Improvements. The Mountain Highway Interchange is a component of the larger project and will be integrated with the Lillooet Road and Dollarton Highway Interchanges.

Feedback received as part of the open house and comment period, and summarized in this report, will be considered, along with technical and financial information, as the project team refines project design and develops mitigation measures. There will be future opportunities to provide input on the Lower Lynn Improvements, including the Mountain Highway, Lillooet Road and Dollarton Highway Interchanges.

2.2 PARTICIPATION

There were a total of 613 participant interactions during the Mountain Highway Interchange Project open house and comment period:

- 390 people attended an open house
- 126 completed comment forms were received (77 hardcopy, 49 online)
- 97 submissions were received through email or mail

2.3 ENGAGEMENT TOPICS

Display boards provided at the open house and made available online included information regarding the Mountain Highway Interchange design and the other phases of the Lower Lynn Improvements.

Participants were asked to provide comments regarding the project design and other considerations the project team should be aware of as they move forward with planning and design for the Mountain Highway Interchange Project, specifically:

- Minimizing impacts to park land and private property
- Protecting and enhancing Keith Creek
- Salop Trail expansion and connections
- Improving cycling and pedestrian facilities
- Improving safety for all modes of transportation
- Accommodating residential access along Keith Road
- Planning for future improvements to Highway 1
- Construction impacts to neighbouring communities
- Continuation of transit services

Participants were also asked to provide additional comments regarding the Mountain Highway Interchange Project.

A copy of the display boards and comment form can be found in Appendix 1.

2.4 NOTIFICATION

Notification of opportunities to participate in Mountain Highway Interchange Project open house and comment period included:

- **Invitation Emails and Notification to Stakeholders:** 159 stakeholders were notified of the engagement and opportunities for participation.
- **Advertising:** Newspaper notification ads for the open house and comment period were run in the North Shore News on January 8, 13 and 17, 2016.
- **Social Media:** Two tweets were sent from @TranBC (15.6K followers) to notify the public about the open house.
- **Website:** A dedicated engagement website (gov.bc.ca/lowerlynninterchanges) was available throughout the comment period and all materials, including the display boards and online comment form, were available on the project website starting on January 19, 2016.

A copy of the notification materials can be found in Appendix 2.

2.5 ENGAGEMENT METHODS

2.5.1. MATERIALS AND COMMENT FORM

Materials provided information about the need and benefits of the Mountain Highway Interchange Project and presented the detailed design for the interchange. These materials included display boards with maps illustrating the improvements, and a project rendering of the interchange design. The display boards were provided to participants at the open house and made available online. A comment form to gather input was also provided at the public open house and an online version was posted at gov.bc.ca/lowerlynninterchanges.

A copy of the display boards and comment form can be found in Appendix 1.

2.5.2. ONLINE ENGAGEMENT

All materials were available on the website gov.bc.ca/lowerlynninterchanges, including electronic copies of the open house display boards, and an online comment form that could be submitted electronically.

Of the 126 comment forms received, 49 were received through the online comment form.

2.5.3. OPEN HOUSE

390 people attended a public open house held on January 19, 2016 at the Holiday Inn & Suites in North Vancouver. Materials and comment forms were provided to attendees at the open house and display boards summarizing information were set up around the room, and participants were encouraged to complete their comment forms in hardcopy or online. Project team members engaged attendees in one-on-one and small group discussions.

3. OPEN HOUSE AND COMMENT FORM RESULTS

The following themes are based on the **223 responses** provided. In total, **126 respondents** completed the comment form, and **97 respondents** provided comments through email and written submissions regarding the Mountain Highway Interchange Project.

Participants were asked to provide comments regarding the project design and other considerations the project team should be aware of as they move forward with planning and design for the Mountain Highway Interchange Project.

It should be noted that a response may have included more than one theme.

Comments provided by respondents will be reviewed and considered by the project team, along with technical and financial information, as planning and design continues.

- **Ensure improved municipal connectivity for North Vancouver residents**
 - Participants requested sufficient separation of local and highway traffic in order to allow for better east/west connectivity for North Vancouver residents (85 comments)
 - Participants expressed concerns over access to Shavington Street as a result of the new design (20 comments)
- **Request for access to Highway 1 eastbound onramp from Mountain Highway**
 - Participants expressed concern regarding the lack of a connection to Highway 1 eastbound for residents travelling southbound on Mountain Highway (78 comments)
 - Participants stated concern over the proposed Keith Road route and commented that the proposed Lillooet Interchange is confusing and inefficient (30 comments)
- **Concern regarding congestion, and request to ensure the project accounts for future growth**
 - Participants expressed concern that the proposed changes would not reduce bottlenecks or keep up with growth in the area (67 comments)
 - Participants voiced concern about traffic backing up at the light on Fern Street and Mountain Highway (11 comments)
- **Concern regarding neighbourhood impacts and request for natural or artificial sound and visual barriers**
 - Participants expressed concerns that the proposed changes would have negative impacts on neighbouring communities, including increased noise, increased traffic on residential streets and greater visual impacts from the proposed interchange design (43 comments)
 - Participants requested natural or artificial sound and visual barriers to protect residents from increased noise as a result of closer traffic and the removal of trees (37 comments)
 - Participants expressed concerns regarding the safety of children playing and walking in the area as a result of the proposed changes for the Mountain Highway (25 comments)

- **Request to widen Highway 1 and replace Lynn Creek Bridge**
 - Participants commented that the Highway 1 Lynn Creek Bridge requires an immediate upgrade, including widening or replacement to accommodate westbound and eastbound traffic, and that it will be costly to fix later (41 comments)
 - Participants stated the need for widening Highway 1 to three lanes in order to accommodate traffic (18 comments)
 - Participants requested an additional bridge over Lynn Creek (12 comments)
- **Request for improved pedestrian and cycling facilities**
 - Participants expressed dissatisfaction with the proposed cycling improvements and stated that cyclists require safer routes with greater separation from the highway and more efficient connections (37 comments)
 - Participants requested the project increase pedestrian and cyclist routes, as commuting trends will continue to change (17 comments)
 - Participants requested that pedestrian paths be designed for safety and efficiency (16 comments)
- **Request to ensure the project design minimizes environmental impacts**
 - Participants expressed concerns relating to the project's impact on the environment associated with increased traffic, construction and road widening (31 comments)
 - Participants requested more parkland to make up for the removal of trees (29 comments)
- **Additional comments included:**
 - Participants expressed general support for the project design (29 comments)
 - Participants expressed concerns regarding the public consultation process, including comments that the open house was too crowded, there should have been a slideshow and requests for a longer comment period that includes all three project phases (25 comments)
 - Participants expressed general opposition of the project and the proposed interchange design (24 comments)
 - Participants requested greater emphasis and investment on improvements to transit routes due to increasing density in the area (23 comments)
 - Participants expressed opposition to the proposed Municipal Bridge in Phase 3 of the project (21 comments)
 - Participants complimented the public consultation process, including the professional and patient staff at the open house, and the informative materials (14 comments)
 - Participants requested easier access to northbound Mountain Highway when traveling eastbound and westbound on Highway 1 (11 comments)
 - Participants requested that the project provide safe, dependable and efficient routes for first responders to access highway accidents and residential emergencies (i.e., police, fire, ambulance and other emergency vehicles) (9 comments)
 - Participants stated that the overall condition of the highway requires upgrades or maintenance to improve safety and efficiency (9 comments)

- Participants requested that the website material and graphics be updated and clarified (9 comments)
- Participants voiced concern regarding the lack of connection to westbound Highway 1 for residents travelling southbound on Mountain Highway (8 comments)
- Participants commented that the proposed changes will result in reduced traffic congestion (8 comments)
- Participants expressed concerns over traffic congestion during the construction period and stated that the length of the construction period was too long (7 comments)
- Participants commented on the Salop Trail expansion and connections, and requested more details on the design of the underpass (7 comments)
- Participants expressed concerns regarding the ordering of project phases and proposed scheduling for the Lower Lynn Improvements, including suggestions of moving up the timing of Phase 3 (6 comments)
- Participants voiced concerns over truck traffic and requested a dedicated commercial lane to allow for easier and safer merging onto the Highway (6 comments)
- Participants voiced their opposition and concerns regarding the planned changes during Phase 2 (5 comments)
- Participants requested a wider Mountain Highway overpass (5 comments)
- Participants requested a future expansion of the Second Narrows Bridge (5 comments)
- Participants commented on the need for more communication between the Ministry of Transportation and Infrastructure, the City of North Vancouver and the District of North Vancouver regarding the new Mountain Highway Overpass (4 comments)
- Participants voiced support for the realignment of Mountain Highway with Brooksbank Avenue (3 comments)
- Participants voiced concern over the realignment of Mountain Highway with Brooksbank Avenue (3 comments)
- Participants wrote positive comments regarding the Municipal Bridge (2 comments)
- Participants questioned how North Vancouver municipal roads would connect with the highway (2 comments)

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Mountain Highway Interchange Project

Open House and Comment Period

January 19 – February 5, 2016

Appendix 1: Engagement Materials

May 2016

DISPLAY BOARDS

Mountain Highway Interchange Project

Welcome to the Highway 1 at Mountain Highway Interchange Project Open House

Purpose of Open House

To provide you with information regarding the Highway 1 at Mountain Highway Interchange Project and the opportunity to provide your input into the development of this project.

We Want to Hear From You

Provide us with your feedback by:

- Completing a comment form and leaving it with our team
- Sending an email to lowerlynn@gov.bc.ca by February 5, 2016



Mountain Highway Overpass – looking north towards Arborlynn Drive

The Province of B.C. and the Government of Canada are investing \$36 million in the Mountain Highway Interchange, which is the first of three phases for overall Lower Lynn Improvements totalling \$150 million.

Mountain Highway Interchange Project



Highway 1 – Lower Lynn Improvements

The Province of B.C., the District of North Vancouver, and the Government of Canada are investing \$150 million in three phases of Highway 1 – Lower Lynn Improvements.

The overall Lower Lynn Improvements:

Phases	Project	Sponsor	Status
Phase 1	Keith Road and Bridge Expansion	<ul style="list-style-type: none">• District of North Vancouver	Completion 2016
Phase 1	Mountain Highway Interchange	<ul style="list-style-type: none">• BC Ministry of Transportation Infrastructure• Government of Canada	Detailed Design (2016)
Phase 2	Lillooet Road (Fern St) Interchange	<ul style="list-style-type: none">• BC Ministry of Transportation Infrastructure• Government of Canada• District of North Vancouver	Functional Design (2017)
Phase 3	Dollarton Highway Interchange/ Crown Street Pedestrian Overpass	<ul style="list-style-type: none">• BC Ministry of Transportation Infrastructure• Government of Canada• District of North Vancouver	Functional Design (2018)
Phase 3	Mountain Highway to Lillooet Road Connector	<ul style="list-style-type: none">• District of North Vancouver	Concept Development

The anticipated completion date for the overall Lower Lynn Improvements is spring 2021.

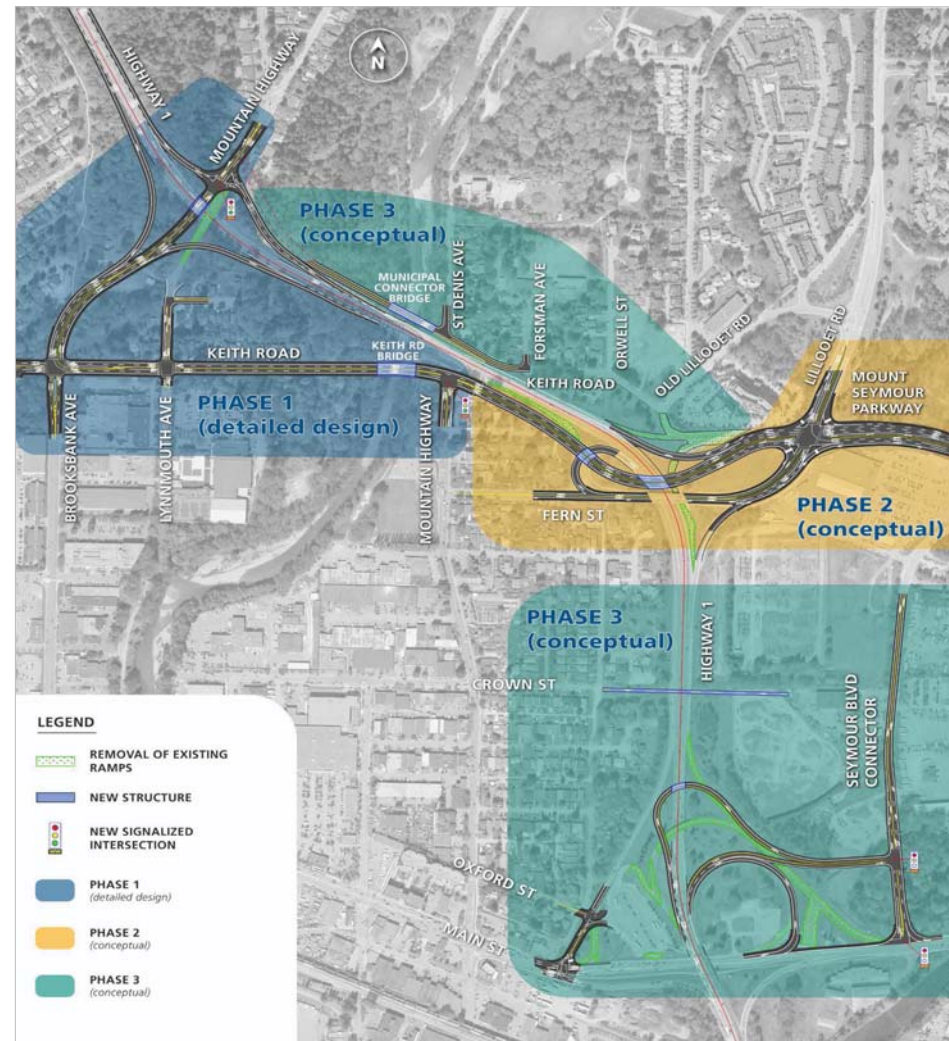
Mountain Highway Interchange Project

Highway 1 – Lower Lynn Improvements

Mountain Highway, Lillooet Road (Fern Street) and Dollarton Highway Interchanges will be upgraded over three phases, which are to be completed by spring 2021.

In addition to the upgraded interchanges, the District of North Vancouver is expanding Keith Road and the Keith Road Bridge and is planning to build a connector road between Mountain Highway and Lillooet Road.

Each phase of Lower Lynn Improvements are being designed to operate together to provide the best overall traffic movement and upgraded pedestrian and cycling facilities. There will be further opportunities to provide input regarding Phases 2 and 3 of the Lower Lynn Improvements.



Mountain Highway Interchange Project



Causes of Congestion

The North Shore's Lower Lynn interchanges were designed and built over 50 years ago and are in need of upgrades or replacement. Recent Lower Lynn traffic studies found that the interchange configurations and their close proximity to each other create traffic weaving, short merge distances, narrow shoulders and lane drop-offs.

These are causing highway inefficiencies at key points, such as the Mountain Highway Interchange where peak hour average driving speeds are 25-35 km/h, which hampers the flow of traffic on Highway 1 and surrounding municipal roadway network.

Replacement and reconstruction of the interchanges are also necessary to accommodate future Highway 1 improvements.

Highway 1 Average Speeds

Eastbound Traffic – 2015 AM/PM Peak Hour



Mountain Highway Interchange Project

Mountain Highway Interchange Overview

The Ministry of Transportation and Infrastructure and the Government of Canada are partnering in the design and construction of a new interchange at Highway 1 and Mountain Highway.

The new interchange will consist of the following key components:

1. Construction of on/off ramps in all four quadrants
2. Signalization at both ends of the new structure to provide the safe movement of traffic on and off Mountain Highway
3. Replacement of the existing two-lane Mountain Highway underpass with a new four-lane structure
4. Full intersection at Keith Road/Brooksbank Ave/ Mountain Highway
5. New realigned Mountain Highway

The design will include overall improvements and expansion of facilities for alternate modes of transportation.



Mountain Highway Interchange Project

Why build the Mountain Highway Interchange?

The Mountain Highway Overpass is over 50 years old and is being upgraded as part of the Province's commitment to "Improving Highway Capacity and Reliability" in *B.C. on the Move: A 10-Year Transportation Plan*. Upgrades to this interchange will:

- ✓ Improve traffic flow during peak times, reducing travel times for commuters
- ✓ Support better connection between municipalities to support the local economy
- ✓ Promote other modes of transportation through improved pedestrian and cycling facilities
- ✓ Improve access to Highway 1
- ✓ Improve fish and wildlife habitat in the area through environmental and drainage enhancements
- ✓ Improve safety by upgrading design to current engineering standards
- ✓ Help reduce traffic incidents through safety improvements to Mountain Highway and Keith Road
- ✓ Enable future improvements to Highway 1

B.C. on the Move: A 10-Year Transportation Plan

B.C. on the Move is the Government of B.C.'s 10-year plan for the improvement of the province's transportation network.

The plan was released in spring 2015 and was developed by government with input gathered during an extensive engagement process in fall 2014. The engagement included a public survey that drew over 12,500 responses from throughout B.C.

More information can be found: engage.gov.bc.ca/transportationplan/



Mountain Highway Interchange Project

Considerations

What does the Project need to consider?

- Minimizing impacts to park land and private property
- Protecting and enhancing Keith Creek
- Salop Trail expansion and connections
- Improving the cycling and pedestrian facilities
- Improving safety for all modes of transportation
- Accommodating residential access along Keith Road
- Planning for future improvements to Highway 1
- Construction impacts to neighbouring communities
- Continuation of transit services

We Want to Hear From You

Are there other considerations you think we should be aware of?



Keith Creek

Mountain Highway Interchange Project

Benefits

Improved safety

- ✓ Left turn signal at the westbound off-ramp and Mountain Highway
- ✓ Four-laning and reduced grade on the new Mountain Highway structure
- ✓ New bike lanes and protected multi-use paths
- ✓ Improved sight lines on Highway 1
- ✓ New LED lighting on the new interchange

Improved traffic flow

- ✓ Eastbound off-ramp to be extended about 100 metres up the cut, reducing congestion
- ✓ Three additional ramps to provide more travel options for drivers
- ✓ Direct north/south connectivity with new realigned Mountain Highway
- ✓ Improvements to local traffic flow with less congestion and fewer delays on local roads

Improved travel time

- ✓ Brooksbank Avenue to Mount Seymour Parkway travel time is expected to be reduced by 50% during peak times

Improved bike and pedestrian facilities

- ✓ Addition of approximately 1.8 km of bike and pedestrian facilities along the Mountain Highway Interchange

Improved habitat

- ✓ Habitat improvements include the rehabilitation of Keith Creek and riparian planting of native species



Mountain Highway Interchange Project

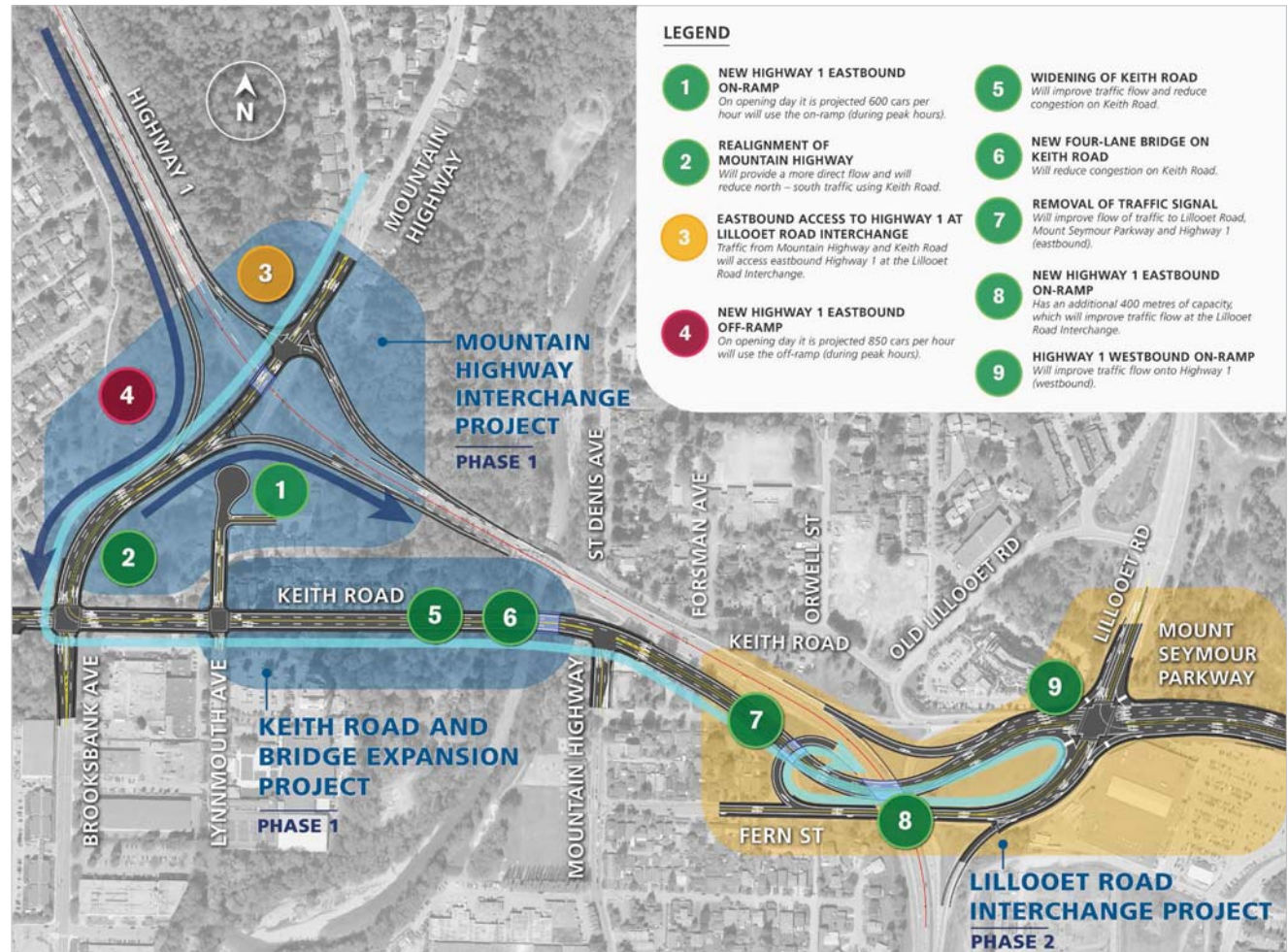
Improved Traffic Flow on Municipal Roads

The Highway 1 – Lower Lynn Improvements, in addition to District of North Vancouver road upgrades, will improve traffic flow and result in less congestion and fewer delays on municipal roads.

Once the improvements are in place, it is expected that travel times from Brooksbank Avenue to Mount Seymour Parkway will be reduced by 50% at peak times.

Changes to traffic flow on municipal roads will take place in two phases.

See legend in the map.



Mountain Highway Interchange Project

Pedestrian, Cycling and Transit

The Mountain Highway Interchange Project will result in improved bike and pedestrian facilities, including a protected intersection at Mountain Highway/Brooksbank Ave/Keith Road, and the addition of approximately 645 metres of multi-use pathways, 850 metres of roadway bike paths and 260 metres of sidewalk that will integrate with existing facilities. Reinstatement of impacted bus stops (4) will be done in consultation with TransLink. The overall reduction in congestion as a result of this Project will improve transit reliability.



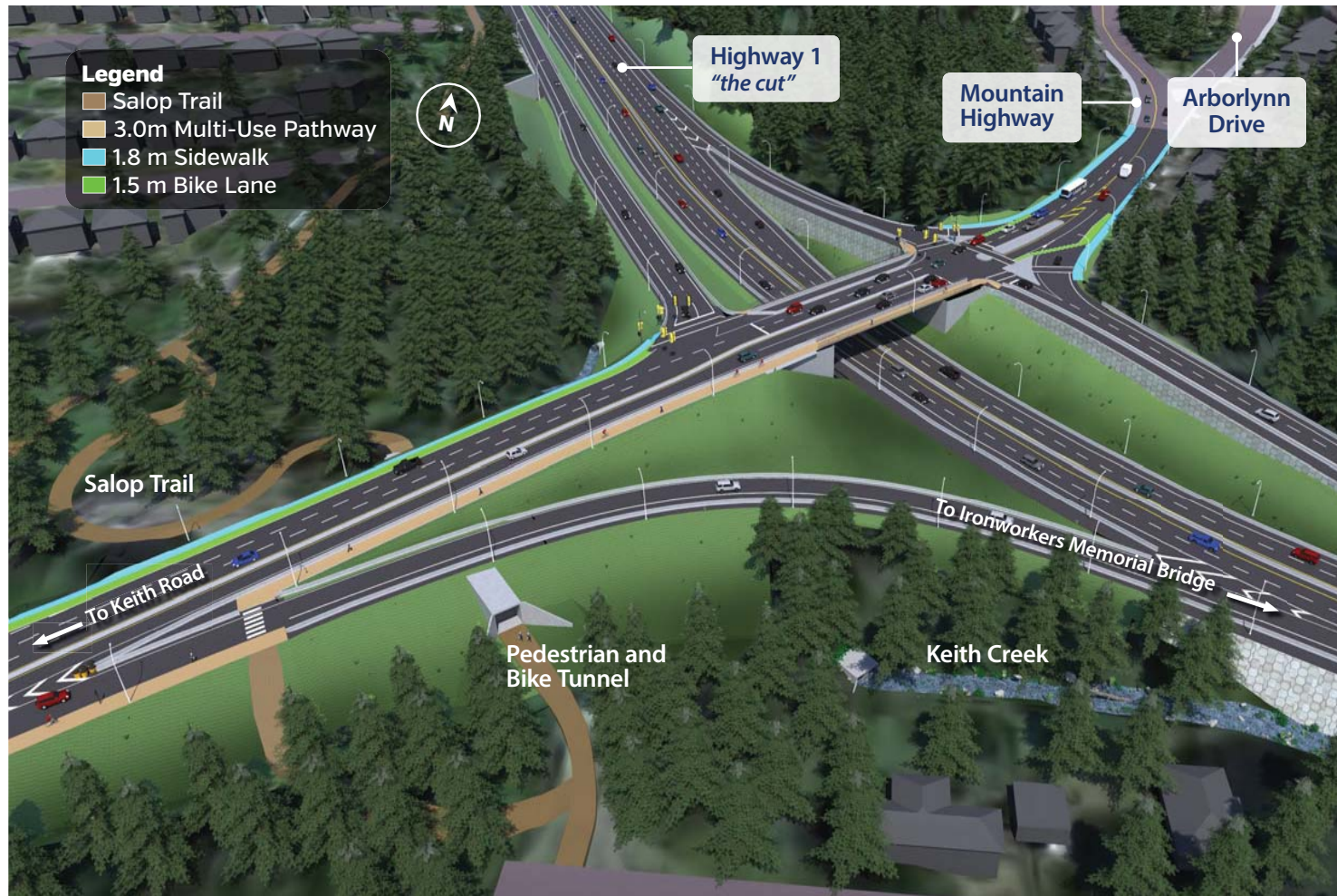
Current Conditions



Post-Construction (in development and subject to change)

Mountain Highway Interchange Project

Rendering



Looking Ahead – Construction

Construction on the Mountain Highway Interchange Project is scheduled to start in summer 2016 and be completed by spring 2018. During construction the Ministry of Transportation and Infrastructure will work to minimize impacts to residents, commuters and the public, and ensure awareness of construction activities and traffic changes.

Public Notification

- Door-to-door visits or letter notices delivered to nearby residents to provide notification of upcoming construction activities
- Road-side message boards with traffic information
- Traffic notification advertisements in local papers
- Project website updates and Drive BC traffic information

Construction Noise

- Construction hours will be mostly limited to noise bylaw restrictions
- Advance notice will be given to nearby residents for activities requiring night-time work

Traffic Management

- Minimize impacts to commuters with restrictions to lane closures and work hours
- Existing Mountain Highway will remain open to traffic until the new Mountain Highway is completed



Mountain Highway Overpass – looking south towards Keith Road

Mountain Highway Interchange Project

Next Steps

- Consider input from this engagement
- Continued engagement with key stakeholders, residents and First Nations
- Complete detailed design including:
 - Traffic engineering
 - Habitat enhancement design
 - Geotechnical engineering
 - Structural engineering
 - Pedestrian and cycling facilities design
 - Drainage engineering
 - Electrical engineering and utility relocation

Thank You for Coming!

Please remember to provide us with your feedback by:

- Completing a comment form and leaving it with our team
- Sending an email to lowerlynn@gov.bc.ca by February 5, 2016

Mountain Highway Interchange Schedule

	2014	2015	2016	2017	2018	2019	2020	2021
Highway 1 at Mountain Highway								
Functional Design		→						
Detailed Design			→					
Tender and Construction				→				



COMMENT FORM



Mountain Highway Interchange Project

Comment Form

Introduction

The Province of B.C. and the Government of Canada are investing \$36 million in the Mountain Highway Interchange, which is the first phase of three phases for overall Lower Lynn Improvements totalling \$150 million.

The design and construction of a new interchange at Highway 1 and Mountain Highway will improve safety for all users, while reducing congestion and travel times for commuters, improving access to Highway 1 and providing better connectivity for municipalities.

This phase of consultation gives you the opportunity to share your input on the design to ensure important considerations are taken into account. There will be future opportunities for you to provide your feedback as the project progresses.

We want to hear from you

Provide us with your feedback by:

- Completing this comment form and submitting by **February 5, 2016**
- Sending an email to lowerlynn@gov.bc.ca by **February 5, 2016**

The project team will be considering the following factors as we move forward with planning and design for the Highway 1 at Mountain Highway Interchange Project:

- Minimizing impacts to park land and private property
- Protecting and enhancing Keith Creek
- Salop Trail expansion and connections
- Improving the cycling and pedestrian facilities
- Improving safety for all modes of transportation
- Accommodating residential access along Keith Road
- Planning for future improvements to Highway 1
- Construction impacts to neighbouring communities
- Continuation of transit services

1. Are there other considerations you think we should be aware of?

COMMENT FORM



2. Please provide any comments you may have regarding the interchange design or the project in general.

Thank you for your input!

Your comments will be reviewed and considered by the project team, along with technical and financial information, as planning and design continues.

Privacy Policy

Personal information collected through this comment form will inform the Ministry of Transportation and Infrastructure Highway 1 at Mountain Highway Interchange Project under the authority of s.26 of the *Freedom of Information and Protection of Privacy Act*. If you have any questions about the collection, use and disclosure of your personal information, please contact:

Jay Porter
Project Manager, Ministry of Transportation and Infrastructure
310 - 1500 Woolridge
Coquitlam BC, V3K 0B8
lowerlynn@gov.bc.ca



Mountain Highway Interchange Project

Open House and Comment Period

January 19 – February 5, 2016

Appendix 2: Notification Materials

May 2016

NEWSPAPER ADVERTISING

Public Notice of Open House Highway 1 at Mountain Highway Interchange Project

The Ministry of Transportation and Infrastructure invites the public to attend an open house regarding the proposed Highway 1 at Mountain Highway Interchange Project. The project involves upgrading the existing Mountain Highway overpass to a full interchange.

This will be an opportunity for the public to review and provide input on the project. Ministry staff and the project team will be available to provide information and answer questions.

The drop-in open house is scheduled for the following date:

**Tuesday, January 19, 2016
4:00 p.m. to 8:00 p.m.
Holiday Inn & Suites
700 Old Lillooet Road, North Vancouver, B.C.**

For those unable to attend the open house, the information presented will be posted on the ministry's web site on January 19, 2016.

**For more information, please visit:
www.gov.bc.ca/lowerlynninterchanges
or contact us by telephone at 604 527-3105
or by e-mail at lowerlynn@gov.bc.ca**



SAMPLE TWITTER POSTS



BC Transportation @TranBC · Jan 12

Mountain Highway Interchange project open house will be Jan 19
bit.ly/1OpyPoW #NorthVan #BCHwy1



7



2



BC Transportation @TranBC · Jan 15

Coming up in #NorthVan Jan 19: **Mountain Highway Interchange open house**
bit.ly/1OpyPoW #BCHwy1



4



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