Table of Contents

1	LOWER MAINLAND	2
1.01	Definitions	2
1.02	Tunnel Traffic Monitoring / Control – George Massey Tunnel	3
1.03	Tunnel Traffic Monitoring / Control – George Massey Tunnel Bridge and Tunnel Syste Maintenance – George Massey Tunnel and Mary Hill Bypass Pump Station	em 6
1.04	Bridge Hard Surfaced Apron / Revetment Cleaning	8
1.05	Bridge Traveller Maintenance – Alex Fraser Bridge and Port Mann Bridge	9
1.06	Bridge Cable Stay Snow and Ice Control – Alex Fraser Bridge	10
1.07	Bridge Cable Stay Snow and Ice Control – Port Mann Bridge	12
1.08	Highway Crossing Infrastructure	14
1.09	Invasive Plants Management	16
1.10	Lane Closures	18
1.11	Movable Barrier Transfer System Operations and Maintenance – Alex Fraser Bridge	20
1.12	Movable Bridge Operation and Maintenance - Middle Arm South and Annacis Channe Swing Bridges	el 22
1.13	Pavement Surface Reflectors	24
1.14	Salt Containment Infrastructure Maintenance	25
1.15	Sound Wall Maintenance	28
1.16	Traffic Patrol – George Massey Tunnel, Oak Street Bridge, Alex Fraser Bridge, Queensborough Bridge, Highway #91 and #91A from the Queensborough Bridge to 72nd Avenue, Pitt River Bridge and Port Mann Bridge	29
1.17	Traffic Patrol – Port Mann Highway 1	33
1.18	Traffic Management – Pacific Highway Truck Crossing	36
1.19	Traffic Management and Support – Port Mann Highway 1 Structures Inspections	38
1.20	Vehicle Inspection Station Maintenance	47
1.21	Enhanced Winter Maintenance on Key Commuter and Goods Movement Routes – Highways 1, 91A, 91, and 99	51

1 LOWER MAINLAND

1.01 Definitions

In these Local Area Specifications, capitalized terms will have the corresponding meanings as set out in Article 1 of this Agreement and Section 1 of this Schedule 1 ("Specifications"), and as set forth below:

"Bridge Traveller" means a traveller, including all its components that is used for Bridge maintenance and repair, including, but not limited to the structural elements, electrical system, mechanical system, hydraulic system, tracks, guideways, all associated hardware, safety lines, fall access to systems, hatches, ladders and walkways.

"Invasive Plants" means any invasive alien plant species that has the potential to pose undesirable or detrimental impacts on humans, animals or ecosystems.

"Salt Containment Infrastructure" means a storage facility, including all of its components that is used for the storage and loading/unloading salt for winter maintenance operations including, but not limited to the salt shed, fabric/steel roofing, pit floor, evapotranspiration liner, containment pad, and skirt.

"Sound Wall" means a vertical structure designed to reduce Highway noise levels.

- **1.02** Tunnel Traffic Monitoring / Control George Massey Tunnel
- 1.02.1 Outcome

To provide traffic monitoring and/or traffic control for the George Massey Tunnel.

- **1.02.2** Routine Maintenance Services
 - PM1.02.2-1 Provide continuous traffic monitoring and/or traffic control 24 hours per day with console operators located at the Regional Transportation Management Centre.
 - PM1.02.2-2 Initiate counterflow lane change operations within 5 minutes, when warranted by traffic conditions at the George Massey Tunnel.
 - PM1.02.2-3 Dispatch safety patrols immediately for counterflow lane change operations or traffic related incidents or other incidents affecting traffic flow.
 - PM1.02.2-4 Respond immediately to power failures that prevent traffic signals from operating, as directed by the Province.
 - PM1.02.2-5 Notify safety patrols and police authorities immediately of all traffic related incidents or other incidents affecting traffic flow.
 - PM1.02.2-6 Report to the Province immediately when counterflow lane change operations are initiated or when traffic related incidents or other incidents affect traffic flow.
 - PM1.02.2-7 Respond to media requests immediately regarding traffic conditions, as approved by the Province.
 - PM1.02.2-8 Provide a shuttle service for cyclists and their bicycles between the west side of Highway 99 and the south end, at the Junction of Highway 99 and Highway 17, in accordance with the schedule in Appendix A that may be periodically adjusted as mutually agreed.
- 1.02.3 Materials and/or Procedures
 - a) Comply with the George Massey Tunnel Volume 1 System Overview Manual, Volume 2 – User Manual, Volume 3 – Policy and Procedures Manual, Volume 4 – Emergency Response Manual, Volume 5 – Fault Management Manual, Volume 6 – Maintenance Manual, and Volume 7 - Policy and Procedure & Incident Response – Field Manual;
 - b) Monitor and evaluate weather conditions, road surfaces and traffic congestion using methods including, but not limited to safety patrols and technology to anticipate counterflow lane changes;
 - c) Monitor carbon monoxide levels and regulate ventilation fans in response;

- d) Activate the interior tunnel lighting system during counterflow lane changes or during an incident;
- e) Operate the counterflow system during counterflow lane changing; and
- f) Document traffic monitoring report logs and other reports, as directed by the Province.

Full Service Schedule				
Southbound	Northbound			
Departure Times	Departure Times			
0600	0630			
0700	0730			
0800	0830			
0900	0930			
1100	1130			
1300	1330			
1500	1530			
1600	1630			
1700	1730			
1800	1830			

Appendix A George Massey	Tunnel Shuttle Schedule
--------------------------	-------------------------

Commuter Service Schedule				
Southbound	Northbound			
Departure Times	Departure Times			
0600	0600			
0700	0700			
0800	0800			
1600	1600			
1700	1700			
1800	1800			

Full service is to be provided:

- On weekends in the month of April;
- On Saturday March 31 if April 1 is a Sunday;
- On Good Friday and Easter Monday if Easter falls in April;
- Daily from the last weekend in April through to and including Thanksgiving Monday in October (noting that if April 30 is a Saturday, the weekend of April 30 and May 1 shall be the last weekend in April);
- On all weekends in October after Thanksgiving Monday; and
- On Sunday November 1 if October 31 is a Saturday.

Commuter service is to be provided:

• On weekdays from and including the day after Thanksgiving Monday until the last weekend in April.

Additional responsibilities:

- By January 31 of each year, the Contractor shall deliver, in a format acceptable to the Province, an updated schedule to the District Operations Manager outlining the seasonal shuttle service schedule until at least May 1 of the following year; and
- Six weeks prior to each seasonal change in service, the Contractor shall update the two onsite schedule boards at the shuttle service pickup locations with current and upcoming schedule information.

- **1.03** Tunnel Traffic Monitoring / Control George Massey Tunnel Bridge and Tunnel System Maintenance George Massey Tunnel and Mary Hill Bypass Pump Station
- 1.03.1 Outcome

Provide safe and efficient operation of mechanical systems at the George Massey Tunnel and Mary Hill Bypass Pump station.

- 1.03.2 Routine Maintenance Services
 - PM1.03.2-1 Repair immediately any mechanical system failures.
 - PM1.03.2-2 Notify the Province immediately of any mechanical system failures.
 - PM1.03.2-3 Maintain, repair or replace immediately damaged or deteriorated mechanical system components.
 - PM1.03.2-4 Conduct inspections in accordance with the manufacturer's specifications and recommendations, provincial manuals and check sheets.
 - PM1.03.2-5 Test and certify the sprinkler system twice annually or in accordance with local fire department requirements, whichever is more frequent.
 - PM1.03.2-6 Conduct a daily driving inspection of the lane control system components during the morning counterflow operation and during the afternoon counterflow operation.
 - PM1.03.2-7 Clean computer workstation components every 3 months.

Notes:

- 1) The Tunnel systems for the George Massey Tunnel includes mechanical, electrical, electronic and camera equipment connected to or fed from the Tunnel power services and systems, on Highway 99 or connecting roads, from 72nd Street to the south side of Highway 91.
- 1.03.3 Materials and/or Procedures
 - a) Comply with the George Massey Tunnel Volume 1 System Overview Manual, Volume 2 – User Manual, Volume 3 – Policy and Procedures Manual, Volume 4 – Emergency Response Manual, Volume 5 – Fault Management Manual, Volume 6 – Maintenance Manual, and Volume 7 - Policy and Procedure & Incident Response – Field Manual; and
 - b) Maintain, repair or replace mechanical equipment in accordance with the manufacturer's specifications and recommendations.

SA 6 Local Area Specification

1.03.4 Routine Maintenance Services Cap

\$35,000 - for each occurrence, the cost to repair or replace mechanical systems, or components.

- **1.04** Bridge Hard Surfaced Apron / Revetment Cleaning
- 1.04.1 Outcome

To provide safe and clean hard surfaced Bridge aprons / revetments.

- **1.04.2** Routine Maintenance Services
 - PM1.04.2-1 Flush all concrete and shotcrete Bridge aprons / revetments by June 30th of each calendar year.
 - PM1.04.2-2 Clean all concrete and shotcrete Bridge aprons / revetments every second year.
- **1.04.3** Materials and/or Procedures
 - a) Use low pressure / high volume equipment for the annual flushing of concrete and shotcrete Bridge aprons / revetments.
 - b) Use high pressure washing equipment for the cleaning of concrete and shotcrete Bridge aprons / revetments.

- **1.05** Bridge Traveller Maintenance Alex Fraser Bridge and Port Mann Bridge
- 1.05.1 Outcome

To provide a safe, efficient and smooth operation of the Bridge Traveller at the Alex Fraser Bridge and Port Mann Bridge.

- 1.05.2 Routine Maintenance Services
 - PM1.05.2-1 Repair or replace damaged or deteriorated mechanical, electrical or hydraulic Bridge Traveller components within 21 days.
 - PM1.05.2-2 Inspect, test and certify Bridge Travellers annually.
 - PM1.05.2-3 Operate Bridge Travellers monthly to confirm the units function as designed.
- **1.05.3** Materials and/or Procedures
 - a) Maintain and repair Bridge Travellers in accordance with the manufacturer's specifications and recommendations.
- 1.05.4 Routine Maintenance Services Cap

\$35,000 - for each occurrence, the cost to repair or replace a Bridge Traveller.

1.06 Bridge Cable Stay Snow and Ice Control – Alex Fraser Bridge

1.06.1 Outcome

To keep the cable stays clear of snow and ice and ensure the safety of Highway Users on the Alex Fraser Bridge.

- **1.06.2** Routine Maintenance Services
 - PM1.06.2-1 Perform all monitoring and cable stay de-icing services in accordance with the Alex Fraser Bridge Cable Stay Winter Snow and Ice Management Plan.
 - PM1.06.2-2 Perform cable stay collar reloading operations in accordance with the collar installation procedure.
 - PM1.06.2-3 Complete cable stay snow and ice control training with the Province by October 15th of each calendar year, in accordance with the Alex Fraser Bridge Cable Stay Snow and Ice Management Plan.
 - PM1.06.2-4 Provide access to the Bridge, including all necessary field and equipment support for maintenance personnel within 24 hours from November 1st to April 30th and within 72 hours from May 1st to October 31st for maintenance including, but not limited to electrical systems, computer systems, mechanical systems and the weather station.
 - PM1.06.2-5 Inspect and document the condition of the cable snow and ice management equipment in accordance with the Alex Fraser Bridge Cable Stay Winter Snow and Ice Management Plan.
 - PM1.06.2-6 Maintain the cable stay snow and ice control system components in accordance with the Alex Fraser Bridge Cable Stay Winter Snow and Ice Management Plan and manufacturer's specifications and recommendations.
- **1.06.3** Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- a) Comply with the Alex Fraser Bridge Cable Stay Winter Snow and Ice Management Plan;
- b) Designate a lead individual, who will be responsible for ensuring the Alex Fraser Bridge Cable Stay Winter Snow and Ice Management Plan is implemented as required; and
- c) Provide resources in accordance with the Alex Fraser Bridge Cable Stay Winter Snow and Ice Management Plan.

1.06.4 Routine Maintenance Service Cap

\$0 – for each occurrence, the cost to respond to Level 3 or 4 or 5 alerts and the costs to reset collars into the collar release device.

\$10,000 – for each occurrence, the cost to replace cable stay snow and ice control system components.

1.07 Bridge Cable Stay Snow and Ice Control – Port Mann Bridge

1.07.1 Outcome

To keep the cable stays clear of snow and ice and ensure the safety of Highway Users on the Port Mann Bridge.

- **1.07.2** Routine Maintenance Services
 - PM1.07.2-1 Perform all monitoring and cable stay de-icing services in accordance with the Port Mann Bridge Cable Stay Winter Snow and Ice Management Plan.
 - PM1.07.2-2 Perform cable stay collar reloading operations in accordance with the collar installation procedure.
 - PM1.07.2-3 Complete cable stay snow and ice control training with the Province by October 15th of each calendar year, in accordance with the Port Mann Bridge Cable Stay Snow and Ice Management Plan.
 - PM1.07.2-4 Provide access to the Bridge, including all necessary field and equipment support, for maintenance personnel within 24 hours, from November 1st to April 30th and within 72 hours from May 1st to October 31st for maintenance including, but not limited to electrical systems, computer systems, mechanical systems and the weather station.
 - PM1.07.2-5 Inspect and document the condition of the Collar Release Devices (CRD) in accordance with the CRD Maintenance Manual and the Port Mann Bridge Cable Stay Winter Snow and Ice Management Plan.
 - PM1.07.2-6 Maintain the cable stay snow and ice control system components in accordance with the Port Mann Bridge Cable Stay Winter Snow and Ice Management Plan and manufacturer's specifications and recommendations.
- **1.07.3** Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- a) Comply with the Port Mann Bridge Cable Stay Winter Snow and Ice Management Plan;
- b) Designate a lead individual, who will be responsible for ensuring the Port Mann Bridge Cable Stay Winter Snow and Ice Management Plan is implemented as required;
- c) Provide resources in accordance with the Port Mann Bridge Cable Stay Winter Snow and Ice Management Plan; and

- d) Ensure all snow and ice removal equipment is safely secured, unencumbered and readily accessible at all times including, but not limited to Programmable Logic Controller Human Machine Interface (PLC HMI), standby generators, winches and electric motors.
- **1.07.4** Routine Maintenance Service Cap

\$0 – for each occurrence, the cost to respond to Level 3, or 4 or 5 alerts and the costs to reset collars into the collar release device.

\$10,000 – for each occurrence, the cost to replace cable stay snow and ice control system components.

- **1.08** Highway Crossing Infrastructure
- 1.08.1 Outcome

To provide safe passage of pedestrians and animals underneath or beside a Highway.

- **1.08.2** Routine Maintenance Services
 - PM1.08.2-1 Respond immediately to restrict all access to Highway Crossing Infrastructure, as directed by the Province.
 - PM1.08.2-2 Repair or replace immediately, as directed by the Province, any damaged or deteriorated Highway Crossing Infrastructure that has been structurally compromised, as determined by the Province.
 - PM1.08.2-3 Repair or replace within 3 months, any damaged or deteriorated Highway Crossing Infrastructure that has not been structurally compromised, as determined by the Province.
 - PM1.08.2-4 Remove Debris immediately from the surfaces of floors, pedestrian paths or stairways.
 - PM1.08.2-5 Remove Accumulations, surface contaminants and chemicals by June 30th of each calendar year from all surfaces.
 - PM1.08.2-6 Remove Debris within 1 month that impedes the passage of animals in animal accessed Highway Crossing Infrastructure.
- **1.08.3** Quantified Maintenance Services
 - PM1.08.3-1 Repair within 24 hours damaged or deteriorated surfaces on underpass floors, pedestrian paths or stairways.

PM1.08.3-2 Repair within 6 months other damaged or deteriorated surfaces.

Specific Requirements:

- a) Maintain Highway Crossing Infrastructure within Rest Areas in accordance with the response of the adjacent Highway Classification.
- **1.08.4** Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional material and/or procedures requirements are as follows:

a) Use materials in accordance with the same type and quality on the existing Highway Crossing Infrastructure.

1.08.5 Routine Maintenance Services Cap

\$50,000 – for each occurrence, the cost to repair or replace Highway Crossing Infrastructure.

1.08.6 Warranty

Refer to Section 3 of this Schedule 1 ("Specifications").

1.09 Invasive Plants Management

1.09.1 Outcome

To minimize the introduction and spread of Invasive Plants on Highways and Gravel Pits.

- **1.09.2** Routine Maintenance Services
 - PM1.09.2-1 Meet annually, with the agency conducting Invasive Plant management for the Province, during development of the Quantified Maintenance Services to coordinate planned activities.
 - PM1.09.2-2 Inspect all Gravel Pits and material sources annually to ensure they are free of Invasive Plants.

PM1.09.2-3 Report Invasive Plant conditions to the agency conducting Invasive Plant management for the Province, as follows:

Per	formance Criteria	Response
a)	Prior to the disturbance of knotweed species that restricts Sight Distance or creates a condition that is unsafe or has the potential to become unsafe	immediately
b)	Any Invasive Plant infestations on Highways and Gravel Pits	2 d

Notes:

- 1) Only the exposed, active areas of the Gravel Pits are to be considered.
- 1.09.3 Quantified Maintenance Services

PM1.09.3-1 Seed specific areas of exposed soils exceeding 1 metre up the Shoulder sideslope and the backslope due to ditch maintenance.

Notes:

- The Standard Specifications for Highway Construction describes the revegetation requirements including, but not limited to blending, seed analysis and application timing.
- **1.09.4** Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

a) Comply with the Best Practices for Managing Invasive Plants on Roadsides;

- b) Incorporate Invasive Plant management when planning and performing Quantified Maintenance Services;
- c) Seed side-cast ditch materials;
- d) Seek approval from the Province if disturbance of knotweed species is required;
- e) The Contractor may submit a plan for approval by the Province for the use of herbicides, as a control measure for knotweed or other Invasive Plants;
- f) Herbicides are to be applied by a certified pesticide applicator;
- g) Do not use gravel materials contaminated with Invasive Plants, unless a rectification process is submitted and approved by the Province; and
- Report Invasive Plants to the agency conducting Invasive Plant management for the Province online or using the Province's smartphone application or the provincial tollfree service.

1.09.5 Warranty

Refer to Section 3 of this Schedule 1 ("Specifications").

1.10 Lane Closures

1.10.1 Outcome

To keep Highway Users safe and provide the Services with minimal interruptions to the flow of traffic.

- **1.10.2** Routine Maintenance Services
 - PM1.10.2-1 Notify emergency services and Translink a minimum of 2 days in advance of all lane closures.
 - PM1.10.2-2 Advertise all lane closures a minimum of 2 days in advance on the local radio stations.
 - PM1.10.2-3 Use portable changeable message signs a minimum of 2 days in advance of all lane closures with a duration greater than 2 weeks.
 - PM1.10.2-4 Adjust or terminate Services if a Traffic Delay exceeds 3 minutes through a work zone.

Highway	Starting	Ending	Between	Time Period
Highway 1 Mainline Eastbound	Monday	Friday	Eastbound Exit 44 (Highway 7 Coquitlam) and Collector Distributor Eastbound Merge	0500 to 2300
Highway 1 Mainline Westbound	Monday	Friday	Westbound Exit 48 (152 nd Street) and Highway 7B Merge Coquitlam	0500 to 2000
Highway 1 Mainline Eastbound	Saturday	Sunday	Eastbound Exit 44 (Highway 7 Coquitlam) and Collector Distributor Eastbound Merge	0900 to 2000
Highway 1 Mainline Westbound	Saturday	Sunday	Westbound Exit 48 (152 nd Street) and Highway 7B Merge Coquitlam	0800 to 2000
Highway 1 Collector & Distributor Eastbound	Monday	Friday	Eastbound Exit 44 (Highway 7 Coquitlam) and Eastbound Exit 48 (152 nd Street)	0500 to 0000
Highway 1 Collector & Distributor Westbound	Monday	Friday	Westbound Exit 48 (152 nd Street) and Highway 7 West / East Diverge	0500 to 2000
Highway 1 Collector & Distributor Eastbound	Saturday	Sunday	Eastbound Exit 44 (Highway 7 Coquitlam) and Eastbound Exit 48 (152 nd Street)	0900 to 0000
Highway 1 Collector & Distributor Westbound	Saturday	Sunday	Westbound Exit 48 (152 nd Street) and Highway 7 West / East Diverge	0600 to 1900

PM1.10.2-5 Lane closures are prohibited as follows:

Notes:

 The Province may modify the prohibitions in response to changing conditions, including but not limited to traffic volumes, construction, or other changing conditions as determined by the Province: and 2) The Province may grant exemptions to the time periods where lane closures are prohibited for work of short duration or minimal impact to traffic flow or for work that cannot be practically accomplished by means of artificial lighting.

1.10.3 Materials and/or Procedures

Additional materials and/or procedures are as follows:

- a) Ensure traffic control devices are not in an active position when lane closures are prohibited;
- b) When statutory holidays fall on a Friday, lane closures are prohibited from 1200 hours on the Thursday preceding until 1200 hours on the Monday following;
- c) When statutory holidays fall on a Monday, lane closures are prohibited from 1200 hours on the Friday preceding until 1200 hours on the Tuesday following;
- d) All lane closures are prohibited on multi lane Highways when traffic volumes exceed 1200 vehicles per hour per open lane for lanes adjacent to the work zone; and
- e) All lane closures are prohibited on multi lane Highways when traffic volumes exceed 1500 vehicles per hour per open lane for lanes not adjacent to the work zone.

- **1.11** Movable Barrier Transfer System Operations and Maintenance Alex Fraser Bridge
- 1.11.1 Outcome

To provide safe, reliable and timely operation of the Movable Barrier Transfer System at the Alex Fraser Bridge.

- **1.11.2** Routine Maintenance Services
 - PM1.11.2-1 Transfer movable barriers by 4:30 am to open the fourth northbound lane and by 11:30 am to open the southbound lane, Monday to Friday, except on statutory holidays.
 - PM1.11.2-2 Communicate immediately to the Regional Transportation Management Centre when movable barrier transfer operations are initiated.
 PM1.11.2-3 Transfer movable barriers as requested by the Province.
 - PM1.11.2-4 Clean, realign, repair or replace before the next scheduled transfer, dirty, misaligned, damaged, or deteriorated Movable Barrier Transfer System.
 - PM1.11.2-5 Communicate immediately to the Regional Transportation Management Centre when movable barriers cannot be repaired or replaced.
 - PM1.11.2-6 Exchange the active barrier transfer machine monthly with the non-active barrier transfer machine.
 - PM1.11.2-7 Clean the interior and exterior surfaces of the barrier transfer machine weekly.
 - PM1.11.2-8 Inspect and document annually, the condition of the Movable Barrier Transfer System in accordance with the manufacturer's specifications and recommendations.

Specific Requirements:

- a) The Contractor, prior to executing the Agreement, inspects and examines the Movable Barrier Transfer System, including spare parts and the Contractor shall be deemed to have inspected and examined and inventoried the Movable Barrier Transfer System, including spare parts same and to have satisfied itself with respect thereto;
- b) The Contractor has and shall have satisfied itself in all respect prior to executing this Agreement as to the Movable Barrier Transfer System and spare parts including the condition, situation, status, quality, fitness and standard thereto;
- c) Upon the expiration of the Term or sooner termination of this Agreement, return the Movable Barrier Transfer System in the same condition and quantity as at the time of executing the Agreement, reasonable wear and tear excepted;

- d) Upon the expiration of the Term or sooner termination of this Agreement, the parties shall conduct an inspection and inventory of the Movable Barrier Transfer System; and
- e) Store the non-active barrier transfer machine, when not in use and spare parts at a location as directed by the Province.
- 1.11.3 Materials and/or Procedures
 - a) Comply with the Alex Fraser Bridge Movable Barrier Transfer System Operations and Maintenance manuals;
 - b) Operate and maintain the Movable Barrier System in accordance with the manufacturer's specifications and recommendations;
 - c) Provide an estimated schedule and costs for the replacement of Movable Barrier Transfer System components with the annual condition report; and
 - d) Use Original Equipment Manufacturer (OEM) parts or components of the same type and quality as the existing Movable Barrier Transfer System or as approved by the Province.
- **1.11.4** Routine Maintenance Services Cap

\$10,000 for each occurrence to repair or replace the Movable Barrier Transfer System; and

\$0 for each occurrence to transfer the movable barriers at the request of the Province.

- **1.12** Movable Bridge Operation and Maintenance Middle Arm South and Annacis Channel Swing Bridges
- 1.12.1 Outcome

To provide safe navigable waterways for marine traffic and ensure safe and reliable service to Highway Users.

- 1.12.2 Routine Maintenance Services
 - PM1.01.2-1 Report any malfunctions immediately to the Province.
 - PM1.01.2-2 Open the Movable Bridge at the time scheduled by the Vancouver Fraser Port Authority, direct movement of the vessels until they are clear of the Movable Bridge, and then immediately close the Movable Bridge.
 - PM1.01.2-3 Operate and maintain the Movable Bridge in accordance with the Operating and Maintenance Manuals for the Middle Arm South and Annacis Channel Swing Bridges.
 - PM1.01.2-4 Maintain, repair or replace immediately any damaged or deteriorated steel or mechanical components.
 - PM1.1.01-5 Maintain and lubricate annually, all moving parts and contact faces at deck joints.
- 1.12.3 Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures are as follows:

- a) Post contact telephone numbers for the Contractor and the Province at the marine approaches to the Movable Bridge at locations approved by the Province;
- b) Operate in accordance with the applicable Coast Guard approvals under the provisions of the Navigation Protection Act;
- c) Ensure operators of the Movable Bridge are qualified to operate VHF radio to direct the movement of vessels;
- d) Coordinate openings of the Annacis Channel Swing Bridge with the Railway Authority; and
- e) Coordinate maintenance work that impacts electrical components with the Province's electrical contractor.

1.12.4 Routine Maintenance Service Cap

\$50,000 – per occurrence, the cost for the Contractor to maintain, repair or replace steel or mechanical components of the Movable Bridge.

- **1.13** Pavement Surface Reflectors
- 1.13.1 Outcome

To facilitate the safe and orderly movement of traffic.

1.13.2 Routine Maintenance Services

There are no Routine Maintenance Services.

1.13.3 Quantified Maintenance Services

PM1.13.3-1

Replace pavement surface reflectors by May 31st of each calendar year that are missing or are no longer effective.

- PM1.13.3-2 Install non-recessed pavement surface reflectors within 1 month at new locations.
- 1.13.4 Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

1.14 Salt Containment Infrastructure Maintenance

1.14.1 Outcome

To provide for the safe handling and storage of salt and Winter Abrasives on provincial land and monitor, maintain, repair and replace provincially owned Salt Containment Infrastructure.

- **1.14.2** Routine Maintenance Services
 - PM1.14.2-1 Off-load salt onto an evapotranspiration liner or containment pad, if available and/or store immediately within the salt shed.
 - PM1.14.2-2 Retrieve and return to the salt shed immediately, any salt spillage over the top of skirt that lines the inside of the salt shed.
 - PM1.14.2-3 Remove immediately, any salt or salt contaminated material on the pit floor to a depth of 40 centimetres for use with Winter Abrasives when processing.
 - PM1.14.2-4 Notify the Province immediately of any damage to the containment pond, including but not limited to the liner, berm or fencing.
 - PM1.14.2-5 Temporarily repair damaged or deteriorated salt shed components immediately, that permits water infiltration.
 - PM1.14.2-6 Permanently repair within 8 weeks, any temporarily repaired steel/fabric salt shed components that permits water infiltration.
 - PM1.14.2-7 Permanently repair within 2 weeks, any temporarily repaired wooden salt shed components that permits water infiltration.
 - PM1.14.2-8 Inspect and document the condition of Salt Containment Infrastructure as follows:

Per	formance Criteria	Response	
a)	Evapotranspiration water/brine levels	daily or more often when required	
b)	Water in the containment pond to prevent over-flowing	daily or more often when required	
c)	Steel/fabric salt sheds including, but not limited to, the steel structural components including base plates, wire cross- bracing, fabric roof, fabric lashing, winches and vents, lock- blocks and protective skirt	bi-annually in the spring and fall or in accordance with the manufacturer's specifications and recommendations, whichever is more frequent	
d)	Wooden salt shed including but not limited to structural condition and weatherproof exterior	annually	
e)	Salt shed apron and containment pad surfaces	annually	
f)	Evapotranspiration liner surface absorption	daily or more often when required	

PM1.14.2-9 Maintain the superstructure of steel/fabric salt sheds as follows:

Per	formance Criteria	Response
a)	Remove grime and encrusted salt off the salt shed's steel interior	annually
b)	Lubricate winches	annually
c)	Re-tension-web and fabric roof lashing	annually
d)	Re-tighten fastening bolts	annually
e)	Remove surface rust	annually

PM1.14.2-10 Repair or replace Salt Containment Infrastructure as follows:

Performance Criteria		Response	
a)	Damaged or deteriorated containment pond components, including but not limited to the liner, berm or fencing	immediately	
b)	Loss of absorption for a compact surface where water is ponding on the evapotranspiration liner	immediately	
c)	Saturation or overflow of evapotranspiration water/brine	when required	
d)	Damaged or deteriorated wooden salt shed components	within 2 weeks of the bi-annual inspection or as noted in PM1.14.2-8	
e)	Damaged or deteriorated steel/fabric salt shed components	within 8 weeks of the bi-annual inspection or as noted in PM 1.14.2-8 if salt and/or Winter Abrasive with salt is present or prior to when the salt and/or Winter Abrasive with salt is scheduled to be stored	
f)	Cracked, chipped edges, pot holes, settling/ponding, or base failure of surfaces	General Specifications 1.01, 1.06 and 1.10 of this Schedule 1 ("Specifications") for a Class 4 Highway	

PM1.14.2-11 Replace annually, the top 10 centimetres of salt contaminated material on the evapotranspiration surface with free draining material and use the removed salt contaminated material for Winter Abrasives processing.

Notes:

- The Province inspection H-form is to be used for inspections of steel/fabric salt sheds;
- 2) PM1.14.2-10 (f) includes possible Quantified Maintenance Services, and
- 3) Salt shed locations are provided in Appendix A of Schedule 13 ("Gravel Licence").

1.14.3 Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- a) Load salt and/or Winter Abrasive containing salt on a containment pad or the evapotranspiration liner surface;
- b) Store salt and/or Winter Abrasive containing salt at a height below the top 30 centimetres of the skirt within a steel/fabric salt shed and ensure the top of the lock block wall remains free of salt accumulation;
- c) Park heavy equipment used for loading salt or Winter Abrasive containing salt, on the containment pad, evapotranspiration liner or within the salt shed;
- d) Prevent spillage onto the pit floor when transporting salt;
- e) Store Winter Abrasive containing salt under cover or on a containment pad or on an evapotranspiration liner, if supplied;
- f) Use a spill proof apron for salt hoppers to contain salt and facilitate retrieval;
- g) Store salt contaminated material for future use with Winter Abrasives on a containment pad or evapotranspiration liner or in a salt shed;
- Prevent salt contaminated materials from being tracked from the containment pad or evapotranspiration liner and use a containment pond for disposal, if one exists on site;
- i) Maintain an open catchment area adjacent to the salt shed exterior walls to accommodate unobstructed snow shedding off the structure;
- Remove snow from the roof of steel/fabric salt shed and adjust the roof tension after the snow accumulation has been removed in accordance with the manufacturer's specifications and recommendations;
- Reseal exposed surfaces following the removal of surface rust with zinc-rich primer/paint;
- I) Maintain and repair damaged or deteriorated salt shed components in accordance with the manufacturer's specifications and recommendations;
- m) Use engineered designs for all repairs, modifications or replacement to steel/fabric salt shed structural components including, but not limited to the fabric roof, prepared by a Professional Engineer, retained by the Contractor; and
- n) Securely lock gates and post signage to prevent unauthorized access to fenced containment ponds.
- **1.14.4** Routine Maintenance Services Cap

^{\$50,000 –} for each occurrence, the cost to repair or replace a salt shed.

- **1.15** Sound Wall Maintenance
- 1.15.1 Outcome

To provide safe and stable Sounds Walls.

1.15.2 Routine Maintenance Services

There are no Routine Maintenance Services.

- 1.15.3 Quantified Maintenance Services
 - PM1.15.3-1 Repair immediately, as directed by the Province, any damaged or deteriorated Sound Walls that have been structurally compromised, as determined by the Province.
 - PM1.15.3-2 Repair any damaged or deteriorated Sound Walls that have not been structurally compromised, as determined by the Province as follows:

Performance Criteria		Response by Highway Classification		
	Fenomialice Chiena	1&2	3	
a)	Damage, deterioration, deflection or settlement	1 m	2 m	

PM1.15.3-3 Repair within 6 months, other damaged or deteriorated Sound Walls.

PM1.15.3-4 Replace within 6 months, Sound Wall components that are damaged or deteriorated beyond repair.

1.15.4 Materials and/or Procedures

Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

Additional materials and/or procedures requirements are as follows:

- a) Supply and use material of the same type, quality and size as existing; and
- b) Repair or replace damaged or deteriorated Sound Walls in accordance with the manufacturer's specifications and recommendations.

1.15.5 Warranty

Refer to Section 3 of this Schedule 1 ("Specifications")

- **1.16** Traffic Patrol George Massey Tunnel, Oak Street Bridge, Alex Fraser Bridge, Queensborough Bridge, Highway #91 and #91A from the Queensborough Bridge to 72nd Avenue, Pitt River Bridge and Port Mann Bridge
- 1.16.1 Outcome

To provide the safe and efficient flow of traffic in the the George Massey Tunnel and on Oak Street Bridge, Alex Fraser Bridge, Queensborough Bridge, Highway #91 and #91A from Queensborough Bridge to 72nd Avenue, Pitt River Bridge, and the Port Mann Bridge.

1.16.2 Routine Maintenance Services

PM1.16.2-1 Conduct hourly traffic patrols at each location as follows:

Location		From	То	Time Period	No. of Vehicles
a)	Oak Street Bridge	Monday	Friday	0900 to 1500	1
b)	Pitt River Bridge	Monday	Friday	0830 to 1500	1

PM1.16.2-2 Conduct continuous traffic patrols at each location as follows:

Location		From	То	Time Period	No. of Vehicles
a)	George Massey Tunnel	Monday	Sunday	0000 to 2400	1
b)	Highway 91 (from Highway 10 to No. 6 Road and Highway 91A)	Monday	Friday	0530 to 2000	1
c)	Highway 91/91A (from Queensborough Bridge to 72nd Avenue)	Monday	Friday	1000 to 1400	1
d)	Port Mann Bridge	Monday	Sunday	0000 to 2400	1

PM1.16.2-3 Station patrol vehicles at each location for point duty as follows:

Loc	ation	From	То	Time Period	No. of Vehicles
a)	Oak Street Bridge (and	Monday	Friday	0500 to 0900	2
	bridge approaches)	Monday	Friday	1500 to 2000	2
b)	Aloy Frager Dridge	Monday	Friday	0500 to 1000	3
b)	Alex Fraser Bridge	Monday	Friday	1400 to 2000	3
c)	Queensborough Bridge	Monday	Friday	0530 to 1000	2
		Monday	Friday	1400 to 2000	2
d)	Pitt River Bridge	Monday	Friday	0500 to 0830	2

Location	From	То	Time Period	No. of Vehicles
	Monday	Friday	1500 to 2000	2
e) Port Mann Bridge	Monday	Sunday	0500 to 1000	3
	Monday	Sunday	1400 to 2000	3

PM1.16.2-4 Station patrol vehicles at George Massey Tunnel counter flow operations from September 1st to June 30th for point duty as follows:

Location		From	То	Time Period	No. of Vehicles
a)	George Massey Tunnel (counter flow operations)	Monday	Friday	0545 to 0930	2
		Monday	Friday	1500 to 1830	2

PM1.16.2-5 Station patrol vehicles at George Massey Tunnel counter flow operations from July 1st to August 31st for point duty as follows:

Location		From	То	Time Period	No. of Vehicles
Í	George Massey Tunnel (counter flow operations)	Monday	Friday	0545 to 0900	2
		Monday	Friday	1515 to 1800	2

- PM1.16.2-6 Respond with a patrol vehicle immediately to the scene of an obstruction.
- PM1.16.2-7 Remove any vehicles involved in an incident or other obstructions immediately from the Travelled Lanes.
- PM1.16.2-8 Operate the transit queue gates on the Bridgeport Road ramp connection to the Oak Street Bridge as directed by the Province to allow only busses to use the ramp.
- PM1.16.2-9 Respond immediately to prevent Highway Users from any unauthorized access to Structures.
- PM1.16.2-10 Identify and document immediately, all traffic disruption incidents, including their circumstances within a daily log book.

PM1.16.2-11 Communicate immediately the following conditions or incidents to the Regional Traffic Management Centre:

Location		Condition or Incident	
a)	All locations	Any incidents or condition affecting or having the potential to affect the flow of traffic	
b)	All locations	Damage to a Bridge, Tunnel, entrance ramp or an exit ramp	
c)	Highway 1, 91,91A, or 99	Any pedestrians or cyclists on Freeway Portions	

1.16.3 Materials and/or Procedures

Additional materials and/or procedures requirements are as follows:

- a) Provide a standard 1-ton tow truck with wheel lift device for hourly traffic patrols at all locations;
- b) Provide a standard 5-ton tow truck with wheel lift device for continuous traffic patrols at the George Massey Tunnel;
- c) Provide a flat deck tow truck with wheel lift device for continuous traffic patrols at the Port Mann Bridge;
- d) Provide a standard 1-ton tow truck with wheel lift device for continuous traffic patrols on Highway 91 (from Highway 10 to No. 6 Road and Highway 91a) and Highway 91/91A (from Queensborough Bridge to 72nd Avenue);
- e) Stationing of patrol vehicles for point duty is not required on statutory holidays;
- f) Provide a standard 1-ton tow truck with wheel lift device and a flat deck tow truck with wheel lift device for point duty at all locations except at the George Massey Tunnel;
- g) Provide a standard 5-ton tow truck with wheel lift device and a flat deck tow truck with wheel lift device for point duty at the George Massey Tunnel;
- h) Provide a heavy wrecker tow truck with wheel lift device for point duty at the Alex Fraser Bridge;
- i) Locate point duty vehicles during the counterflow operations at each end of the George Massey Tunnel;
- j) Vehicles conducting patrols at the George Massey Tunnel, and the Port Mann Bridge must remain within 5 minutes of the tunnel and its approaches;
- k) Vehicles conducting patrols at Oak Street Bridge must remain within 15 minutes of the bridge and its approaches;

- I) Provide a heavy wrecker tow truck with wheel lift device for point duty operations at the Port Mann Bridge;
- m) Vehicles conducting patrols at Port Mann Bridge must remain within 5 minutes of the bridge and its approaches;
- n) Vehicles conducting point duty at Port Mann Bridge must be located at each end of the bridge;
- Provide buffer vehicle(s) during the removal of disabled vehicles from the Travelled Lanes;
- p) Ensure patrol vehicles are equipped to communicate with the Regional Traffic Management Centre at all times; and
- q) Patrol vehicles are to be equipped with the following:
 - Front push bumper and wheel lift device;
 - Firefighting equipment;
 - Basic first aid equipment;
 - Safety flares;
 - Brooms, shovels, jumper cables and other equipment as directed by the province;
 - Flashing arrow board; and
 - 20 litres of liquid absorbing compound.

SA 6 Local Area Specification

- **1.17** Traffic Patrol Port Mann Highway 1
- 1.17.1 Outcome

To provide the safe and efficient flow of traffic on the Port Mann Highway 1 freeway.

1.17.2 Routine Maintenance Services

PM1.17.2-1 Monitor the corridor via closed circuit cameras and conduct continuous traffic patrols as follows:

Loc	ation	From	То	Time Period	No. of Vehicles
a) 1 st Avenue overpass to the Port Mann Bridge	Monday	Friday	0530 to 2130	1	
	the Port Mann Bridge	Saturday	Sunday	0700 to 2300	1
b)	Port Mann Bridge to	Monday	Friday	0530 to 2130	1
	264 th Street (Langley)	Saturday	Sunday	0700 to 2300	1

- **PM1.17.2-2** Respond immediately to provide assistance to Highway Users who are stranded on the Shoulder or roadway including, but not limited to removing vehicles, providing jump starts, fuel, water, minor repairs/service, changing flat tires, and providing transport for stranded motorists to a nearby location as required.
- PM1.17.2-3 Respond with a patrol vehicle immediately to the scene of an obstruction.
- PM1.17.2-4 Remove any vehicles involved in an incident or other obstructions immediately from the Travelled Lanes.
- PM1.17.2-5 Assist the Police and/or other emergency response agencies in traffic Control or other requested assistance.
- PM1.17.2-6 Identify and document immediately, all traffic disruption incidents, including their circumstances within a daily log book.
- PM1.17.2-7 Communicate immediately, the following conditions or incidents to the Regional Traffic Management Centre:

Location	Condition or Incident		
	Any incidents of condition affecting or having the potential to affect the flow of traffic		
a) All locations	Damage to a Bridge, entrance ramp or an exit ramp		
	Any pedestrians or cyclists on Freeway Portions		

1.17.3 Materials and/or Procedures

Additional materials and/or procedures requirements are as follows:

- a) Provide a standard 1 tonne tow truck for continuous patrols;
- b) Provide a standard ½ tonne 4x4 pickup truck for continuous patrols;
- c) Provide patrol vehicles with the following equipment:
 - Roof mounted full size arrow board;
 - Heavy duty front push bumper;
 - Jump packs for jumper cables front and rear;
 - Jumper cables;
 - Two fire extinguishers (10lb);
 - Level 1 first aid kit;
 - Two disposable blankets;
 - One case of flares;
 - One heavy duty push broom;
 - One short handle, flat shovel;
 - One 10 litre water can;
 - Two medium sized funnels;
 - A hands free cellular phone and radio equipment for two-way communication between the operators, the Regional Transportation Management Centre and maintenance contractor's communications centre;
 - Pinch (pry) bar;
 - Rechargeable flashlight with red traffic wand;
 - All weather tires;
 - Digital camera;
 - Duct and electrical tape;
 - Binoculars;
 - Plastic garbage bags;
 - Hand cleaner;
 - Paper towels;
 - Area maps;
 - Two spare bulbs for arrow boards;
 - Floor jack;
 - 4-way tire iron;
 - Basic tool kit (pliers, screw drivers, adjustable wrenches, utility knife);
 - Absorbent pads or bulk material for vehicle fluids clean up;
 - Stop/slow paddle;
 - 20 tube delineators; and
 - Portable traffic control signs.
- d) Full fuel and water cans at the start of each shift and refilled within two hours of use;
- e) Maintain vehicles in a clean and tidy condition at all times. The passenger area must be clean and available for transport of one passenger;
- f) Return damaged and disabled vehicles to service within 2 hours or replace with a similar vehicle;

- g) Perform maintenance and repair outside scheduled hours of operations; and,
- h) Provide each driver/operator with the following equipment:
 - Clean reflectorized type 2 orange coveralls;
 - Name tags and logos on coveralls;
 - Reflectorized rain gear;
 - Rubber and leather gloves;
 - Eye protection (safety glasses);
 - Regulation safety toed boots; and,
 - Regulation hard hats.
- i) Provide reports of incidents to the Province as requested.
- j) Record the following incident information:
 - Road and weather conditions;
 - Location, direction, lane, Landmark Kilometre Inventory marker;
 - Time incident occurred and time detected/verified;
 - Response time of the patrol vehicle, police authorities, emergency responders and regulatory agencies;
 - Type of accident, severity, number of vehicles involved, number of injuries;
 - Contributing factors;
 - Impact on traffic;
 - Whether traffic control devices are in place; and
 - Time incident cleared.

1.18 Traffic Management – Pacific Highway Truck Crossing

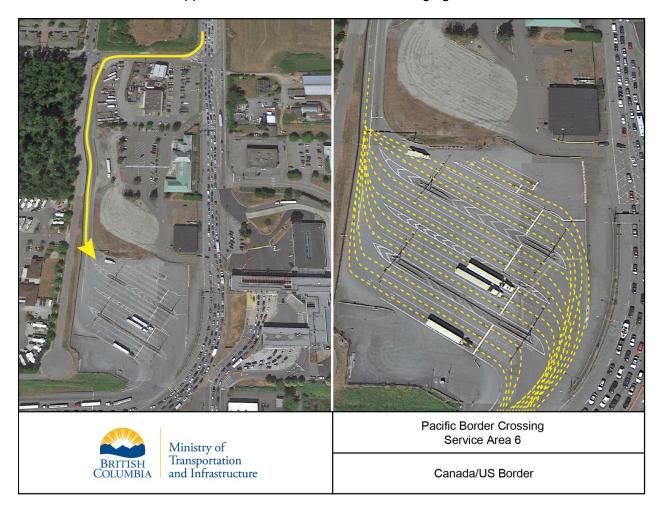
1.18.1 Outcome

To provide enhanced traffic management exceeding the performance measures in General Specification 5.03 of this Schedule 1 ("Specifications") related to commercial traffic flow on Highway 15 at the Pacific Highway Truck Crossing.

- 1.18.2 Routine Maintenance Services
 - PM1.18.2-1 Commence traffic control immediately when commercial vehicles do not follow the required automated electronic vehicle queuing instructions.
 - PM1.18.2-2 Provide one personnel to monitor the automated electronic queuing system and provide traffic control as required, from 6:00 am to 3:00 pm, Monday to Friday.
 - PM1.18.2-3 Communicate immediately, any conditions or incidents affecting or having the potential to affect the flow of traffic to the Regional Transportation Management Centre.
 - PM1.18.2-4 Identify and document immediately, all commercial vehicle noncompliance incidents, including their circumstances within a daily log book.

Notes:

- The commercial vehicle staging area is located at the Pacific Highway Truck Crossing as shown in Appendix A. Commercial vehicles are required to use the automated electronic queuing system upon entry to the commercial vehicle staging area and are assigned a designated lane to park the vehicle. Traffic control is required when commercial vehicles do not comply.
- 1.18.3 Materials and/or Procedures
 - a) Provide traffic control personnel that have successfully completed the British Columbia Construction Safety Alliance (BCCSA) traffic control training.



Appendix A – Commercial Vehicle Staging Area

- **1.19** Traffic Management and Support Port Mann Highway 1 Structures Inspections
- 1.19.1 Outcome

To provide enhanced traffic management exceeding the performance measures in the General Specifications of this Schedule 1 ("Specifications") and supporting resources related to the inspection of Structures by the Province on Port Mann Highway 1.

1.19.2 Routine Maintenance Services

PM1.19.2-1 Provide traffic management and supporting resources, as requested by the Province.

Notes:

- 1) There are 85 Bridges and 126 sign Structures that will be inspected by the Province as listed in Appendix A;
- 2) Routine inspections are performed on 80 percent of the Bridges and sign Structures annually. Detailed inspections are performed on 20 percent of the Bridges and sign Structures annually. The list of annual routine and detailed inspections making up the 80% and 20%, respectively, will vary from year to year ensuring each structure receives a detailed inspection within a 5-year period;
- 3) The Province will provide the list of annual routine and detailed structure inspections once it is created, typically in the first 3 months of the calendar year.
- 4) There will be 12 scoping inspections performed over the first 10 years of the Term and 4 scoping inspections during the 5 years of the renewal Term;
- 5) The duration of the inspections, lane closure requirements and equipment requirements will vary depending upon the Bridge / sign structure, location, type of inspection, scheduling either during the day or night and condition of the Bridge; and
- 6) The Province will provide notification 7 days in advance of scheduled inspections.
- 1.19.3 Materials and/or Procedures
 - a) Comply with the Traffic Management Manual for Work on Roadways;
 - b) Provide a motorized mobile personal lift capable of accommodating the operator and 2 additional persons; and
 - c) Provide ground mounted mobile generators and mobile night lighting units with operating personnel, as required.
- 1.19.4 Routine Maintenance Services Cap
 - \$100,000 the cost to provide traffic management and supporting resources annually.

Appendix A

Bridge Structure Number	Structure Name	Structure Type	Year Built	Latitude	Long
01614M	PORT MANN CABLE STAYED SPAN	Road Bridge	2013	49.213761	-122.813956
01614N	PORT MANN NORTH APPROACH	Road Bridge	2013	49.221536	-122.813956
01614S	PORT MANN SOUTH APPROACH	Road Bridge	2013	49.211142	-122.808333
01380A	OAK ST	Road Bridge	1957	49.201400	-123.127072
01380B	OAK ST	Road Bridge	1957	49.199680	-123.125493
01380C	OAK ST	Road Bridge	1957	49.198224	-123.124145
01380D	OAK ST	Road Bridge	1957	49.191142	-123.117500
01380N	OAK ST EXIT RAMP N	Road Bridge	1957	49.203317	-123.128738
01380S	OAK ST EXIT RAMP S	Road Bridge	1957	49.191471	-123.119876
01553A	QUEENSBOROUGH	Road Bridge	1960	49.195580	-122.946287
01553B	QUEENSBOROUGH	Road Bridge	1960	49.195526	-122.946307
01553C	QUEENSBOROUGH	Road Bridge	1960	49.198222	-122.949028
01553D	QUEENSBOROUGH	Road Bridge	1960	49.197752	-122.948159
01553E	QUEENSBOROUGH E PED RAMP	Ped O/Pass	2004	49.198389	-122.947639
01553W	QUEENSBOROUGH W PED RAMP	Ped O/Pass	2005	49.197820	-122.948839
02753M	ALEX FRASER MAIN SP	Road Bridge	1986	49.155775	-122.941121
02753N	ALEX FRASER N APPRO	Road Bridge	1986	49.163957	-122.944440
02753R	ANNACIS OFF RAMP	Road Bridge	1986	49.170397	-122.948883
02753S	ALEX FRASER S APPRO	Road Bridge	1986	49.148661	-122.938179
02763	ANNACIS CHANNEL EAST	Road Bridge	1985	49.176944	-122.957639
02763P	ANNACIS C EAST PED R	Foot Bridge	1989	49.177600	-122.957434
02913	ANNACIS CHANNEL WEST	Road Bridge	1996	49.176139	-122.961194
03233E	PITT RIVER EAST APPROACH	Road Bridge	2009	49.246967	-122.727017
03233M	PITT RIVER CABLE-STAYED	Road Bridge	2009	49.248828	-122.731422
03233W	PITT RIVER WEST APPROACH	Road Bridge	2009	49.248828	-122.731422
01627	HWY1 & LHH / CP O/P	Overpass	2010	49.229700	-122.835500
01628	CPR O/H CAPE HORN	Overhead	1960	49.232222	-122.829417
01650	LATIMER ROAD U/P	Underpass	1963	49.170194	-122.692583
01651E	176TH ST EB U/P	Underpass	2011	49.181610	-122.735060
01651W	176TH ST WB U/P	Underpass	2011	49.181510	-122.734630
01652	160TH ST U/P	Underpass	2010	49.192500	-122.777780
01653	152ND ST U/P	Underpass	2011	49.200790	-122.798020
01663	FIRST AVE O/P	Overpass	2012	49.269760	-123.028000
01664	BROADWAY O/P	Overpass	2012	49.265250	-123.025820
01665	BNSF #2 O/P	Overhead	2011	49.262590	-123.025670
01666	BOUNDARY RD O/P	Overpass	2012	49.261410	-123.023860
01667	CLYDESDALE ST U/P	Underpass	1961	49.258389	-123.019861
01669	GILMORE U/P	Underpass	1962	49.257611	-123.012194
01670	WILLINGDON AVE U/P	Underpass	2011	49.257130	-123.004370
01671	DOUGLAS ROAD U/P	Underpass	1962	49.257444	-122.982778
01672	SPROTT STREET U/P	Underpass	2013	49.250020	-122.974050
01673	KENSINGTON AVE U/P	Underpass	2011	49.244190	-122.967650
01674	BOUNDARY LOOP O/P	Overpass	2012	49.260360	-123.022990

Bridge Structure Number	Structure Name	Structure Type	Year Built	Latitude	Long
01675	GAGLARDI WAY U/P	Underpass	2013	49.243090	-122.914750
01677	BRUNETTE RIVER	Road Bridge	2012	49.246050	-122.907940
01678	BNSF #1 O/H	Overhead	2012	49.246250	-122.906630
01679	NORTH ROAD O/P	Overpass	2010	49.242230	-122.892960
01680	BRUNETTE ST I/C U/P	Underpass	1960	49.234556	-122.878778
01681	BRUNETTE ST RIVER	Road Bridge	1978	49.233877	-122.880436
01682	KING EDWARD U/P	Underpass	2011	49.232920	-122.861790
01683	CAPE HORN I/C U/P	Underpass	1961	49.228639	-122.829278
02005	ST WB OFFRAMP F/O	Flyover	2011	49.190660	-122.772690
02000	200TH STREET U/P	Underpass	2002	49.164222	-122.668500
02650	BRUNETTE BNR O/H	Overhead	1976	49.233660	-122.881039
02664	COLONY FARM O/H	Overhead	1982	49.237000	-122.820500
02004 02664E	COLONY FARM SOUTH-EAST RAMP	Overhead	1982		
02004E		Overhead	1982	@	@
0266477				@ 49.231833	(00000000000000000000000000000000000000
		Flyover	1984		-122.831083
03213E	GOLDEN EARS WAY S O/P (TCH EB)	Overpass	2009	49.176260	-122.715254
03213W	GOLDEN EARS WAY N O/P (TCH WB)	Overpass	2009	49.176720	-122.715380
03263N	156TH STREET N O/P (TCH WB)	Overpass	2008	49.195499	-122.789460
03263S	156TH STREET S O/P (TCH EB)	Overpass	2008	49.195050	-122.789572
05901	LOUGHEED HWY EB U/P	Underpass	2011	49.230660	-122.847160
05902	MHB-EB OVER CPR F/O	Flyover	2013	49.229320	-122.837520
05903	TREO WEST ACCESS ROAD	Overpass	2012	49.190960	-122.771359
05904	MHB WB OVER CPR F/O	Flyover	2013	49.229950	-122.835810
05904A	MHB WB OVER CPR CYCLIST	Ped O/Pass	2013	49.230320	-122.834310
05905	LHH-WB TO HWY 1/PMBCD EB F/O	Flyover	2012	49.232110	-122.830620
05906	PMBCD-WB TO LHH-EB MHB F/O	Flyover	2011	49.229430	-122.828510
05907	PMBCD WB TO LHH EB CPR F/O	Flyover	2011	49.233150	-122.827620
05908	MHB OVER UNITED BLVD O/P	Overpass	2013	49.227840	-122.819190
05909	PMBCD WB TO LHH WB MHB F/O	Flyover	2010	49.229170	-122.828830
05910	LHH EB OVER MHB EB F/O	Flyover	2012	49.230510	-122.846610
05911	PORT MANN TOLL GANTRY	Misc. Structures	2012	49.205460	-122.801260
05918	BOUNDARY RD RAMP F/O	Flyover	2013	49.261490	-123.023940
05919	STILL CREEK	Road Bridge	2012	49.259580	-123.003760
05920	HOV-WB TO GVH RAMP F/O	Flyover	2012	49.258060	-123.016800
05921	GVH TO HOV-EB RAMP F/O	Flyover	2011	49.257540	-123.014780
05922	GOVT ST TRANSIT RAMP F/O	Flyover	2012	49.245940	-122.900910
05926	112TH AVE PEDESTRIAN O/P	Ped O/Pass	2011	49.206020	-122.801830
05927	160 ST WB OFFRMP OVER EBONRAMP	Flyover	2011	49.190230	-122.773730
05928	BARNSTON DRIVE U/P	Underpass	2011	49.185450	-122.733980
05968	CYCLIST O/P LHH AT CPR	Overpass	2012	49.229340	-122.837910
07781E	202 ST O/P (TCH EB)	Overpass	2012	49.161640	-122.659780
07781L	202 ST O/P (TCH WB)	Overpass	2012	49.161990	-122.659590

Sign Structure Number	Sign Structure Name	Road Name	Lat	Long
02950B	Custom Sign Bridge - Guide Sign GSCW 1954 - Segment C1 - Highway 1 - Sta. 195+404.000	@	@	@
02950E	Alignment - L195 Sign Bridge - Guide Sign CMS-03	Rte 1 WB - TransCanada	49.275964	-123.031240
03230	Custom Cantilever - Guide Sign GSCEL 1227	@	@	@
03251	EB Custom Cantilever - Guide Sign GSCEL 1231	@	@	@
04701	EB Custom Cantilever - Guide Sign GSCEL 1236	@	49.206111	-122.803333
04702	HWY 1 EB at 156 St Interchange - Custom Cantilever - Guide Sign GSCE 2002	@	49.203333	-122.813330
05923G	EB At 156 St Interchange - Standard Cantilever - Guide Sign GSCE 2006 - Sta. 200+683.000	Rte 1 WB - TransCanada	49.157500	-122.643200
05931G	EB at 156 St Interchange Sign Bridge - Guide Sign GSBE 2008	Rte 1 WB - TransCanada	49.156150	-122.638120
05933G	EB Tie to E2 - Custom Cantilever - Guide Sign GSCE 1263 - Sta. 126+353.000	@	@	@
05959G	WB at 156 St Interchange - Sign Bridge - Guide Sign GSBW 3003	Rte 1 EB - TransCanada	49.164310	-122.669150
05960G	WB at 156 St Interchange - Custom Cantilever - Guide Sign GSCW 3009	@	49.231970	-122.858300
05966G	Westbound - Custom Cantilever - Guide Sign GSCWL 1248 - Sta. 124+874.000	Rte 1 EB - TransCanada	49.208290	-122.804950
05967G	Hwy 1 EB Tie to E2 - Sign Bridge - Guide Sign GSBW 5264 - Sta.526+447.000	Rte 1 EB - TransCanada	49.206460	-122.802950
05969G	152 Street - Sign Bridge - Guide Sign GSBN 26501	Rte 1 EB - TransCanada	49.202960	-122.799440
05970G	152 St NB on Ramp to Hwy 1 WB and CD WB Sign Bridge - Guide Sign GSBN 26406	Rte 1 EB - TransCanada	49.199300	-122.795760
05971G	104th Avenue South - Custom Cantilever - Guide Sign GSCE 61322	Rte 1 EB - TransCanada	49.197790	-122.794430
05973G	160 Street - Standard Cantilever - Guide Sign GSCS 60999 - Sta. 6099+964.000	Rte 1 EB - TransCanada	49.195220	-122.790240
05974G	Westbound - Standard Cantilever - Guide Sign GSCWL 61259 - Sta. 6125+900	Rte 1 EB - TransCanada	49.194580	-122.787560
05975G	WB Standard Cantilever - Guide Sign GSCE 61262	Rte 1 EB - TransCanada	49.188300	-122.763250
05977G	Eastbound - Custom Cantilever - Guide Sign CMS-01 - Sta. 102+220.000	156th Street IC - Rte 1 EB Off Ramp	49.197060	-122.792940
05978G	Eastbound - Custom Cantilever - Guide Sign GSCE 1025 - Sta. 102+500.000	Rte 1 WB - TransCanada	49.194510	-122.785630
05979G	Eastbound - Sign Bridge - Guide Sign GSBE 1029 - STA. 102 925.000	Rte 1 WB - TransCanada	49.193320	-122.782170
05982G	Eastbound - Sign Bridge - Guide Sign GSBW 5003 - Sta. 500 390.000	Rte 1 WB - TransCanada	49.188070	-122.761450
05983G	WB Sign Bridge - Guide Sign GSBW 5039 - Sta 503+980	152nd Street IC - Rte 1 WB On Ramp	49.198250	-122.799660
05984G	05984G WB Sign Bridge - Guide Sign GSBW 5051 - Sta 1 504+926.000 I		49.200650	-122.798400

Sign Structure Number	Sign Structure Name	Road Name	Lat	Long
		On Ramp		
05990G	WB Custom Cantilever - Guide Sign GSCWL 5052 Sta. 505+295	160th Street IC - Rte 1 EB Off Ramp	49.190980	-122.779380
05992G	WB - Custom Cantilever - Guide Sign GSCWL 5057 Sta 505+927	160th Street IC - 160th Street	49.191810	-122.778200
05996G	EB On-ramp Custom Cantilever - Guide Sign GSC 13501 - Sta 1350+180	160th Street IC - Rte 1 WB Off Ramp	49.191110	-122.768240
05997G	Grandview Hwy EB On-ramp Sign Bridge - Guide Sign GSBE 13504 - Sta 1350+360	160th Street IC - Rte 1 WB Off Ramp	49.189560	-122.765260
06761	Willingdon Avenue Standard Cantilever - Guide Sign GSCN 15006 - Sta 1500+613	@	@	@
07339	EB - Custom Cantilever - Guide Sign GSCEL 1325 - STA 132+599.000	@	@	@
07341	176 Street Custom CMS - CMS Sign CMS-08 - North of 92 Ave - East Side	@	@	@
08308G	Highway 1 Westbound Custom Cantilever Guide Sign GSCW 5059 Sta 505+700.000	Rte 1 EB - TransCanada	49.268870	-123.027590
08309G	Custom Cantilever - Guide Sign GSCE HWY 7-1 Segment C1 - Lougheed Highway - 40m West of Construction Limit	Rte 1 EB - TransCanada	49.266470	-123.026560
08310G	Sign Bridge - Guide Sign GSBE 1957 - Sta. 195 760	Boundary Road IC - Rte 1 EB Off Ramp	49.262740	-123.025440
08315G	TCH EB Off-Ramp to Leeder Road - Standard Cantilever - Guide Sign GSCW 54203 - Sta.5420+391	1st Avenue IC - Rte 1 WB Off Ramp	49.267160	-123.026500
08319G	19G United Blvd Standard Cantilever - Guide Sign GSCE 57013 - Sta. 5701+318		49.257770	-123.014220
08321G	Eastbound - Sign Bridge - Guide Sign GSBE 1119 - Sta. 111+940.000	Rte 1 WB - TransCanada	49.257630	-123.001240
08322G	Custom Cantilever - Guide Sign CMS - 02 - Sta. 112+840.000	Rte 1 EB - TransCanada	49.257860	-122.993920
08323G	Eastbound - Custom Cantilever - Guide Sign GSCE 1140 - Sta. 114+000.000	Rte 1 EB - TransCanada	49.257850	-122.987880
08324G	176 Street - Custom Cantilever - Guide Sign GSCN 62043 - STA 6204+372.247	@	49.258030	-123.022180
08325G	Custom Cantilever - Guide Sign GSCS 62043 - STA 6204+270.071	Grandview Highway IC - Rte 1 EB HOV On Ramp	49.257690	-123.019810
08326G	176th Street Custom Cantilever - Guide Sign GSCW 62102 Sta 6210+240	Willingdon Avenue IC - Willingdon Avenue NB	49.257300	-123.004070

Sign				
Structure Number	Sign Structure Name	Road Name	Lat	Long
08332G	176 Street Custom Cantilever - Guide Sign GSCN 62046 Sta 6204+630.000	Rte 1 EB - TransCanada	49.167920	-122.683430
08334G	176 Street Custom Cantilever - Guide Sign GSCN 62048 Sta 6204+798.000	Rte 15 NB	49.174850	-122.734450
08350G	Custom Cantilever - Guide Sign GSCS 25055 - Segment C1 - King Edward Street - Sta. 2505+541.000	Rte 1 WB - TransCanada	49.258070	-122.990620
08352G	Custom Cantilever GSCN 25056 - King Edward Street Sta. 2505+655	@	49.233240	-122.855560
08359G	Custom Cantilever - Guide Sign GSCS 25054 - Segment C1 - King Edward Street - Sta. 2505+488.000	Rte 7B WB	49.232040	-122.819000
08360G	Custom Cantilever - Guide Sign GSCE HWY 7-2 - Lougheed Highway - 37M East of Constuction Limit	Rte 7B WB	49.234120	-122.820190
08371G	EB Custom Cantilever - Guide Sign GSCE 1222	Rte 1 EB - TransCanada	49.225760	-122.817320
08377G	EB Sign Bridge - Guide Sign GSBE 1230	Rte 1 EB - TransCanada	49.237200	-122.884310
08393G	HWY 1 EB at 156 St Interchange - Standard Cantilever - Guide Sign SACE 2005	@	49.234570	-122.862950
08408G	WB Custom Cantilever - Guide Sign GSCW 1224	Rte 1 EB - TransCanada	49.163400	-122.665910
08409G	Westbound - Custom Cantilever - Guide Sign GSCWL 1254 - Sta. 125+419.000	200th Street IC - Rte 1 WB Off Ramp	49.162660	-122.662870
08441G	Westbound - Custom Cantilever - Guide Sign GSCWL 1258 - Sta. 125+796.000	@	49.231400	-122.853490
08449	152 Street - Custom Cantilever - Guide Sign GSCN 26505	@	49.188333	-122.767500
08450	See Note - Standard Cantilever - GSCE Ferguson	@	49.182500	-122.736388
08459G	See Note Standard Canitlever - Gide Sign GSCW Guidford	@	49.227960	-122.830670
08460G	WB Custom Cantilever - Guide Sign GSCE 61308	@	49.226110	-122.821270
08496G	104 TH Avenue South - Standard Cantilever - Guide Sign GSCE 61350	Rte 1 EB - TransCanada	49.239570	-122.920170
08497G	104th Avenue South - Custom Cantilever - Guide Sign GSCW 61321	Rte 1 EB - TransCanada	49.244730	-122.910680
08498	160 Street (North) Custom Cantilever - Guide Sign GSCN 61151		49.228470	-122.826230
08499G	160 Street - Standard Cantilever - Guide Sign GSCN 60997	Government Street IC - Rte 1 EB On Ramp	49.243840	-122.896160
08770	Westbound - Standard Cantilever - Guide Sign GSCWL 61255 - Sta. 6125+545.000	@	@	@
08773	Eastbound - Standard Cantilever - Guide Sign GSBE 1034 - Sta. 103+420.000	@	@	@
08776	EB Guide Signs GSBE 1045 and GSCWL 1045 - Sta 104+515.000	@	49.201944	-122.799160
08777	Eastbound - Custom Cantilever - Guide Sign GSCE 1056 - Sta. 105+651.000	@	49.202777	-122.797222
09002	WB Custom Cantilevers- Guide Sign GSCW 5024A and GSCW 5024B - Sta 502 + 425.000	@	49.227750	-122.822350

Sign Structure Number	Sign Structure Name	Road Name	Lat	Long
09003	Westbound - Standard Cantilever - Guide Sign GSCW 5030 STA. 503+047.000	@	49.229460	-122.829920
09004	Eastbound - Standard Cantilever - Guide Sign GSCW 5036 - Sta. 503+630.000	@	49.230510	-122.829270
09005	Willingdon Avenue Standard Cantilever - Guide Sign GSCS 15007 - Sta 1500+710	@	49.233520	-122.827170
09006	Willingdon Avenue Standard Cantilever - Guide Sign CSCS 15008 - Sta 1500+910.000	@	49.230380	-122.841500
09007	Willingdon Avenue Standard Cantilever - Guide Sign GSCN 15003 - Sta 1500+389	@	49.230880	-122.844780
09008	Grandview Hwy Clydesdale Road On-Ramp - Standard Cantilever - Guide Sign GSCWL 13702 - Sta. 1370+224.000	@	49.230710	-122.832950
09009	EB - Custom Cantilever - Guide Sign GSCEL 1332 - STA 133 205.000	@	49.234500	-122.825290
09010	176th - North of Barnston Dr Underpass - Custom Cantilever - Guide Sign GSCS 63027 - STA 6302 714.000	@	49.229320	-122.830370
09011	GEB Connector - EB Custom Cantilever - Guide Sign GSCE 63405 - Sta 6340+515	@	49.225460	-122.810740
09012	GEB Connector - WB Custom Cantilever - Guide Sign GSCW 63405 - Sta 6340+510	@	49.226240	-122.815520
09013	GEB Connector - WB Custom Cantilever - Guide Sign GSCW 63407 - Sta 6340+720	Rte 1 EB - TransCanada	49.257650	-122.987050
09014	Willingdon Avenue Standard Cantilever - Guide Sign GSCN 15001 - Sta 1500+166	Rte 1 EB - TransCanada	49.253200	-122.976340
09015	Custom Cantilever - Guide Sign GSCW 55205 - Sta. 5520 507	Rte 1 EB - TransCanada	49.245910	-122.969880
09016	Standard Cantilever - Guide Sign GSCE 1961 - Sta. 196 180	Rte 1 EB - TransCanada	49.241250	-122.961210
09017	Custom Cantilever - Guide Sign GSCE 1965 - Sta. 196 530	Rte 1 WB - TransCanada	49.254830	-122.977430
09018	Sign Bridge - Guide Sign GSBE 1968 - Sta. 196 869	Rte 1 WB - TransCanada	49.249680	-122.972860
09019	Sign Bridge - Guide Sign GSBE 1972 - Sta. 197+279	Rte 1 WB - TransCanada	49.241850	-122.963230
09020	Sign Bridge - Guide Sign GSBE 1981 - Sta. 198 180	Rte 1 EB - TransCanada	49.236450	-122.937100
09021	Custom Cantilever - Guide Sign CMS-06 STA 195+670	Rte 1 EB - TransCanada	49.233030	-122.869750
09022	Custom Cantilever - Guide Sign - GSCW 1959 - STA 195+910	Rte 1 WB - TransCanada	49.238930	-122.921760
09023	Leeder Road- Standard Cantilever - Guide Sign GSCS 59999 Stas 5999+971	Rte 1 WB - TransCanada	49.244420	-122.911780
09024	Custom Cantilever - Guide Sign GSBE 52000 See Notes	Rte 1 WB - TransCanada	49.246170	-122.902120
09025	Lougheed EB To HWY 1 WB - Sign Bridge - Guide Sign GSBE 52100 STA 5210+090	Rte 1 WB - TransCanada	49.243910	-122.894880
09026	Standard Cantilever - Guide Sign GSCE 52015 Sta 5201+582	Rte 1 WB - TransCanada	49.243180	-122.894200
09027	Lougheed EB OFF-Ramp to United Blvd Standard Cantilever - Guide Sign GSCE 52300 - Sta. 5230+025	Rte 1 EB - TransCanada	49.238760	-122.886850

Sign Structure Number	Sign Structure Name	Road Name	Lat	Long
09028	Lougheed EB To HWY 1 WB - Sign Bridge - Guide Sign GSBE 52103 STA 5210+392	Rte 1 WB - TransCanada	49.237840	-122.884830
09029	Standard Cantilever - Guide Sign GSCE 54002 - Sta 5400+276	Rte 1 WB - TransCanada	49.232890	-122.866420
09030	TCH EB Connection to Lougheed EB - Custom Sign Bridge - Guide Sign GSBE 54007 - Sta 5400 767	Stormont Avenue IC - Gaglardi Way SB	49.244760	-122.915560
09031	TCH EB to Mary Hill Bypass EB Standard Cantilever - Guide Sign GSCE 54013 Sta 5401+340	@	@	@
09032	TCH WB Connection to Lougheed WB Sign Bridge - Guide Sign GSBW 55002 Sta 5500+348	Rte 1 EB - TransCanada	49.187250	-122.759050
09033	TCH WB Connection to Lougheed WB - Sign Bridge - Guide Sign GSBW 55001 - Sta.5500+052	Rte 1 EB - TransCanada	49.185360	-122.751340
09034	TCH WB Connection To Lougheed WB - Standard Cantilever - Guide Sign CSCWL 55004 - Sta. 5500 473	Rte 1 EB - TransCanada	49.183170	-122.741390
09035	TCH WB Connection to Lougheed WB - Custom Cantilever - Guide Sign GSCWL 55006 - Sta.5500+640	Rte 1 EB - TransCanada	49.171660	-122.697520
09036	TCH WB Dir Ramp to Lougheed EB Sign Bridge - Guide Sign GSBW 55106 Sta 5510+690	Rte 1 EB - TransCanada	49.170360	-122.693600
09037	TCH WB Dir Ramp to Lougheed EB Sign Bridge - Guide Sign GSBW 55110 Sta 5511+050	Rte 1 EB - TransCanada	49.168720	-122.687360
09038	Lougheed Hwy WB - sign Bridge - Guide Sign GSBW 51017 - Sta. 5101 768.265	Rte 1 EB - TransCanada	49.166940	-122.679580
09039	Lougheed HWY WB - Sign Bridge - Guide Sign GSBW 51020 - Sta. 5102+013	Rte 1 WB - TransCanada	49.185480	-122.750160
09040	Lougheed HWY WB - Custom Cantilever - Guide Sign GSCW 51025 - Sta. 5102+542	Rte 1 WB - TransCanada	49.184640	-122.745800
09041	Lougheed WB Custom Cantilever - Guide Sign GSCWL 51011 - Sta. 5110+155	Rte 1 WB - TransCanada	49.183450	-122.741060
09042	Lougheed WB to Col Distributor EB - Standard Cantilever - Guide Sign GSCEL 51097 - Sta. 5109 761	Rte 1 WB - TransCanada	49.180040	-122.728810
09043	Lougheed WB to Col Distributor EB - Custom Cantilever - Guide Sign GSCE 51101 - Sta. 5110+155	Rte 1 WB - TransCanada	49.177630	-122.718830
09044	Lougheed WB to Col-Distributor EB Sign Bridge - Guide Sign GSBE 51105 Sta 5110+575	Rte 1 WB - TransCanada	49.175610	-122.711190
09045	Mary Hill Bypass - Sign Bridge - Guide Sign GSBW 53008 - Sta. 5300+806	Rte 1 WB - TransCanada	49.172740	-122.700320
09046	Mary Hill Bypass - Sign Bridge - Guide Sign GSBW 53004 - Sta. 5300+425	Rte 1 WB - TransCanada	49.155249	-122.634196
09047	Mary Hill Bypass - Standard Cantilever - Guide Sign GSCW 53001 - Sta. 5300+145	@	@	@
09048	Mary Hill Bypass WB Con To Lougheed WB - standard Cantilever - Guide Sign GSBW 53202 - Sta. 5320+220	152nd Street IC - Rte 1 EB2 Off Ramp	49.203520	-122.800280
09049	Mary Hill Bypass WB to United Blvd - Custom Cantilever - Guide Sign GSCW 53103 STA 5310+200	Grandview Highway IC - Rte 1 EB HOV On Ramp	49.257650	-123.007180
09050	EB Custom Cantilever - Guide Sign GSCE 1060 - Sta 106+001	Rte 1 WB - TransCanada	49.261890	-123.024370

Sign Structure Number	Sign Structure Name	Road Name	Lat	Long
09052	EB Sign Bridge - Guide Sign GSBE 1070 - Sta 107+000.082	@	49.229810	-122.838470
09053	EB Sign Bridge - Guide Sign GSBE 1079 - Sta 107+937.595	@	49.229180	-122.832920
09054	EB Custom Cantilever - Guide Sign GSCE 1087 - Sta 108 780	@	49.227260	-122.820950
09055	EB Custom Cantilever - Guide Sign GSCW 5065 - STA 506+322.000	@	49.231770	-122.854640
09056	EB Custom Cantilever - Guide Sign GSCW 5068 - Sta 506+810.000	@	49.231440	-122.851400
09057	WB Custom Cantilever - Guide Sign CMS-07 - Sta 507 472	@	@	@
09058	WB Sign Bridge - Guide Sign GSBW 5086 - Sta 508+621.588	@	49.231750	-122.848730
09059	WB Custom Cantilever - Guide Sign GSCW 5093 - Sta 509+324	@	49.230420	-122.845230
09060	WB Custom Cantilever - Guide Sign GSCW 5099 - Sta 509+924	@	49.230000	-122.843160
09983	Sprott Street on Ramp To HWY 1 WB - Standard Cantilever - Guide Sign GSCE 18103 - STA 1810+330.000	@	@	@

- 1.20 Vehicle Inspection Station Maintenance
- 1.20.1 Outcome

To facilitate the safe and efficient operation of Vehicle Inspection Stations.

- **1.20.2** Routine Maintenance Services
 - PM1.19.2-1 Provide Services at the Vehicle Inspection Station areas in accordance with the response identified in the Vehicle Inspection Station plan in Appendix A.

Specific Requirements:

a) Remove Winter Accumulations from all Travelled Lanes and vehicle accessible portions of the Vehicle Inspection Station in accordance with PM3.01.2-1 (a) of the General Specifications of this Schedule 1 "Specifications").

Notes:

- 1) The Contractor is not responsible for the buildings or for the management and maintenance of the weigh scale, electrical components and the water and septic systems.
- **1.20.3** Quantified Maintenance Services

PM1.19.3-1 Provide Services at the Vehicle Inspection Station areas in accordance with the response identified in the Inspection Station plan in Appendix B.

- Notes:
- The Contractor is not responsible for the buildings or for the management and 1) maintenance of the weigh scale, electrical components and the water and septic systems.
- 1.20.4 Materials and/or Procedures

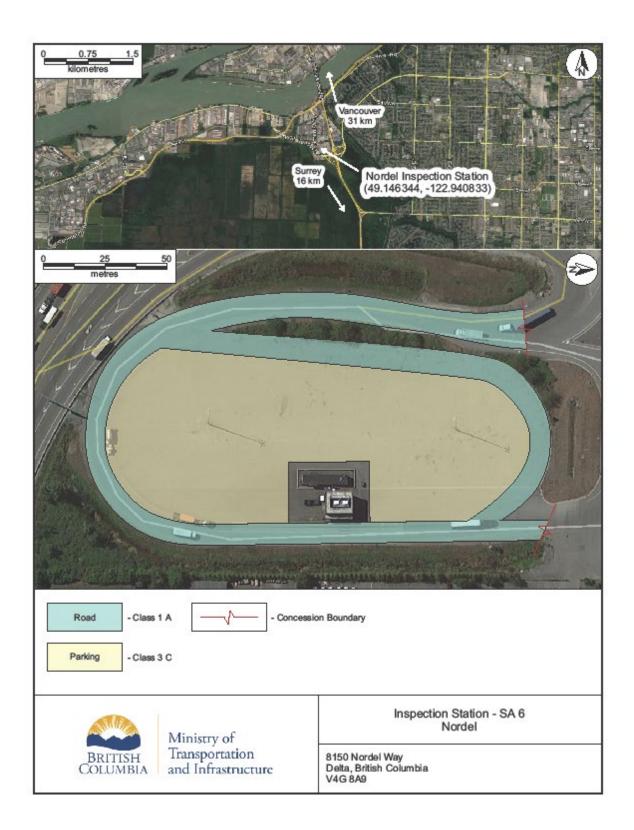
Refer to Subsection 1.6 of this Schedule 1 ("Specifications").

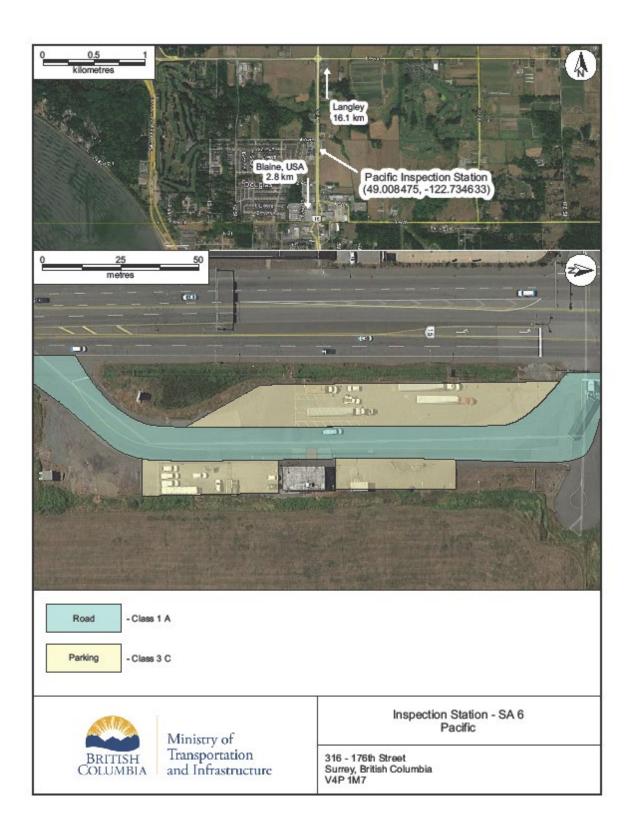
1.20.5 Warranty

Refer to Section 3 of this Schedule 1 ("Specifications").



Appendix B Vehicle Inspection Station Plan





1.21 Enhanced Winter Maintenance on Key Commuter and Goods Movement Routes – Highways 1, 91A, 91, and 99

1.21.1 Outcome

To provide enhanced highway snow removal and snow and ice bonding prevention and control exceeding the performance measures in General Specifications 3.01 and 3.02 of this Schedule 1 ("Specifications") related to the response to Winter Accumulations and Compact on Highway 1 between First Avenue and 200th Street, Highway 1 between 200th Street and 264th Street, Highway 91A between Highway 91 and Marine Way, Highway 91 between Highway 99 in Richmond and Highway 99 in Delta, and Highway 99 between Sea Island Highway and Highway 91 in Delta.

1.21.2 Routine Maintenance Services

PM1.21.2-1

1 Remove Winter Accumulations from Travelled Lanes as follows:

		Maximum Winter Accumulation Response						
Performance Criteria		Highway 1 First Avenue to 200th Street	Highway 1 200th Street to 264th Street	Highway 91A Highway 91 to Marine Way	Highway 91 Highway 99 to Highway 99	Highway 99 Sea Island Highway to Highway 91		
a)	Four lanes each direction	4 cm	4 cm	4 cm	4 cm	4 cm		
b)	Additional lanes	6 cm	6 cm	6 cm	6 cm	6 cm		
c)	All other lanes including entrance ramps, exit ramps and any other vehicle accessible portions within the Right- of-Way	6 cm	8 cm	6 cm	6 cm	6 cm		

- PM1.21.2-2 Remove Winter Accumulations and Compact from all Travelled Lanes to bare surface when the pavement temperature is -9°C or warmer, within 12 hours after the end of the Weather Event.
- PM1.21.2-3 Remove Winter Accumulations from paved shoulders of Travelled Lanes within 24 hours after the end of the Weather Event.
- PM1.21.2-4 Remove Winter Accumulations and restore traction of pedestrian accessed areas, including bridge sidewalks and sidewalk approaches to the Alex Fraser Bridge, Port Mann Bridge, Queensborough Bridge (connection to 22nd Street SkyTrain Station), and Brunette Overpass (connection to Braid Street SkyTrain Station), within 12 hours after the end of the Weather Event.
- PM1.21.2-5 Deploy resources in advance of a forecasted or anticipated Weather Event to pre-treat sidewalks and sidewalk approaches to the Alex Fraser Bridge, Port Mann Bridge, Queensborough Bridge (connection to 22nd

Street SkyTrain Station), and Brunette Overpass (connection to Braid Street SkyTrain Station) with Anti-icing materials, as appropriate for the location, to minimize the development of Slippery conditions and prevent snow or ice from bonding.

Notes:

- 1) The sections of Highway for enhanced winter maintenance in Service Area 6 are shown in Appendix A and includes the Alex Fraser Bridge, Port Mann Bridge, Queensborough Bridge (connection to 22nd Street SkyTrain Station), and Brunette Overpass (connection to Braid Street SkyTrain Station).
- 1.21.3 Materials and/or Procedures
 - d) Refer to Subsection 1.6 of this Schedule 1 ("Specifications").
 - e) Deploy industry practices for echelon plowing to remove Winter Accumulations and conduct ice bonding prevention and control from multiple lanes as conditions require, subject to PM1.21.2-1, in a left to right formation depositing the Winter Accumulations on the outside paved shoulders of Travelled Lanes.
 - f) The order of priority for the removal of Winter Accumulations from Travelled Lanes and conducting ice bonding prevention and control is (1) the furthest lane from the outside Shoulder irrespective of the lane designation, (2) additional lanes and (3) all other lanes including entrance ramps, exit ramps and any other vehicle accessible portions within the Right-of-Way.
 - g) Travelled Lanes are to be maintained during echelon plowing without impeding access or depositing Winter Accumulations onto entrance and exit ramps.
 - h) Remove Winter Accumulations from adjacent entrance ramps and exit ramps immediately following echelon plowing.

Appendix A

