

**PROJECT NO. 04830-0103**  
**GATEWAY PROGRAM**  
**SOUTH FRASER PERIMETER ROAD**  
**80<sup>th</sup> STREET TO HIGHWAY 91**  
**PRELOAD AND DRAINAGE CONSTRUCTION**

**ADDENDUM NO. 2**

**NOTICE OF EXTENSION**

1. TENDER OPENING/CLOSING DATE EXTENDED TO JANUARY 30, 2009.  
TIME AND PLACE REMAIN UNCHANGED.

**2. SCHEDULE 3 – SCHEDULE OF SPECIAL PROVISIONS AND APPENDICES**

**1.05 Insurance**

**Remove Paragraph 1 and replace with**

The Contractor shall comply with the insurance requirements as described in the Insurance Specifications – Major Works Contracts – INS-152, Part 1.

**1.19 Traffic Management**

**Remove entire section and replace with the following:**

1.19 Traffic Management

Traffic Management will comply with SS 194 except as specified below.

The Ministry has assessed this Project to be a Category 1 Project in accordance with Section 4 of the Traffic Management Guidelines for Work on Roadways, available on the Ministry of Transportation website at:

[www.th.gov.bc.ca/publications/eng\\_publications/eng\\_pubs.htm#tcontrol](http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm#tcontrol)

The following traffic management sub-plans are required in accordance with the Guidelines for the Contractor's Traffic Management Plan:

- Traffic Control Plan
- Public Information Plan

- Incident Management Plan
- Implementation Plan

The Contractor shall submit the detailed Traffic Management Sub-plans to the Ministry Representative for review and acceptance in accordance with SS 194.12.

The Traffic Management Plan shall be developed and implemented in accordance with the following in descending order of precedence:

- the criteria contained in SP 1.19;
- the applicable Ministry Circulars and Technical Bulletins;
- Traffic Management Guidelines for Work on Roadways;
- Traffic Control Manual;
- SS 194;
- Electrical and Traffic Engineering Manual;
- BC Supplement to TAC;
- TAC Geometric Design Guide;
- TAC Bikeway Traffic Control Guidelines; and
- the applicable standards of the relevant Municipality;

**a) Traffic Management Plan Submission**

The Contractor's proposed initial Traffic Management Plan shall be submitted to the Ministry Representative, twenty-one (21) days prior to commencement of the Work. This shall outline the approach to traffic management the Contractor will be following and recognition of the risks identified by the Contractor, along with a discussion of how these will be addressed, the sub plans that will be used, and the name and experience of the qualified Traffic Manager and Traffic Engineer for the Works. Supporting data, files, drawings, calculations and analysis shall be submitted with the Traffic Management Plan.

This Traffic Management Plan shall be updated by the Contractor as the Project progresses.

For each stage of the Work that affects traffic, the Contractor shall prepare a customized Traffic Control Plan that addresses stage-specific activities and requirements. For major staging events, and where deemed necessary by the Ministry Representative, the Contractor shall prepare stage-specific Public Information Plans and Incident Management Plans. All of the above are to be prepared and submitted in accordance with the Traffic Management Guidelines for Work on Roadways unless specified otherwise herein.

**b) Contractor's Traffic Management Personnel**

The Contractor shall designate a qualified Traffic Manager for the Works in accordance with the Traffic Management Guidelines for Work on

Roadways. This individual shall be responsible for the following, in addition to other duties and responsibilities as outlined in Section 2 of the Guidelines:

- preparing and implementing the Contractor's Traffic Management Plan and relevant sub-plans;
- reviewing, evaluating and approving the details of the Traffic Control Plan (including traffic control layouts), and where necessary ensuring that these are signed and sealed by a qualified Traffic Engineer;
- monitoring the effectiveness and safety of traffic control during the Works, and keeping daily traffic control logs and incident management reports;
- monitoring traffic queue lengths and delays during active traffic control and implementing measures to reduce these when required by the Ministry Representative;
- making adjustments to the Traffic Control Plan as necessary to ensure safety for traffic and workers, and to ensure minimal disruption or delay to the traveling public at all times;
- directing the Contractor's Public Information Plan;
- directing the Contractor's Incident Management Plan;
- meeting the Ministry Representative regularly to review traffic management.

The Traffic Manager or designated alternate shall be on site during any active traffic control operations and shall have full authority over all traffic control personnel and procedures. The Contractor shall not designate the Site Superintendent as the Traffic Manager.

The Contractor shall also designate a Traffic Control Supervisor in accordance with Section 2 of the Traffic Management Guidelines for Work on Roadways.

The designated Traffic Manager (TM) may be the same individual that is designated as the Traffic Control Supervisor (TCS), or may be a separate individual qualified for the different responsibilities of this function. This individual or one of these individuals shall be solely dedicated to oversee the control of operations, personnel and procedures, and shall not perform the duties of Traffic Control Personnel or other adjunct roles. The TM/TCS shall assign responsibilities as described in Section 2 of Traffic Management Guidelines for Work on Roadways, except as otherwise modified in these Special Provisions.

The qualifications and experience of the Traffic Manager and Traffic Control Supervisor shall be provided to the Ministry Representative for confirmation of their suitability for the Project with or prior to the draft Traffic Management Plan submission.

The Contractor shall retain a qualified Traffic Engineer, in accordance with the Traffic Management Guidelines for Work on Roadways, who is

responsible for designing, sealing and approving the Traffic Control Plan, including all drawings and layouts.

**c) Traffic Control Schedule**

The Contractor shall prepare a weekly traffic control schedule that documents anticipated traffic control activities during the upcoming week. The schedule shall provide brief descriptions of the traffic control activity (e.g. lane closure, lane shift, detour), its location, approximate implementation date and duration. The schedule shall be provided to the Ministry Representative on a weekly basis.

**d) Provision of Services**

The Contractor shall be responsible for all traffic control, including the provision of necessary personnel and equipment. All traffic control personnel shall be qualified in accordance with WCB regulations.

The Contractor is responsible for obtaining all permits that may be required for the Works.

The Contractor is also responsible for obtaining all required road closure orders from the Corporation of Delta for roads to be permanently closed.

**e) Documentation**

The Contractor shall document traffic control measures and activities in accordance with Clause 1.5.2 of the Traffic Control Manual for Work on Roadways (except that photo logging is not required). This shall include completion of the following records:

- Traffic Manager's Daily Activity Report;
- Incident Management Report;
- Traffic Managers Daily Report of Traffic Control;
- Record of Traffic Control Devices and Equipment.

**f) Location and Storage of Materials and Equipment**

Unless protected by barrier and/or attenuators, materials and equipment shall not be stored within three (3) metres of the traveled portion of any roadway.

**g) Traffic Control Plan**

The following Traffic Control Manual sections are modified as shown below:

<i>Further to Section 1.2.3: Responsibility</i>	<i>The Contractor is assigned such responsibility for, and shall at all times make provision for, traffic to pass throughout the Project Site in accordance with this Part, to ensure the convenience and safety of the public, vehicular, cycling, pedestrian and equestrian traffic, and the workers on the Project Site, and the protection of the Project Work.</i>
---	---

<i>Further to Section 1.4: Traffic Control (Work) Zones</i>	<i>Any one or more of the advance warning areas, transition areas, buffer spaces, work areas and termination areas of the traffic control zone may be outside the Project Site, but this shall in no way diminish the Contractor's responsibility to meet the requirements of the Traffic Control Manual.</i>
<i>Further to Section 1.5: Installation, Maintenance and Inspection of Traffic Control</i>	<i>Construction signs, specific to an operation, shall be either removed or effectively covered so that their message is obscured whenever such operation is not in progress.</i>

---

**i) Acceptance of Traffic Control Plans**

The Contractor may not begin Works or disrupt traffic in any way until the Contractor's Traffic Control Plan has been reviewed and accepted by the Ministry. The Ministry will not be liable to the Contractor for the Ministry's decision not to accept a Traffic Control Plan, and this cannot be the basis of a claim by the Contractor.

**ii) Coordination with Other Contractors**

The Contractor shall be responsible for coordinating traffic control with work by others in the Project area, including other agencies' contractors.

The cost for coordination with other contractors shall be considered already included in the Lump Sum price for Traffic Management and no additional payment will be made to the Contractor.

**iii) Sight Visibility**

The Contractor is solely responsible for ensuring that adequate sight visibility according to the Transportation Association of Canada's Geometric Design Guidelines is maintained at all intersections at all times.

**iv) Maintenance of Accesses**

Access to private properties shall be maintained at all times. Alternate access to private properties shall be constructed prior to closing the existing accesses.

**v) Accommodation of Pedestrians, Cyclists and Equestrians**

The Contractor shall ensure that passage at each existing facility and crossing point within the Project Site currently used by pedestrians, cyclists and equestrians is maintained in a safe and efficient manner throughout construction. At a minimum, facilities are to match existing.

**vi) Accommodation of Transit**

The Contractor shall ensure passage along each existing transit route within the Project Site is maintained in a safe and efficient manner

throughout construction. The Contractor shall consult with TransLink and Coast Mountain Bus Company with respect to any construction activities affecting transit operations, facilities and routing. The Contractor shall ensure that delays along transit routes are minimized and have been coordinated with TransLink and Coast Mountain Bus Company to prevent adverse impacts on transit operating schedules. The Contractor shall arrange with TransLink, Coast Mountain Bus Company and the Municipalities for the relocation of bus stops and associated facilities.

**vii) Construction Truck Traffic**

The Contractor shall use Municipal and Ministry designated truck routes wherever possible and limit use of Municipalities' streets by construction related vehicles as far as is practically possible.

Use of other Municipal streets is prohibited, unless the necessary permits are obtained from the Corporation of Delta by the Contractor and are subject to approval by the Ministry Representative. The Contractor shall be responsible for the cost of all permits/approvals associated with traffic management.

The Contractor shall design, construct and maintain construction access routes as required to perform the Work and comply with the above restrictions. Proposed construction access route plans shall be submitted to the Ministry Representative for review fourteen (14) days prior to the commencement of work. New access roads that are constructed as part of the Project shall be gated to prevent unauthorized access. During working hours, flag persons shall be stationed at these locations to control traffic.

If access to the site requires crossing over the BNSF rail right of way, other than the three access provided by the Ministry the Contractor shall be responsible for constructing, maintaining and removing the access in accordance with the Railway's requirements (see also SP1.22).

The Contractor shall be responsible for obtaining all environmental approvals and permits for access routes in accordance with SP1.21

If construction vehicles are to travel over existing underground utilities, the Contractor shall protect the existing pipes or other facilities to ensure no damage occurs and also ensure that service is maintained. If damage is caused to existing underground utilities the Contractor will be responsible, at its own cost, for repair or replacement to the satisfaction of the Utility Owner and the Ministry.

The Contractor shall satisfy itself that any existing structures that may be used for truck access are capable of carrying the truck loading before trucks are permitted to use the structures.

In the event that the Works results in additional traffic on municipal streets, the Contractor shall be responsible for arranging with the

Corporation of Delta whatever may be required to minimise the impacts on these streets.

The Traffic Control Plan shall consider and demonstrate how general traffic, as well as traffic generated by the Works, will be accommodated.

**viii) Lane Closure/Reduction Windows**

Full road closures or single lane traffic will not be allowed on River Road or Nordel Way.

During Peak Periods, the Contractor shall not engage in any activity that may significantly impede the flow of traffic. The Peak Periods are deemed minimum and may be adjusted, as determined by the Ministry Representative. Peak Periods are defined in the table below.

Peak Periods		
Monday to Friday	Saturday	Sunday
6 AM to 9 AM; 4 PM to 7 PM	None	None

No traffic delays will be permitted after 12:00 PM (noon) on the day preceding a long weekend. Detours or changes in traffic patterns will not be permitted, unless approved by the Ministry Rep

The Peak Periods outlined in this Section are for the guidance of the Contractor and shall be the basis for the development of the Traffic Control Plan. Variations to the defined Peak Periods at specific locations may be permitted, if substantiated through traffic analyses by the Contractor, and submitted to the Ministry Representative for acceptance.

The Contractor shall be responsible for the collection of any traffic data that may be required for analyses to justify a variation in the Peak Periods or for any other reason. All data used for analyses shall be less than 18 months old. The traffic data shall be provided to the Ministry Representative in a format as per Appendix – Sample Traffic Count.

The restrictions set out in this clause are based on typical daily traffic flows. The hours may be adjusted at the discretion of the Ministry Representative in consideration of circumstances such as, but not limited to, weekends, statutory holidays, special events, incidents, or accidents.

## **ix) Permissible Delays**

Permissible delays shall be approved by the Ministry Representative and shall only be permitted outside Peak Periods. Permissible delays are categorized as follows:

- (a) **Random Delays**: Less than 30 seconds in duration; for occasional minor interruptions due to construction activities. These delays shall be coordinated with available breaks in the traffic flow and will be permitted during Peak Periods.
- (b) **Minor Delays**: Less than two (2) minutes in duration; for occasional interruption due to construction activities. These delays shall be coordinated with available breaks in the traffic flow.

A delay is defined herein as the aggregate length of time over and above normal (free flow) conditions at that period and location. A delay, therefore, is the total of the effects on a given vehicle of reduced speed due to construction (either by side friction, construction-related congestion, or travel in a construction speed zone), plus the duration of the stoppage, plus the time the queue is released to free flow condition.

The Traffic Manager shall be responsible for measuring and monitoring queue lengths and delays. If traffic delays exceed two (2) minutes, or if queues become excessive and impact on the operation of adjacent intersections or accesses as determined by the Ministry Representative, the Traffic Manager shall arrange for the re-opening of all lanes as soon as possible. Free Flow Conditions shall be restored before another minor delay is implemented.

If required, the Traffic Manager shall adjust the duration of the delay and/or the interval between delays. If the Ministry Representative determines that the traffic delays exceed two (2) minutes, the Contractor shall immediately cease construction activities and make all the travel lanes available to traffic as quickly as possible. Resumption of minor delays will only be permitted as traffic levels dictate and upon approval by the Ministry Representative.

The Ministry's Representative may, in consideration of circumstances including, but not limited to, excessive traffic delays, special events, incidents or accidents amend the duration, timing and frequency of permissible delays. No additional payment will be considered when the hours of work are restricted

## **x) Traffic Control Devices**

The Contractor shall supply all necessary traffic control devices required to perform traffic control services for the Project. Signs and traffic control devices not applying to existing conditions shall be

removed. Where operations are carried out in stages, only those traffic control devices that apply to the current stage are to be left in place.

Supply, installation, maintenance and removal of all Works-related signing shall be the responsibility of the Contractor. The location and type of each sign shall be indicated on the approved Traffic Control Plan, for each stage of the Works.

In accordance with SS 194.11, the following traffic engineering requirements must be incorporated into all traffic control plans unless otherwise approved by the Ministry Representative:

- a flashing arrow board is to be used at all lane drop locations;
- where excavations are made adjacent to a traveled lane, causing a drop off which is or could be hazardous to public traffic, the Contractor will either place concrete roadside barrier (CRB) to separate the traffic from the hazard, or backfill the excavation and install Select Granular Sub-base (SGSB), shaped to eliminate the hazard, prior to the end of each shift;
- The Contractor shall supply and install the “Barrier Removed” (Zc-069) signs in advance of construction zones on roadways where median and/or roadside barrier have been temporary removed. When used in advance of the construction zone, the Zc-069 sign may be tabbed with the Z-068 “FOR \_\_\_\_ km” sign that indicates the total distance covered by the construction project. On longer projects, confirmatory Zc-069 signs may be repeated at regular intervals, and/or at locations within the construction zone as specified by the Ministry Representative. These are special signs, not yet incorporated in the Traffic Control Manual for Work on Roadways (TCM), and shall meet the ASTM D4956-01 Type 3 [encapsulated lens sheeting (High-Intensity)] requirement.

The safety apparel and traffic control retro-reflectivity signs and devices referenced in the Traffic Control Manual for Work on Roadways (TCM) are being revised as per Technical Circular T-09/05:

[www.th.gov.bc.ca/publications/Circulars/Current/T\\_Circ/2005/t09-05.pdf](http://www.th.gov.bc.ca/publications/Circulars/Current/T_Circ/2005/t09-05.pdf).

Notwithstanding the 3-year phase-in period described in the circular, the new standards shall apply to all Work under this Contract.

The Contractor shall provide portable changeable message signs (CMS) and shall use the signs to provide advance notification of traffic delays a minimum of one (1) week prior to the date of implementation, or as directed by the Ministry Representative. CMS are to comply with SS 194.46. In addition, the portable changeable message signs shall be Precision Solar Controls, SMC full matrix (solar powered message centre) or equivalent.

CMS locations and messages shall be shown in the Traffic Control Plan for approval by the Ministry Representative.

In addition, the Contractor shall use the CMS to provide notification of incidents or unplanned traffic pattern changes, as deemed necessary by the Ministry Representative.

**xi) Construction Accesses**

The construction access locations are shown on Drawing R1-553-003. One CMS sign shall be placed in advance of the access locations for each direction of approaching traffic. If night work occurs the access locations shall be illuminated by the use of light plants or the installation of temporary luminaires when active flagging operations in place.

- A) For the two construction accesses off River Road (access to Preload 1, Preload 2 and Preload 3)
- No single-lane traffic shall be permitted except in special circumstances that will require submissions to the Ministry Representative for approval.
  - Flag persons will be required to control traffic in each direction;
  - Minor delays should be limited to allow trucks turning into and out of the accesses.
  - Wash stations may be required to prevent mud being tracked onto River Way.
- B) One access off River Way by way of Nordel Way (access to Preload 4 and Preload 5)
- No special requirements for this access location
- C) One access is off of Nordel Way, opposite the weigh scale access, (access to Preload 6)
- Scale access is signalized – will not contractor be allowed to override signals with flag persons.
  - Priority will be given to scale traffic
  - Private driveways should not be blocked or impeded.

## **xii) Construction Detours**

All detours and lane shifts for the Project shall be paved, with appropriate pavement markings and signs placed in accordance with the Traffic Control Manual for Work on Roadways. The Contractor shall consider the condition of the pavement used for detours and lane shifts, and its impact on the safety and function of the detour. Milled surfaces upon which traffic is to run shall be clean and allow adequate drainage. The minimum requirements for construction detours are as follows:

- Design Speed/Posted Speed: .....50 km/h, or as approved by the Ministry
- Design Vehicle: .....WB20
- Maximum Grade:.....As existing
- Maximum Superelevation: .....6%
- Vertical Clearance: .....The lesser of 5.0 m or existing
- Lane Width: .....3.5 m (minimum)
- Shoulder (open):.....1.5 m (minimum) paved
- Sidewalk/Cycling .....to match existing

## **xiii) Temporary Pavement Markings**

Further to Section 2.2.1 of the Traffic Control Manual for Work on Roadways, the Contractor shall be responsible for the application, maintenance and removal of all temporary pavement markings and reflective devices.

When traffic lanes have to be redefined for long-duration Work (more than one daytime shift), the Contractor shall eradicate all redundant temporary or permanent pavement markings that are not required for the intended traffic patterns, and install alternative markings. These markings shall consist of paint supplemented with raised pavement markers as per the

[Manual of Standard Traffic Signs and Pavement Markings,](#)

[\(www.th.gov.bc.ca/publications/eng\\_publications/electrical/MoST\\_PM.pdf\).](http://www.th.gov.bc.ca/publications/eng_publications/electrical/MoST_PM.pdf)

## **xiv) Project Information Signing**

The Contractor shall supply and install temporary information signs to notify traffic of the times and dates of lane and road closures. The location and wording of the signs is to be included in the Traffic Management Plan.

The signs shall provide current information throughout the duration of the Project. Each sign shall be fully reflective, 1220 mm x 2440 mm in size, and shall have wording as agreed to by the Ministry Representative.

## **h) Public Information Plan**

The Ministry has long-standing relationships with major user groups, businesses, stakeholders and the Municipality in the area of the Works. To ensure continuity and ongoing coordination through this and subsequent Works in the delivery of the Project, the Ministry will organize and implement a Public Information Plan to ensure that major user groups, community and stakeholders are kept informed with information on the Works, schedule and traffic pattern changes.

To facilitate this, the Contractor shall provide the following to the Ministry Representative:

- A weekly report in writing detailing all future planned traffic pattern changes, including but not limited to detours, lane shifts, lane closures, road closures, access restrictions, traffic signal commissioning / decommissioning, road marking changes, priority changes etc.

This schedule shall be submitted to the Ministry Representative no later than noon on each Thursday covering the entire Contract period from the following Monday onwards.

The Ministry Representative will approve or reject these requests by noon on the following day (Friday). The first of these requests is to be submitted to the Ministry Representative fifteen (15) working days prior to implementation of any traffic control or road closure.

- A daily confirmation in writing of planned traffic pattern changes, including but not limited to detours, lane shifts, lane closures, access restrictions, traffic signal commissioning / decommissioning, road marking changes, priority changes, pedestrian facilities, etc. for the current week (Monday to Sunday).

This daily submission shall confirm planned traffic control or clearly state requested changes to the planned Works.

- The Contractor must submit any requests for a total closure or detour of any road to the Ministry Representative at least ten (10) working days prior to planned implementation.
- The Contractor shall notify any businesses and properties along the Project corridor forty-eight (48) hours in advance of any Works that will possibly interfere or disrupt any accesses.

Upon approval of the Contractor's submitted request, the Ministry will communicate the schedule to local stakeholders, the Municipality, emergency responders and other major user groups.

Procedures for disseminating information about unplanned traffic pattern changes (e.g. due to incidents such as emergency repairs, motor vehicle accidents etc.) shall be addressed by the Contractor in the Incident Management Plan.

The Ministry will designate a Communications Representative to act as sole spokesperson to the media on all Project-related issues. All media requests received by the Contractor shall be referred to the Ministry's Communications Representative.

**i) Incident Management Plan**

The Contractor shall organize and implement an Incident Management Plan in accordance with the Traffic Management Guidelines for Work on Roadways.

An incident includes, but is not limited to, motor vehicle accidents, emergency road repairs, disabled vehicles, and debris on the road. The primary objectives of an Incident Management Plan are to facilitate incident response and move traffic safely and expeditiously through or around the incident. The Plan shall specify how the Contractor will provide access for emergency vehicles and provide assistance to emergency response personnel. The immediate response to an emergency shall by necessity make use of available devices and equipment.

The Incident Management Plan shall also address access for incidents or emergencies external to the Project Site, but for which emergency vehicles and response personnel require passage through the worksite. This is particularly relevant for bridge crossings or where no alternate routing is available.

**j) Implementation Plan**

The Contractor shall prepare and submit an Implementation Plan in accordance with the Traffic Management Guidelines for Work on Roadways.

The Implementation Plan shall identify the Traffic Manager, the Traffic Engineer, and the Traffic Control Supervisor for these Works, along with the qualifications and experience of those named individuals. It shall also define processes to ensure that the Traffic Control Plan, the Public Information Plan, and the Incident Management Plan are developed and implemented efficiently and appropriately, and that they are kept up-to-date with necessary modifications during the Works.

**k) Lump Sum Payment**

Payment of the Lump Sum Price bid for Traffic Management will be made as follows:

- 25% of the Lump Sum when the Contractor has submitted the Traffic Management Plan, as described in SP 1.19 1.19 Traffic Management, to the Ministry Representative.
- 65% of the Lump Sum paid prorated on a monthly basis based on the percentage of the Contract completed. The prorated amount will be adjusted as and when the Contractor revises their construction schedule.

- 10% of the Lump Sum when the Contractor has completed all Work and has left the Site in a condition acceptable to the Ministry Representative.

The Lump Sum paid will be full compensation for all costs resulting from the foregoing requirements for Traffic Management, including but not limited to supply, installation, maintenance, and removal upon Project completion, of all traffic control devices, signing, lighting, construction, maintenance and removal, if required, of access roads and traffic diversions and permitting required for traffic management during construction.

## 1.21 Protection of the Environment

### g) Designated Vegetation Sensitive Areas

Remove Paragraph 2, 3 and replace it with

Potential rare plant habitat is located within Preload Area 1. Rare plants surveys will be conducted by the ministry along the project alignment prior to project works, as required by the EAC commitments and assurances, and outlined in the EMP. It will be the responsibility of the Ministry to undertake any required mitigation measures (e.g. plant salvage).

This survey work will be undertaken by the Ministry during the period when rare plant species potentially present within the Project area can be most easily identified (May 1 to August 15, 2009). Work cannot proceed within potential rare plant habitat until August 15, 2009 unless otherwise directed by the Ministry Representative.

### h) Designated Wildlife Sensitive Areas

Remove and Replace with the following

Table 1.21-1  
**Designated Wildlife Sensitive Areas With The Project Area**

<b>Location</b>	<b>Wildlife Sensitive Area / Feature</b>	<b>Contractor Responsibilities</b>
Preload Area 1	Polygons 61 – S of CN/BNSF Railway, which has been rated as high potential PWS habitat	PWS salvage and relocation
Preload Area 3	West of 96 Street Ditch, which has been rated as high potential PWS habitat	PWS salvage and relocation
Preload Areas 4 and 5	East of Sunbury I/C, rated as high potential PWS habitat	PWS salvage and relocation

## **j) Bird Nests**

Replace with the following

As outlined in the EMP's Wildlife and Habitat Management Plan document, the clearing of vegetation should be restricted during the critical bird breeding period (March 15 to July 31). For Project Works to be undertaken during this period, the Contractor is required to conduct nest surveys to identify active bird nests, and apply the appropriate site- and species-specific buffers and/or timing windows. If a nest is active, a site-specific management plan will be determined by the Ministry Environmental Manager through consultation with Ministry of Environment or Canadian Wildlife Service (i.e. protection through buffers and/or by instituting appropriate exclusion windows during Project Works).

The Vegetation and Wildlife Impact Assessment, Technical Volume 12 of the Project Environmental Assessment Application, identified a red-tailed hawk nest (nest E) located approximately 200 m north of Station 224+00 (Preload Area 3). The presence of this nest could not be verified during the most recent Ministry raptor survey in the fall of 2008, therefore there is some potential that this nest may still be present and active.

The Contractor will need to adhere to standard mitigation measures for raptors in rural settings, as described in the Ministry of Water, Land and Air Protection's "Best Management Practices for Raptor Conservation during Rural and Urban Land Development in B.C." (2005). Bald eagle nests are afforded year-round protection by the Wildlife Act, regardless of activity status. In accordance with the aforementioned raptor BMP guidance document, the retention of a 100 m vegetated buffer applies to bald eagle nests. If active, a 200 m vegetated buffer is to be applied to red-tailed hawk nests. During periods of the year when raptor nests are active, loud noises and other notable human disturbances (i.e., construction activities) are not to occur within either the aforementioned vegetated buffers or an additional 100 m quiet zone buffer. Restrictions on construction activities within these buffer zones continue to apply to active nests until nesting activities are complete (i.e., young have fledged and are no longer dependent upon the nest).

Any additional raptor nests that might be identified will require appropriate vegetated buffers and breeding season quiet buffers, in accordance with the aforementioned raptor BMP guidance document. If a passerine nest is determined to be active during the critical breeding season, a 30 meter buffer will need to be applied until the young become independent of the nest.

It is recognized that bird nests within and/or in proximity to the Project are may be close to existing disturbances that reduce the applicability of standard mitigation measures including the proposed quiet buffers. In these cases, the quiet buffers should remain free from any additional human disturbances associated with construction activities. The Contractor has the option to retain a qualified professional (i.e., Registered Professional Biologist, with experience in raptor management) to review the application of these standard mitigation

measures and propose alternative quiet zone buffers for the Ministry's consideration and signoff. Any proposed application of alternative quiet zone buffers will require the development and implementation of a nest monitoring program.

#### 1.22 Accommodation of Railway Traffic.

Replace paragraph 1 with the following:

The Contractor shall ensure the safety of, and minimize interference with traffic on the Burlington Northern Santa Fe Railway Company (BNSF).

Replace paragraph 6 with the following:

In general, rail traffic control persons will be required whenever work is done over the railway track, within 10m of the railway track or when equipment crosses the railway track. The Contractor shall give the appropriate Railway Engineering, as named above, seventy-two (72) hours notice of the start of such operations. The Contractor shall not commence such operations until rail traffic control persons have been posted. Rail traffic control persons will be provided by the railway and paid for as a provisional sum from Site modifications. All works in will comply in accordance with SS145.28.04, except that no surcharge will be applied.

#### 1.32 Site Modifications

Add the following after the last bullet

- Supply, installation and maintenance of Security Fencing and Gates.
- Railway Flagging

#### **Add the following clauses:**

#### 1.33 Security Fencing and Gates

The Contractor shall install chain link fencing and security gates at all access points to the project site adjacent to public right of ways in accordance with SS 316. Fencing to extend across the right of way with gates provided as required by the Contractor. The security fencing and gates will prevent the entrance of vehicles, including motorcycles and all terrain vehicles to the project site during non-working hours. Security

gates will be subject to inspection by the Ministry Representative to ensure compliance.

Payment for supply, installation and maintenance of the fences and gates will be made from the Provisional Sum for Site Modifications.

#### 1.34 Wind Fencing

The Contractor shall install Wind fencing along the southern most side of each Preload/Berm Area delineating Preload/Berm Area from Burns Bog. Wind Fence shall be placed along the northern strip between Preload Area 6 and Terasen gas line. The wind fencing shall be 2 meters high and have 50 per cent porosity. Wind fencing installation will be subject to inspection by the Ministry Representative to ensure compliance.

Payment for Wind Fence will be per meter supply, installation and maintenance of the fences will be made from the Provisional Sum from Site Modifications.

### **Section 2 – Earthworks, Grading and Drainage**

#### 2.01 Clearing

##### (c) Burns Bog Mitigation Berm Close-cut Clearing Handwork

Remove last paragraph and replace with

Payment for Burns Bog Mitigation Berm Close-cut Clearing will be made at the Unit Price bid per Hectare and shall be accepted as full compensation for all Work performed, including disposal of all material. Removal of buried logs will be considered incidental to Burns Bog Mitigation Berm Close-cut Clearing and no separate or additional payment will be made.

#### **2.05 Granular Materials**

##### b) Fill Material for Preloads and Berms

Add paragraph following the table

An alternative to Granular fill is Fraser River Sand with less than 10% fines passing through the 0.075mm Sieve.

**3. SCHEDULE 7 – SCHEDULE OF APPROXIMATE QUANTITIES AND UNIT PRICES**

01.05 Revise Approx Quantity

01.07 Revise Approx Quantity

Add the following:

01.08 Wind Fence      Meter      1,300

**A REVISED SCHEDULE 7, DATED JANUARY 23, 2009 AND MARKED REVISION 'A' IS ATTACHED AND MUST BE USED FOR TENDER PURPOSES.**

**Question:**

Drawing 105 shows the alignment of the construction access road to Preload Area 3 along the existing track and railway crossing. This alignment appears to fall within the 30m riparian leave strip of the red-coded 96 Street Ditch. The existing track will require significant widening and upgrading to support the construction traffic required to construct the preload. Will we be permitted to widen and upgrade this track?

**Answer:**

The Ministry will acquire the necessary permits that will allow the Contractor to construct and maintain an access road along the 96 Street ditch corridor.

**SCHEDULE OF APPROXIMATE QUANTITIES AND UNIT PRICES**

Project No: 04830-0103  
 Project Name: GATEWAY PROGRAM - SOUTH FRASER PERIMETER ROAD, 80th STREET TO HIGHWAY 91:  
 PRELOAD AND DRAINAGE CONSTRUCTION

Item#	Description of Work	Unit of Measure	Approx Quantity	Unit Price	Extended Amount
<b>01</b>	<b>SECTION 1 - GENERAL</b>				
01.01	Mobilization	L.S.	100%	L.S.	\$ _____
01.02	Traffic Management	L.S.	100%	L.S.	\$ _____
01.03	Quality Management	L.S.	100%	L.S.	\$ _____
01.04	Environmental Management	L.S.	100%	L.S.	\$ _____
01.05	Pacific Western Shrew Salvage	Hectare	12	\$ _____	\$ _____
01.06	Type C Site Office	L.S.	100%	L.S.	\$ _____
01.07	Site Modifications S.P. 1.32	P.S.	\$570,000.00	P.S.	\$570,000.00
01.08	Wind Fence	Metre	1,300	\$ _____	\$ _____
<b>02</b>	<b>SECTION 2 - SITE PREPARATION, GRADING AND DRAINAGE</b>				
<b>02.01</b>	<b>Clearing</b>				
02.01.01	Close Cut Clearing (Preload Areas)	Hectare	8.70	\$ _____	\$ _____
02.01.02	Close Cut Clearing (Mitigation Berms)	Hectare	1.50	\$ _____	\$ _____
02.02	Preload Areas Woven Geotextile	Square Metre	81,860	\$ _____	\$ _____
<b>02.03</b>	<b>Mitigation Berm Geosynthetic Materials</b>				
02.03.01	Geomembrane	Square Metre	6,180	\$ _____	\$ _____
02.03.02	Woven Geotextile	Square Metre	10,060	\$ _____	\$ _____
<b>02.04</b>	<b>Drainage Management During Construction</b>				

**SCHEDULE OF APPROXIMATE QUANTITIES AND UNIT PRICES**

Project No: 04830-0103  
 Project Name: GATEWAY PROGRAM - SOUTH FRASER PERIMETER ROAD, 80th STREET TO HIGHWAY 91:  
 PRELOAD AND DRAINAGE CONSTRUCTION

Item#	Description of Work	Unit of Measure	Approx Quantity	Unit Price	Extended Amount
02.04.01	Preload Area 1	L.S.	100%	L.S.	\$ _____
02.04.02	Preload Area 2	L.S.	100%	L.S.	\$ _____
02.04.03	Preload Area 3	L.S.	100%	L.S.	\$ _____
02.04.04	Mitigation Berm Area 4 and Preload Area 5	L.S.	100%	L.S.	\$ _____
02.04.05	Preload Area 6	L.S.	100%	L.S.	\$ _____
<b>02.05</b>	<b>Granular Materials</b>				
02.05.01	Preload and Berm Fill	Tonne	264,190	\$ _____	\$ _____
<b>02.06</b>	<b>Geotechnical Monitoring Instrumentation</b>				
02.06.01	Settlement Gauges	Each	25	\$ _____	\$ _____
02.06.02	Standpipe Piezometers	Each	10	\$ _____	\$ _____
02.06.03	Pneumatic Piezometers	Each	10	\$ _____	\$ _____
02.06.04	Inclinometers	Each	2	\$ _____	\$ _____
02.06.05	Railway Monitoring Movement Hubs	Each	10	\$ _____	\$ _____
02.06.06	Utility Monitoring Movement Hubs	Each	10	\$ _____	\$ _____
02.07	2000mm Diameter Interim Wildlife Crossing Pipe	Metre	47	\$ _____	\$ _____
	<b>TENDER PRICE</b>				\$ _____
	<b>TOTAL TENDER COST (Tender Price plus Site Occupancy (if applicable))</b>				\$ _____

