

ANNEX “A” – STATEMENT OF WORK

Painting Roadway Lines in 2017, 2018, and 2019 Banff and Jasper National Parks, Alberta Yoho, Kootenay, Glacier, Mt. Revelstoke, National Parks, British Columbia

1. Description of Work

The Work consists of supplying paint and glass beads and painting roadway lines on pavement surfaces as specified herein. Hatch marking of roadway islands will also be required. The contract period will be from date of award to July 1, 2019. Work must be completed on or before the milestone completion dates identified herein.

2. Location

Areas to be painted are on primary highways, secondary highways, local roads and town sites located in seven national parks: Banff and Jasper National Parks in Alberta; Yoho, Kootenay, Glacier, Mt. Revelstoke National Parks in British Columbia. See Annex A and B for details.

3. Schedule

Two weeks before starting the Work, the Contractor must submit a detailed schedule for approval by the Departmental Representative. This schedule is to be updated immediately when changes occur, as Parks Canada will use this schedule to ensure areas to be painted are clean prior to application of paint. The Contractor shall also provide the Departmental Representative with one portable radio for each paint crew used, capable of transmitting and receiving messages from all vehicles in the paint train, **or** provide the Departmental Representative with a copy of the Contractor's radio license and a letter authorizing Parks Canada to install and transmit on the Contractor's frequency.

Contractor will not be authorized to Work on the following long weekends:

Statutory Holidays:

Victoria Day Long weekend:

From 7:00 am the Friday prior to 7:00 am the Tuesday following

Canada Day Long weekend:

From 7:00 am the Friday prior to 7:00 am the Wednesday following

Heritage Day/BC Day Long weekend:

From 7:00 am the Friday prior to 7:00 am the Tuesday following

Labour Day Long weekend:

From 7:00 am the Friday prior to 7:00 am the Tuesday following

Paint Schedule:

1) Milestone Completion Phase 1:

- i. Contractor must complete the following line painting program by the Thursday prior to the Victoria Day Long Weekend. This requirement will apply to all years identified within the contract.

- a. The contractor should note that highway twining is taking place through Yoho National Park:

- b. All line painting on the Trans-Canada Highway in Banff National Park between the Icefields Interchange (Km 73) and the British Columbia border (Km 82.5). Km 0.0 is located at the Banff East Gate.
- c. All line painting of the Trans-Canada Highway in Yoho, Glacier and Mt. Revelstoke National Parks.

Parks Canada will ensure that pre-marking is done and pavement is cleaned prior to the approved schedule for line painting

2) Milestone Completion Phase 2:

- ii. Contractor must complete the remaining line painting and hatch marking by the Thursday prior to the Canada Day Long Weekend. This requirement will apply to all years identified within the contract.
 - a. All line painting for Highway 16 and Highway 93N in Jasper National Park.
 - b. All line painting for Highway 93S in Banff and Kootenay National Parks
 - c. All remaining line painting on the Trans-Canada Highway in Banff National Park
 - d. The Trans-Canada Highway and Highway 16 are to be given priority.
 - e. The departmental representative will identify secondary road painting locations by the end of May and may identify other priority work, as an example town sites.

Parks Canada will ensure that pre-marking is done and pavement is cleaned prior to any scheduled line painting in the area.

4. Contractor's Submittals

The following identifies the plans, programs and documentation required each year of Contract, prior to mobilization on site and during the construction phase.

a) Pre-Mobilization Submittals

- A completed "Attestation and Proof of Compliance with Occupational Health and Safety (OHS)" form.
- Proof of applicable Parks Canada business licenses.
- Project Schedule – The Contractor must provide the Departmental Representative with a detailed schedule of the workdays and manpower required to complete each phase of the project.
- The Contractor must also provide the Departmental Representative with one portable radio for each paint crew used, capable of transmitting and receiving messages from all vehicles in the paint train, or provide the Departmental Representative with a copy of the Contractor's radio licence and a letter authorizing Parks Canada to install and transmit on the Contractor's frequency.
- Contractor's Chain of Command. The Contractor must submit a list of key Contractor personnel, including names, position and telephone numbers.
- Work Plan – The Contractor must submit a Work Plan describing the Contractor's intended methods of Work and projected number of equipment and personnel on site.
- Laboratory sample results of the materials must be submitted to the Departmental Representative for approval.
- Quality Control Plan documenting Contractors procedures for maintaining the quality of work as per these specifications. Plan must include night inspections to verify retro-reflectivity of lines.
- Traffic Management Plan in accordance with these Specifications.
- Copy of Contractor's Health and Safety Plan,

- An Emergency Response Protocol, documenting Contractors' procedures for handling emergencies.
- Proof of Commercial General Liability Insurance to the levels specified within the contract.

b) Project Submittals

- Quality Control Inspection Reports
- Daily Paint Production Report identifying quantities used under each Contract Unit Price Item. **This report shall be send to Parks Canada Daily.**

c) Project Completion Submittal

- Quality Control Records
- Summary of Daily Paint Production records

5. Materials: Paint and Glass Beads

The following identifies the Paint and Glass Beads requirement for each year of Contract:

- a) The Contractor will use, unless otherwise approved in writing by the Department Representative:
 - i. traffic paint, thermoplastic material and glass beads in accordance with the Recognized Products List (or equivalent) from at least one of the following agencies:
 1. British Columbia Ministry of Transportation and Infrastructure,
 2. Alberta Ministry of Transportation,
 3. Washington State Department of Transportation,
 4. Idaho Transportation Department,
 5. Alaska Department of Transportation and Public Facilities;
- b) The Contractor is responsible for ensuring that paint and glass bead materials supplied meet the requirements specified.
- c) Each year of the Contract, the Contractor will be responsible for the purchase, delivery, storage and handling of paint and glass bead materials to storage sites approved by the Departmental Representative, if located in national parks.
- d) Each year of the Contract, the Contractor will provide necessary facilities and qualified staff to unload, store, and sign for all ordered paint and glass bead materials as it arrives at storage sites, regardless of day or time of day, and be responsible for unloading of materials into storage.
- e) The Contractor is responsible to verify that all materials delivered and used in the Work are the type ordered.
- f) The Contractor will immediately advise the Departmental Representative of any change in paint or glass beads formulation.
- g) No paint formulation shall be diluted or mixed with a different formulation or with any other material without the prior approval of the Departmental Representative. No paint shall be used past its expiration date.
- h) The Contractor must prevent contamination of the materials. Traffic paint, thermoplastic materials and glass beads must be kept within temperatures specified within the product specifications.

- i) The Contractor is responsible to provide safe, convenient access of paint truck and storage sites for inspection, sampling and quantity measurement of paint and glass bead materials by the Departmental Representative.
- j) Each year of the Contract, the Contractor must remove any unused material (paint, glass beads, etc.) by seasonal shutdown, in a timely fashion and as directed by the Departmental Representative. Any material not removed by the Contractor will be removed and disposed of by Parks Canada at the Contractor's expense.

6. Quality Management

Each year of the Contract, the Contractor must put in place a testing program, to be approved by the Departmental Representative, to ensure the materials supplied meet this contract's requirements. The Contractor must provide the Departmental Representative with all the quality control records for review. Cost of this testing program is included in the unit price items and shall not be measured separately for payment.

All materials will be subject to further inspection, sampling and testing by Parks Canada and the Contractor will provide safe, convenient access, acceptable to the Departmental Representative, for inspection and sampling of the materials, and will cooperate in the inspection and sampling process when requested to do so.

Parks Canada shall assess a minimum of three locations for the purpose of confirming the calibration of equipment and ensure the correct volume of material is being applied. The contractor shall provide the volume of paint and glass beads at the beginning and end of each test section. The volume provided by the contract shall be taken from the contractors' electronic device (Digital Pavement Marking Measurement Instrument) and by a physical (dip) form the on board holding tanks.

DPMMI (Digital Pavement Marking Measurement Instrument)

1. Each paint application vehicle must have mounted on it a DPMMI that will be used to track data at an interval no greater than every 15 seconds at all times during paint application.
 - (a) The data to be tracked will include:
 - (i) date;
 - (ii) time;
 - (iii) location;
 - (iv) speed of vehicle;
 - (v) paint application volume (litres);
 - (vi) paint application thickness (wet mils);
 - (vii) distance painted;
 - (viii) glass bead application rate;
 - (ix) road temperature;
 - (x) air temperature;
 - (xi) paint temperature.
2. The Contractor is responsible to accurately track the road and exact location on the road that all recorded data applies to.
3. If, for any reason, the DPMMI becomes inoperable, the Contractor will immediately advise the Departmental Representative. The Contractor will inform the Departmental Representative of the area that has been painted without the DPMMI and a date when the instrument will be back in operation. If the instrument will be out of service for 5 or more Operational Days, the Contractor may be required to

provide documentation from the manufacturer regarding the problem and the proposed date for the solution.

The Contractor is responsible for the quality of the Pavement Marking Services, in accordance with this Agreement, the Specifications and the Contractor's Quality Plan.

The Contractor's Quality Plan for delivery of the Pavement Marking Services will be prepared by the Contractor and provided to the Departmental Representative, and the Contractor's Quality Plan will include, without limitation, the following:

- (a)** documentation of all processes for all Pavement Marking Services in detail;
- (b)** documentation of the Contractor's processes to ensure Quality Control and Quality Assurance, outlining details on how the following tests will be performed and recorded:
 - (i)** colour
 - (ii)** dimensions
 - (iii)** paint and bead application rates
 - (iv)** retro-reflectivity:
 - sampling must be made using a sample size of 20 measurements at 5 metre intervals on a single line;
 - all measurements for retro-reflectivity must be made within a single test site and may be averaged and recorded as an average;
 - testing for retro-reflectivity must be carried out only when the newly painted surface is clean, dry, free of all excess beads, and after 24 hours of paint being applied;
 - all measurements for retro-reflectivity must be made using a Mirolux MX-30, Stripemaster or Stripemaster 2 retro-reflectometer or equivalent, as approved in writing by the Ministry. Measurements must be made using the retro-reflectometer manufacturer's instructions for operation and procedures and must be made only by competent staff;
 - (v)** thickness and consistency; and
 - (vi)** daytime visibility;
- (c)** documentation of the Contractor's processes for using and calibrating the DPMMIs, and tracking the required data from the units;
- (d)** an internal non-conformance process to be initiated by the Contractor when materials, products or Pavement Marking Services fail to meet the terms and conditions of this agreement, outlining:
 - (i)** the methods used to determine the extent, location and quantity of the non-conforming material, product or Service;
 - (ii)** the methods used to resolve an incident or incidents of non-conforming materials, products or Pavement Marking Services, whether they be replacement, rectification or a request to the Departmental Representative to accept the non-conformance;
 - (iii)** how the root cause leading to the non-conformance will be identified and analyzed;
 - (iv)** the method or methods used to ensure all similar incidents are prevented in the future;
 - (v)** the method or methods used to determine the effectiveness of corrective and preventive

- measures; and
- (vi) how the non-conformances and their resolution will be communicated within the Contractor's organization.

7. Equipment

The Contractor must supply all equipment necessary to complete the work including but not limited to **the painting truck, one (1) crash attenuator vehicle, two (2) pilot vehicles** and all ancillary equipment such as fork lifts, hoists, pumps and transport vehicles required to load, unload and transport the paint and glass beads.

7.1 Painting Truck

The painting truck must be self-propelled and equipped to meet or exceed the following requirements:

- Capable of painting over centre line rumble strips.
- Two paint tanks each having a minimum capacity of 700 liters feeding three lines for a simultaneous two-color application (two yellow directional dividing lines and one white line).
- Painting controls capable of adjusting the paint application for the length of dashed line required. Each spray gun shall have independent controls and adjustment mechanisms and shall be operated from the operator's compartment.
- The compressors shall have a minimum rated capacity of 4.25 cubic meters per minute.
- Bead dispensers shall be electrically controlled, air operated, gravity fed with controls to adjust the bead flow. The bead dispensers shall be fed from tank capable of holding a minimum of 800 kilograms of beads.
- Controls displaying line-km of white and yellow paint applied and quantity of glass beads used.
- Television vehicle guidance or a vehicle guidance system mounted on a retractable A-frame with a guide wheel and pointer system, to assist the operator in maintaining alignment on the existing lines.
- A minimum of five (5) spray guns and bead dispensers mounted in the following configuration:
 - Three (3) spray guns and three (3) bead dispensers mounted on an independently controlled boom located on the left side of the truck to paint the directional dividing lines. The outer two (2) spray guns and bead dispensers shall be in a configuration that will produce two (2) lines of equal width with the distance between the two (2) lines equal to the width of one (1) line (100 mm). The inner spray gun and bead dispenser shall operate independently and shall be used to apply the directional dividing line where only a single directional dividing line is required. When a 200 mm wide line is required, two (2) adjacent guns shall be used simultaneously.
 - Two (2) spray guns and two bead dispensers mounted on an independently controlled boom on the right side of the truck to apply the right edge line. When a 200 mm wide line is required two (2) adjacent guns shall be used simultaneously.
- Equipped to apply white or yellow paint from the three spray guns mounted on the left-hand side of the paint truck and to switch from one color to the other during operation.

- Control of independent booms, all spray guns, bead dispensers and painting controls from the operator's compartment(s).

The Departmental Representative may allow the use of alternate equipment, provided the Contractor demonstrates that such equipment is capable of achieving the desired end product.

7.2 Companion Vehicles

The painting vehicle must be immediately followed by a **crash attenuator vehicle** consisting of a five (5) ton truck equipped with a crash attenuator which meets National Cooperative Highway Research Program, Report 350 Test Criteria, Test Level 3 for 100 km/hour work zones. The weight of the crash attenuator vehicle including ballast, flashing arrow board and truck mounted crash attenuator shall be 6,300 to 12,000 kg.

The crash attenuator vehicle must be followed by one ½ ton or larger truck acting as a pilot vehicle. Another ½ ton or larger truck pilot vehicle is also required. The location of this vehicle will depend on the situation.

7.3 Safety Equipment

The painting truck and companion vehicles must be equipped with the following:

- A two-way radio for voice communication. **The contractor is advised that cell phone technology is not available in most of the project area.**
- An overhead revolving beacon with an amber lens a minimum of 180 mm high and 180 mm wide. The beacon must be mounted on the top of the vehicle fully visible to traffic approaching from both front and rear.
- A sequential arrow board meeting the following specifications:
 - Minimum size 0.75 meters x 1.52 meters.
 - Minimum 25 amber sealed beam, hooded lamps.
 - Fully adjustable light intensity on all arrow board lights.
- Operating modes which include:
 - sequential left arrow or chevron
 - sequential right arrow or chevron
 - sequential double arrow or chevron
 - horizontal bar
 - all four (4) lamps in the extreme corners of the panel flashing simultaneously at 35-50 flashes per minute with the flashing light lit 50% of the time.
- The arrow board shall be controlled from a console located in the vehicle cab.
- The arrow board display shall be visible to traffic approaching the rear of the truck.
- A "slow moving vehicle" sign. The sign shall be mounted at the rear of the vehicle and be visible to the public only when the painting truck is applying paint.
- A warning sign, mounted at the rear and/or front of the truck, stating "wet paint keep off". The sign shall have standard warning colors with letters having a minimum height of 150 mm and shall be visible to the public only when the equipment is applying paint.

8. Procedures

8.1 General

The Contractor may paint lines during any day of the week, but is cautioned that traffic volumes are usually higher on Friday, Saturday and Sunday.

With adequate illumination and traffic control, the Contractor may elect to paint at night.

Operation of the painting truck against the flow of traffic is not permitted.

Materials loading are not permitted on the travel lanes of a roadway surface.

Traffic must not be stopped or otherwise impeded such as being slowed down below the posted speed limit, for periods longer than 10 minutes unless authorized by the Departmental Representative's Representative. The Contractor must organize the work to ensure safety of motorists and workers, to minimize traffic delays and to allow, where appropriate, vehicles to pass without tracking.

8.2 Operation of Vehicles

The Contractor must operate all companion vehicles in conjunction with the painting truck during the painting of all longitudinal lines. When stopped, companion vehicle operators must not attempt to control traffic from inside the vehicle. Instead, they should control traffic from outside the vehicle when safe to do so. All companion vehicle operators must have training in Traffic Control and preferably with certification from either the Alberta Construction Safety Association or the B.C. Safety Council.

Operating parameters of the vehicles will be determined by the Contractor to safely accommodate traffic and will be based on site specific conditions such as sight distances, highway geometric configuration and traffic patterns and volumes. The Contractor may supplement the typical operating parameters shown in these specifications with any combination of additional measures such as, but not limited to, crash attenuator on all vehicles, advanced warning companion vehicles, additional signage, fully qualified traffic control persons, cones, and glow posts.

Two weeks before starting the Work, the Contractor shall submit a detailed traffic plan for approval by the Departmental Representative. The traffic plan must indicate placement of vehicles, signage and a detailed plan of how the Contractor intends to accommodate traffic movements under various conditions (two (2) lanes, three (3) lanes, four (4) lanes divided, intersections, interchanges).

8.3 Arrow Board Message

The crash attenuator vehicle, pilot truck and the painting truck shall display the same appropriate message at all times.

8.4 Areas to be painted

The Contractor must paint lane lines, continuity lines, edge lines, directional dividing lines and hatch marks on the roadway sections, interchanges or intersections specified, as well as the lines in town sites, at truck brake checks/chain up areas, rest areas, viewpoints, etc. At minor intersections, the Contractor must only paint the shoulder lines on the primary highway to a point corresponding to the edge of the intersecting shoulder line or as directed by the Departmental Representative.

On Parks Canada roads, there is no standard segment/gap ratio used for broken lines and there is no standard segment/gap ratio used for continuity lines. In addition, distance between

directional lines and edge lines or lane lines vary. The Contractor must make the necessary adjustments while painting to ensure that painted lines match the existing lines exactly unless otherwise directed by the Departmental Representative.

When painting is required in areas where there are no existing lines or where revisions to the existing lines are required, these areas will be identified and laid out or spotted by the Departmental Representative.

8.5 Pavement Surface and Atmospheric Conditions

Painting must not be performed during the following conditions:

- When the pavement temperature is outside the manufacturers' recommended range.
- When wind conditions could cause overspray.
- When pavement is wet.
- During periods of rainfall.
- When visibility is less than 700 meters.

The Contractor is to inspect areas to be painted to ensure they are clean, free of sand and debris, and suitable for painting.

The Contractor shall immediately notify the Departmental Representative of any areas that in their opinion are unsuitable for painting.

8.6 Paint and Bead Application

Paint must be applied at a uniform 375 microns wet film thickness (37.5 liters per line- kilometer for 100 mm wide line) or as directed by the Departmental Representative.

Except for "wide lines" as designated, all painted lines must be 100 mm wide. Glass beads are to be applied immediately following the paint application at a uniform application rate of 600 grams per liter of paint.

When painting hatch marks, paint and glass beads must be uniformly applied such that the beads do not contact the pavement surface. Typically, this can be achieved using an application rate of about 0.4 liters per square meter for the paint and 600 grams of glass beads per liter of paint.

8.7 Removal of Incorrectly Painted Lines or Hatch Marks

The Contractor must ensure that pre-marking is correct and of sufficient quantity to ensure correct line or hatch mark placement. The Contractor must immediately notify the Departmental Representative's Representative of any areas that require clarification prior to painting.

No payment will be made for lines or hatch marks that are incorrectly painted by the Contractor or painted where no lines or hatch marks are specified. In addition, the Contractor is to remove these lines or hatch marks at their own expense and to the satisfaction of the Departmental Representative. **The method and equipment used by the Contractor to remove incorrectly painted lines or hatch marks must not damage pavement surface and will be subject to the approval of the Departmental Representative.** The lines or hatch marks must be removed immediately after notification by the Departmental Representative if in their opinion it represents an immediate danger to motorists. If it does not, lines or hatch marks must be removed within a maximum of 30 days from the date of notification.

9. Acceptance Criteria

The Work will be considered acceptable under the following conditions:

- When the following dimensional criteria for painted lines are met:
 - Painted lines do not exceed a dimensional width of 110 mm for specified 100 mm wide line. No tolerance below 100 mm is allowed for the specified 100 mm wide line.
 - Painted lines do not exceed a dimensional width of 210 mm for specified 200 mm wide line. No tolerance below 200 mm is allowed for the specified 200 mm wide line.
 - Painted direction dividing, lane dividing or continuity lines do not exceed a maximum dimensional length deviation of + / - 100 mm for existing lengths of line.
 - No spaces between painted direction dividing, lane dividing or continuity lines exceed a maximum dimensional length deviation of + / - 100 mm for existing lengths of space.
- When the following dimensional criteria for hatch marks are met:
 - Hatch marks are within + / - 20mm of specified dimensional width.
 - Hatch marks are within + / - 20mm of specified dimensional length.
 - No spaces between hatch marks exceed a maximum dimensional length deviation of + / - 100 mm for existing lengths of space.
- All painted lines including hatch marking, are uniform in thickness and free of tire tracking, with no splatter, excessive over spray or other defects.
- All painted lines including hatch marking, have adequate and uniform retro-reflectivity.
- Paint and glass beads must meet this contract's specifications.
- All paint and glass beads have been applied at the proper locations.
- Any incorrectly painted lines and hatch marking or lines and hatch marking painted at improper locations have been removed to the satisfaction of the Departmental Representative.
- The "Actual Daily Amount" of each color of paint applied each day is at least 95% of the applicable "Required Daily Amount".
- The "Required Daily Amount" for each day will be determined using the applicable specified paint application rate and the length of each color of line painted.
- The "Actual Daily Amount" applied each day will be determined by measuring the number of loads or partial loads for each color of paint.
- Any day's production of roadway lines for which the "Actual Daily Amount" is less than 95% of the "Required Daily Amount" have been repainted at a second application rate of not less than 95% of the specified application rate.
- Glass beads have been uniformly applied at the specified application rate.

Any Work considered unacceptable by the Departmental Representative shall be corrected at the Contractor's own expense to the satisfaction of the Departmental Representative.

10. Occupancy Clause

Phase 1:

- a) For Phase 1, Contractor shall be permitted to lease and occupy sites where they will be working in Phase 1, free of charge from the date of Contract award up to and including the completion date (on or before the Thursday prior to the Victoria Day long weekend). The sites to be leased, by the Contractor, include all the roadways to be painted under Phase 1.
- b) The Contractor's occupancy of the site will be deemed to have ended, when both of the following conditions are met to the satisfaction of Parks Canada:
 1. All the work identified under Phase 1 of this contract, has been completed.
 2. Any outstanding deficiencies have been addressed to the satisfaction of the Departmental Representative.

Phase 2:

- a) For Phase 2, Contractor shall be permitted to lease and occupy sites where he will be working in Phase 2, free of charge from the date of Contract award up to and including the completion date specified (the Thursday prior to the Canada Day long weekend). The sites to be leased, by the Contractor, include all the roadways to be painted under Phase 2.
- b) The Contractor's occupancy of the site will be deemed to have ended, when both of the following conditions are met to the satisfaction of Parks Canada:
 1. All the work identified under Phase 2 of this contract, has been completed.
 2. Any outstanding deficiencies have been addressed to the satisfaction of the Departmental Representative.

11. Measurement and Payment

Payment for "Mobilization and Demobilization" required for the Contractor to do the work in 2017, 2018 and 2019, will be considered incidental to Unit Price Items 1 to 8 and shall not be measured separately for payment. This shall include all quality management, labour, equipment, hardware, tools and incidentals necessary for Mobilization and Demobilization required for this Contract.

Unit Price Items 1 and 2: Supply of Paint

Measurement will be made in liters of the daily quantity of paint used, up to a maximum of 103% of the "Required Daily Amount". Separate measurements will be made for each color of paint. The quantities will be determined by measuring the number of loads or partial loads of paint used each day.

Payment will be made at the applicable unit price bid per liter for "**Supply of Paint - Yellow**" or "**Supply of Paint - White**". These payments will be full compensation for supplying, delivering, storing, handling the paint and all labour, equipment tools and incidentals necessary to complete the Work prior to the application of paint.

No payment will be made until all daily Paint Production reports for the payment period have been received and accepted by the Departmental Representative.

No payment will be made for any quantities of paint used in excess of 103% of the "Required Daily Amount".

No payment will be made for any quantities of paint used when the lines are painted incorrectly or fail to meet the Acceptance Criteria described under Section 9.

Backup (invoices, shipping documents etc) will be provided for volumes purchased for use in this contract.

Unit Price Item 3: Supply of Glass Beads

Measurement will be made in kg of the daily quantity of beads used, up to a maximum of 103% of the "Required Daily Amount".

Payment will be made at the applicable unit price bid per kg for "**Supply of Glass Beads**". These payments will be full compensation for supplying, delivering, storing, handling the glass beads and all quality management, labour, equipment tools and incidentals necessary to complete the Work prior to the application of paint.

No payment will be made until all daily Paint Production reports for the payment period have been received and accepted by the Departmental Representative.

No payment will be made for any quantities of glass beads used in excess of 103% of the "Required Daily Amount".

No payment will be made for any quantities of glass beads used when the lines are painted incorrectly or fail to meet the Acceptance Criteria described under Section 9.

Backup (invoices, shipping documents etc) will be provided for volumes purchased for use in this contract.

Unit Price Items 4, 5 and 6: Painting Roadway Lines

Measurement will be made in kilometers of the length of lines painted. Separate measurements will be made for each color of paint used. The space between "dashed lines" will not be measured for payment.

Payment will be made at the applicable unit price bid per line-kilometer for "**Painted Roadway Lines - Yellow**" or "**Painted Roadway Lines - White**". These payments will be full compensation for inspecting the areas to be painted, temporary storing paint during application, handling and hauling of paint to and from storage locations, applying the paint and glass beads and all labour, equipment, tools and incidentals necessary to complete the Work identified in the Contract or as indicated in any Work Orders which may be issued by Parks Canada.

The application of glass beads including all labour, equipment tools and incidentals necessary to complete the Work is to be considered incidental to Unit Price Items 4 and 5 and shall not be measured separately for payment.

No payment will be made until all daily Paint Production reports for the payment period have been received and accepted by the Departmental Representative.

No payment will be made for any roadway lines painted during a given day in which the Acceptance Criteria has not been achieved for that day.

No payment will be made for any roadway lines incorrectly painted

The Contractor must provide appropriate temporary traffic control measures that are consistent with the provinces of Alberta or British Columbia current policies and guidelines for temporary traffic control in mobile work zones, and that are suitable to protect the workers and road users for the duration of the project.

Sections 7 (Equipment) and Section 8 (Procedure) of this document identify some of the traffic control requirements for this contract. However the Contractor must provide any additional traffic control measures necessary to protect the workers and road users for the duration of the project.

If required traffic control persons must be fully certified and able to produce proof of certification from either BC or Alberta.

The traffic control signs shall have an "NPC" adhesive sticker added to the bottom right hand corner. This sticker will be supplied by the Departmental Representative.

The Contractor must submit a detailed Traffic Control Plan (detailed sketches showing Traffic Control measures for the different situations to be encountered in this project, traffic control equipment and hardware used, etc.) two weeks before starting work for approval by the Departmental Representative.

Traffic control measures will be monitored by the Departmental Representative, and he may require modifications of these measures from time to time.

Payment for "Traffic Control" will be considered incidental to Unit Price Items 4 and 5 and shall not be measured separately for payment. This shall include all labour, equipment, hardware, tools and incidentals necessary for traffic control required for this Contract.

Unit Price Item 7: Painting Roadway Lines at Intersections

Payment will be made at the unit price bid per side for "**Line Painting - Intersections**". This payment will be full compensation for the additional effort involved in painting roadway lines at these locations. This payment will be separate and additional to those made for "Painted Roadway Lines".

Payment for "Line Painting - Intersections" will only be made for those intersections where the Contractor is required to paint additional lane lines (turning lanes or acceleration/deceleration lanes) and will be based on the number of roadway sides of the intersection requiring line painting. For example, additional line painting required on both sides of a two (2) lane undivided highway would be considered two roadway sides.

When intersections are very close to each other (less than 400 meters apart) they are to be considered as a single intersection (one or two sides depending on the situation). For example, three (3) intersections very close to each other, requiring each additional line painting on both sides of a two (2) lane undivided highway would be considered two roadway sides, NOT six roadway sides.

Payment for "Line Painting - Intersections" will also be made for the painting of additional lines at Parks Canada entrance kiosks. Each entrance kiosk is to be considered two roadway sides regardless of the number or length of lines at each kiosk.

Payment for "Line Painting - Intersections" will NOT be made for the painting of climbing lanes or passing lanes.

No payment will be made until all daily Paint Production reports for the payment period have been received and accepted by the Departmental Representative.

Unit Price Item 8: Painting Roadway Lines at Interchanges

Payment will be made at the unit price bid per interchange for "**Line Painting - Interchanges**". These payments will be full compensation for the additional effort involved in painting roadway lines at these locations. These payments will be separate and additional to those made for "Painted Roadway Lines". The unit price bid for "Line Painting - Interchanges" will apply regardless of the size of the interchange.

No payment will be made until all daily Paint Production reports for the payment period have been received and accepted by the Departmental Representative.

Unit Price Item 9: Hatch Marking of Roadway Islands and Gore Areas

Payment will be made at the applicable unit price bid per square-meter for “**Hatch Marking - Yellow or White**”. This payment will be full compensation for inspecting the areas to be painted, temporary storing of paint during application, handling and hauling paint to and from storage locations, applying the paint and glass beads and all labour, equipment, tools and incidentals necessary to complete the Work identified in the Contract or as indicated in any Work Orders which may be issued by Parks Canada.

Hatch marks shall be uniform in thickness with no splatter, excessive over spray or other defects.

To produce a uniform appearance of color and reflectivity, paint and glass beads must be uniformly applied such that the beads do not contact the pavement surface. Typically, this can be achieved using an application rate of about 0.4 liter per square meter for the paint and 600 grams of glass beads per liter of paint.

No payment will be made until all daily Paint Production reports for the payment period have been received and accepted by the Departmental Representative.

No payment will be made for any hatch marking painted during a given day in which the Acceptance Criteria has not been achieved for that day.

No payment will be made for any hatch marking incorrectly painted.

The Contractor must provide appropriate temporary traffic control measures that are consistent with the provinces of Alberta or British Columbia current policies and guidelines for temporary traffic control in mobile work zones, and that are suitable to protect the workers and road users for the duration of the project.

Sections 7 (Equipment) and Section 8 (Procedure) of this document identify some of the traffic control requirements for this contract. However the Contractor must provide any additional traffic control measures necessary to protect the workers and road users for the duration of the project.

The traffic control signs shall have an “NPC” adhesive sticker added to the bottom right hand Corner. This sticker will be supplied by the Departmental Representative.

The Contractor must submit a detailed Traffic Control Plan (detailed sketches showing Traffic Control measures for the different situations to be encountered in this project, traffic control equipment and hardware used, etc.) two weeks before starting work for approval by the Departmental Representative.

Traffic control measures will be monitored by the Departmental Representative, and he may require modifications of these measures from time to time.

Payment for “**Traffic Control**” will be considered incidental to Unit Price Item 8 and shall not be measured separately for payment. This shall include all labour, equipment, hardware, tools and incidentals necessary for traffic control required for this Contract.

12. Warranty

The warranty period for this Work shall be 60 days.

13. Materials and Equipment Storage

The Contractor will be allowed to store equipment and material used for this Contract and carry out minor maintenance work at the following Parks Canada compounds:

Banff Compound
Castle Junction Maintenance Yard
Lake Louise Compound
Kootenay McKay Creek Compound (Radium)
Glacier Rogers Pass Compound
Jasper Compound

Certain conditions may apply for the Contractor to use these facilities, therefore, prior to the start of the contract, the Contractor shall prepare an Action Plan detailing which compounds will be used, for what periods of time and what equipment and material will be stored at each location. This plan shall be submitted for approval of the Departmental Representative. Parks Canada is not responsible for any material or equipment stored on Parks Canada property.

During each year of the Contract, the Contractor must maintain and reclaim all storage sites used for this project.

Each year of the Contract, the Contractor will be responsible for the timely and proper clean up of waste or spilled material, and the timely and proper disposition of containers as directed by the Departmental Representative.

14. Dangerous Goods and Hazardous Materials Information

The Contractor shall perform work in compliance with the Dangerous Goods Act and Regulations for Work place Hazardous Materials Information System (WHMIS). Any materials incorporated into the project must comply with the act and regulations.

15. Supervision

- a) The Contractor must have a qualified Superintendent and necessary supervisory assistants on each crew at all times who shall be readily available for progress meetings, inspection tours of the Work and to receive instructions from the Departmental Representative.
- b) An up-to-date work schedule must be available at all times.

16. Crew Qualifications

- a) Contractor must have a crew and supervisors experienced and qualified in line painting as specified in the Contract.
- b) Contractor must have qualified traffic control personnel or sub-contractor.

17. Prosecution of Work

- a. Contractor must execute work in an efficient and expeditious manner. Departmental Representative reserves right to order removal from work of any employee of Contractor who fails to work in an efficient and expeditious manner. This shall be strictly enforced.
- b. Departmental Representative also reserves right to order removal from job, any piece of equipment that is not in good operation and condition and Contractor shall immediately rectify problem or replace faulty equipment with an equivalent unit within 48 hours.

18. Start-up Meeting

For each year of the Contract, an on-site contract start-up meeting will be held prior to commencement of work. The time and date of the meeting will be set by the Departmental Representative after award of the contract.

19. Environmental Briefing for Workpersons

Each year of the Contract, the Contractor will be requested to assemble their site staff for an environmental briefing to be conducted by the Departmental Representative. Such briefing shall be of 1/2 hours in duration and held at the initial project start-up. The Contractor shall ensure that all their current project staff are in attendance. The Departmental Representative and Contractor will cooperate in setting the most appropriate time and place for the briefing. The cost of attending this briefing shall be considered incidental to the unit price items and shall not be measured separately for payment.

20. National Park Regulations

The Contractor shall ensure that all work is performed in accordance with the ordinances, laws, rules and regulations set out in the National Parks Act.

Parks Canada business licenses must be purchased from Jasper, Banff (covers Banff and Kootenay), Lake Louise (covers Lake Louise and Yoho) and Mount Revelstoke/Glacier.

For each year of the Contract, all Contractor's business and private vehicles are required to obtain a vehicle work pass from Parks Canada. These passes will be provided by the Departmental Representative.

21. Contractor's Camp

The Contractor will not be permitted to set up a camp in the national parks.

22. Waste Disposal

The Contractor shall dispose of all waste material such as paint, drums, beads, etc. at a facility outside the National Parks. No separate payment will be made for waste disposal. The cost of this work shall be considered incidental to the contract.

23. Taxes and Licenses

The Contractor shall include in the tender, payment to taxes properly levied by law (Federal, Provincial and Municipal) including the cost of any collection of permits and business licenses.

24. Environmental and Aesthetic Features

- a) The Contractor's attention is drawn to Division 1, Section 3, for details regarding environmental conditions required for this contract. No separate payment shall be made for this work as it is considered incidental to contract items.
- b) Failure to comply with or observe environmental protection measures as identified in these specifications may result in work being suspended pending rectification of the problems and operators of equipment being charged under the National Parks Act.
- c) The Contractor shall service operating equipment prior to entering the National Parks. Equipment maintenance shall be carried out in an approved area at the work site. Used oil, filter cartridges and other products of equipment shall be collected and disposed of at nearest industrial waste facility.

- d) All fuel or petroleum products storage tanks shall be located in areas well removed from any watercourses including both standing and running water. An impervious berm shall be constructed around the tanks and any other potential spill areas. The berms shall be capable of holding 110% of tank storage volumes.
- e) The Contractor shall maintain sufficient number of spill kits on the project site to handle any potential spills.