

APPENDIX A

Special Provisions

Parks Canada Agency Basic Impact Analysis

Slope Installation (North American Green)

A105 Recommended Performance Guidelines For Emulsified Asphalt
Slurry Seal – International Slurry Surfacing Association

January 2005

Revised May 2005

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21008	Details Of "X" Distance For Circular Vertical Curves At The Toe Of Side And Back Slopes	May/87
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HYDRAULIC MANUAL

HM 705-01	Backfilling Pipe Culverts In Road Embankment	Apr/14
HM 807-01	Riprap: Pipe and Pipe Arch Culvert 600 mm < D < 1500 mm	Jan/14

STANDARD SPECIFICATIONS (INCLUDING GENERAL PROVISIONS), STANDARD TEST PROCEDURES, SPECIFICATIONS FOR MANUFACTURED MATERIALS, AND DESIGN MANUALS can and must be obtained from the Ministry of Highways and Infrastructure's website at www.highways.gov.sk.ca/business under Ministry Manuals.

Control Section(s): Waskesiu Marina Road

1. OCCUPATIONAL HEALTH AND SAFETY

- 1.1 Contrary to General Provision 1450.2.3, a Certificate of Recognition (COR) is not required for this Contract.
 - 1.1.1 Bidders who do not have a COR shall submit their documented Safety Policy and Program with their Bid, or their Bid will be rejected.
 - 1.1.1.1 To facilitate this, the Contractor Occupational Health & Safety Compliance Form is provided with the Bid Package.
 - 1.1.2 Prior to awarding of the Contract, the Parks Canada Agency will determine if the Safety Policy and Program is in accordance with the current Saskatchewan Occupational Health and Safety Act and Regulations.
 - 1.1.2.1 If the Safety Policy and Program is unacceptable, the Agency may reject the Bid.
- 1.2 With Part III of The Saskatchewan Employment Act and The Occupational Health and Safety (Prime Contractor) Regulations coming into force as of January 1, 2015, the Contractor shall assume the roles and responsibilities of the “prime contractor”.

2. COMPLETION DATE AND LIQUIDATED DAMAGES

- 2.1 In accordance with Specification 8100.2 For Specified Completion Date, the following will apply:
 - 2.1.1 The Contractor shall complete the Work by June 20, 2016.
 - 2.1.2 Daily liquidated damages will be \$2,000.00.
 - 2.1.3 The lump sum liquidated damages will be \$20,000.00.

3. DIESEL FUEL ADJUSTMENT

- 3.1 Contrary to General Provision 1800.9.1, there will be no adjustment for diesel fuel cost changes.

4. ORDER OF WORK

- 4.1 The order of work may be governed by the Right-of-Way purchase, relocation of utilities, and approvals and restrictions of regulatory agencies.
 - 4.1.1 Contrary to General Provision 1300.11.3, no direct compensation will be paid for moving within the Contract limits or staging of Work.
- 4.2 **The Waskesiu Marina Roads will be closed to the public for the season sometime between September 15 and October 1 for the purposes of this project. The area will be reopened to the public in the spring of 2016. The Contractor shall accommodate traffic into the marina area and must have at least one boat launch open at all times outside of this shutdown period.**
- 4.3 **The Contractor shall provide two weeks notice prior to work in Parking Area 6 (Project Overview). This is to allow the Marina Operator to clear the area of trailers. The Contractor shall have a maximum of one calendar week to complete all work in this area.**

5. TRAFFIC ACCOMMODATION

- 5.1 The Contractor shall provide a Traffic Accommodation Plan at the Pre-construction Meeting.
- 5.2 Class II Traffic Accommodation as described in Specification 8400-3.20 For Traffic Accommodation will apply to this Contract.
- 5.3 The Parks Canada Operations Center and the reclaimed asphalt pavement stockpile site may be available to the Contractor to store equipment or materials. The Contractor shall make arrangements with the Engineer prior to using these areas.
 - 5.3.1 No interim stockpiling of aggregate will be permitted within Prince Albert National Park (PANP).

6. AGGREGATE SOURCES

- 6.1 **The Contractor shall supply all aggregate required for the production of the final products specified for this Contract. No Parks Canada Agency owned or controlled aggregate sources will be made available to the Contractor.**
- 6.2 In accordance with General Provision 1500.3.2, the Contractor shall bear all costs associated with using material from the Contractor's source(s).
 - 6.2.1 In addition to General Provision 1500.3.2.1, the Contractor shall also bear all costs associated with rejecting aggregate.

7. HAUL ROADS

7.1 In accordance with Section 22 of The Municipalities Act (2006), the Contractor will be required to enter into a Road Maintenance Agreement(s) with the affected municipality(ies) for any municipal roads to be used under this Contract.

7.1.1 The Contractor will be responsible for all costs associated with the municipal roads to be used under this Contract including, but not limited to, the cost of the road maintenance, the cost to provide dust control, and the payment of the capital road loss.

8. UTILITIES

8.1 The Contractor's attention is directed to the known Power utilities at the following approximate locations:

- the underground Saskpower crossing at km 10.130
- the buried Saskpower line along the east ditch of the Marina Road Access
- the buried power lines servicing the dwellings and light posts throughout the project area

8.2 The Contractor's attention is directed to the known SaskTel utilities at the following approximate locations:

- the underground Sasktel crossing at km 0.580
- the buried Sasktel line along the west ditch of the Marina Road Access

8.3 The Contractor's attention is directed to the known Waterline utilities at the following approximate locations:

- The buried line running from the pumphouse at the west end of the project servicing the dwellings

8.4 The Contractor's attention is directed to the known Sanitary Sewer utilities at the following approximate locations:

- the underground sewer crossing at km 0.430 and 0.510
- the buried line along the east ditch of the Marina Road Access
- The buried line running from the manhole servicing the dwellings

9. PROCESSING AGGREGATE

- 9.1 In the event of a discrepancy between Specification 3200 For Processing Aggregate and any Final Product Specification in this Contract, Specification 3200 shall govern.
- 9.2 Base aggregate shall be processed with or without splitting in accordance with Specification 3200.3.2.
- 9.3 The Contractor may elect to process asphalt concrete aggregate using a three-way or a four-way split in accordance with Specification 3200.3.4 or Specification 3200.3.5. The Contractor must ensure the selected process meets all the aggregate requirements for Asphalt Concrete.
- 9.4 Contrary to Specification 3200.6.4.1, the Crushed Aggregate, Crushed Coarse Aggregate, Crushed Fines Aggregate, and Natural Fines Aggregate produced will be considered as interim products after they have been produced until they are incorporated into the Final Product.
- 9.5 Contrary to Specification 3200.6.4.2, there will be no monthly payments for interim products and interim haul.
- 9.6 Contrary to Specification 3200.4.1, the frequency of testing will be at the discretion of the Contractor.
- 9.7 Contrary to specification 1500.5.2 The Engineer or his representative will not take samples and carry out testing and inspections of materials incorporated or being incorporated into the work prior to acceptance testing of the Final Product(s) when hauled to the road.**

9.7.1 In addition tests will be made by and at the expense of the Contractor.

9.7.1.1 Copies of all test results shall be provided to the Engineer.

10. REGULATORY AGENCY REQUIREMENTS

- 10.1 The Contractor shall comply with the conditions contained in the Basic Impact Analysis issued by Parks Canada Agency.
- 10.2 All mitigating measures required by the regulatory agencies will not be paid for directly, but will be considered as a subsidiary obligation of the Contractor under this Contract except where otherwise identified for separate payment under this Contract.

11. SEDIMENT CONTROL

- 11.1 Contrary to Specification 6015.2.1 For Silt Fence, the Contractor shall supply the silt fence materials.
- 11.2 Silt fence shall be a polypropylene woven fabric manufactured specifically for use as silt fence, complete with wooden stakes attached to the fabric and shall meet the following performance requirements:
- Water Flow rate: ASTM D 4491 minimum 405 l/min/m².
 - UV Resistance: ASTM D 4355 minimum 80 % @ 500 hrs.
 - Apparent Opening Size: ASTM D4751 minimum 0.600 mm.
 - Mullen Burst: ASTM D 3786 minimum 2060 kPa
 - Grab Elongation : ASTM D 4632 maximum 15%.
 - Grab Tensile Strength: ASTM D 4632 minimum 0.55 kN.
 - Puncture: ASTM D 4833 minimum 0.285 kN.
 - Trapezoidal Shear: ASTM D 4533 minimum 0.285 kN.
- 11.3 Payment for Supply And Install Silt Fence will be at the contract unit price per metre. The unit price will be full compensation for supply of all materials and completing the Work.

12. CLEARING AND GRUBBING

- 12.1 In addition to Specification 2000.3.4, For Clearing And Grubbing, the following shall apply.
- 12.1.1 Merchantable timber with a minimum diameter of 80 mm and a minimum length of 5.0 m shall be salvaged.
- 12.1.2 Only pine trees will be considered merchantable timber.
- 12.1.3 Merchantable timber shall be cut to lengths between 5.0 m and 17.5 m for hauling purposes.
- 12.1.4 All merchantable timber shall be hauled to the Bear Trap stockpile site identified on the location plan at no direct expense to the Agency.
- 12.1 The Contractor shall be required to chip and/or mulch all organic material not deemed as salvageable timber. Chipping and/or mulching shall be subject to the following requirements and at no direct cost to the Agency.

12.1.1 The chip and/or mulch shall not be incorporated into the embankment.

12.1.1.1 The Contractor shall ensure that the chip and/or mulch does not interfere with construction operations at no direct cost to the Agency.

12.1.1.2 The chip and/or mulch, stumps and non-salvageable timber shall be hauled to the Bear Trap stockpile site and be stockpiled separately from the merchantable timber at no direct expense to the Agency. The contract unit price will be full compensation for all Work required including but not limited to chipping/mulching, loading, hauling and dumping the material.

13. REMOVAL AND REPLACEMENT OF TOPSOIL

13.1 Topsoil within the Construction Footprint shall be removed and stockpiled at locations designated by the Engineer. The required amount of the salvaged topsoil shall be replaced on the Right-of-Way at locations designated by the Engineer.

13.1.1 The Construction Footprint is defined as the area within the cut or fill stakes.

13.1.2 Only the A Horizon material to a depth as specified by the Engineer shall be removed and stockpiled.

13.1.2.1 The maximum depth of topsoil removal will be 150 mm.

13.2 The Contractor shall be responsible for all costs associated with topsoil stockpiles including, but not limited to, moving stockpiles within the job limits if they interfere with construction operations.

13.3 The Contractor shall install appropriate sediment control to ensure no sedimentation from topsoil stockpiles enters into adjacent water bodies at no direct expense to the Agency.

13.4 The volume of the topsoil removed will be measured in cubic metres in its original position. The volume will be measured by the cross-section method. Cross-sections will be taken before and after the topsoil is removed.

13.5 Payment for the removal and stockpiling of the topsoil will be made at the contract unit price per cubic metre for Removal Of Topsoil Including Hauling. The contract unit price will be full compensation for all Work required including but not limited to excavating, loading, hauling, stockpiling, and trimming the stockpile if required.

13.6 Topsoil shall be replaced to a uniform depth as specified by the Engineer over the Construction Footprint excluding the Roadway or as designated by the Engineer.

- 13.7 The volume of the topsoil replaced will be the volume of topsoil removed less the amount remaining in the stockpiles.
- 13.8 Payment for the placement of topsoil on the Right-of-Way will be at the contract unit price per cubic metre for Replacing Topsoil On Right-of-Way Including Hauling. The contract unit price will be full compensation for all Work required to place the topsoil uniformly over the Right-of-Way, including but not limited to loading and hauling, and placing, shaping and trimming the slopes and surfaces.
- 13.9 Payment for removal and disposal of stones 80 mm or more in diameter from the topsoil replaced will be at the contract unit price for Disposal Of Surplus Rock.
14. REMOVAL AND REPLACEMENT OF STRIPPING ON LANDSCAPE BORROW SOURCES
- 14.1 The volume of the stripping will be measured in cubic metres in its original position by the cross-section method. Cross-sections will be taken before and after the borrow source is stripped.
- 14.2 Payment for the removal and stockpiling of the stripping will be made at the contract unit price per cubic metre for Removal Of Topsoil Including Hauling.
- 14.3 Stripping shall be replaced to a uniform depth over the designated landscape borrow source(s) as directed by the Engineer.
- 14.4 Payment for replacing the topsoil on landscape borrow sources will be made at the contract unit price per cubic metre for Replacing Topsoil On Right-of-Way Including Hauling. The contract unit price will be full compensation for all Work required to place the stripping uniformly over the borrow areas, including but not limited to loading, hauling, placing, shaping and trimming the slopes and surfaces.
- 14.5 Payment for removal and disposal of stones 80 mm or more in diameter from the top 150 mm of stripping replaced on the borrow areas will be at the contract unit price for Disposal Of Surplus Rock.
15. SUPPLY AND INSTALL GEOTEXTILE FABRIC
- 15.1 The Contractor shall supply and install geotextile fabric. Geotextile fabric shall be woven type and shall meet the following performance requirements:
- Grab Tensile Strength: to ASTM D4632 minimum 1100 N
 - Puncture strength: to ASTM D6241 minimum 2200 N.
 - Trapezoidal Tear strength: to ASTM D4533 minimum 400 N.

- Apparent Opening Size: to ASTM D4751 maximum 0.22mm
- Elongation at failure: maximum 50%.
- Permittivity: to ASTM D4491 minimum 0.1 sec^{-1}

15.2 Payment for Supply And Install Geotextile Fabric will be at the contract unit price per square metre. The unit price will be full compensation for supply of all materials and completing the Work.

16. SUBGRADE CONSTRUCTION

16.1 The following surfaces shall be surfaced mixed to a minimum depth of 100 mm prior to grading activities taking place:

- km 0.000 to 0.760
- km 10.000 to 10.230

16.2 Unsuitable material shall be excavated, placed in the embankment as outlined on Standard Plan No. 22020, Standard Plan No. 22022 and Standard Plan No. 22030 or disposed of as directed by the Engineer. For the purpose of Standard Plan No. 22022, this Highway shall be considered a System 3 Road.

16.2.1 Any unsuitable material excavated after the chip/mulch and topsoil have been removed that cannot be incorporated into the embankment shall be hauled to the north and east boundary of parking area 4. The material shall be dumped and spread or stockpiled along the boundary as directed by the Engineer.

16.3 In addition to Specification 2300-3.08 (d) For Embankments, the density for the earth embankment will be determined in accordance with STP 205-7 for Density-In-Place By Nuclear Gauge.

16.4 Subgrade Compaction

16.4.1 Contrary to Specification 2300-3.08 (d), each layer of the top 500 mm of the Highway Subgrade shall be dried to at least the optimum moisture content and compacted to an average of not less than 98% of the maximum density.

16.4.2 Contrary to Specification 2300-3.08 (d) (ii), the density on any section will be considered satisfactory when the density test results average not less than 98% of the maximum density and all individual density tests are greater than 96% of the maximum density.

16.5 In addition to Specification 2300-3.08 (d) (i), each layer of earth embankment required to prepare the bed and the backfill of through-grade drainage structures from 600 mm below the culvert invert to 600 mm above the culvert crown for the full width of the excavated area shall be dried to at least the optimum moisture content and compacted to not less than 100% of the maximum density.

- 16.5.1 For fill sections, the compaction zone width shall be the same as the bedding width.
- 16.5.2 The 600 mm below the culvert invert shall be comprised of granular and/or earth backfill material (dimensions B and C respectfully on Standard Plan Nos. 24510 and 24511) as determined by the Engineer.
- 16.6 Contrary to Specification 2300-3.08 (d) (iv), the embankment layer (including the subcut backfill layer) from 650 mm to 500 mm below the top of the Highway Subgrade shall be dried to within 3% of the optimum moisture content at no direct expense to the Agency.
- 16.7 Contrary to General Provision 1300.6.1, the Contractor shall bear the cost of maintenance, except for snow and ice removal, on sections of roadway where the road surface has been disturbed by construction operations.
- 17. REMOVAL AND DISPOSAL OF SURPLUS ROCK
 - 17.1 In addition to Specification 2320 For Disposal Of Surplus Rock, surplus rock will be defined as stones, boulders, and detached fragmentary rocks which have a dimension of 80 mm or more when measured in any direction except for those which are utilized as rip-rap.
- 18. ADJUSTMENTS TO MANHOLES AND CATCH BASINS
 - 18.1 Contrary to Specification 5500 For Storm Sewers, The Contractor shall supply all materials required to adjust the manhole including, but not limited to the concrete riser ring and grout .
 - 18.2 In addition to Specification 5500 For Storm Sewers, the work shall consist of the adjustment of manholes and/or catch basins as designated by the Engineer.
 - 18.3 An adjustment shall be defined as the addition or removal of one or more courses of brickwork or precast concrete riser rings.
 - 18.4 All tops shall be firmly set into position at the required elevation and grouted.
 - 18.5 It will be the responsibility of the Contractor to bring all manholes and catch basins to the finished grade elevation designated by the Engineer. The manhole shall show no depressions or bumps exceeding 5 mm under a straight edge 3 m (minimum) long, placed parallel to the road center line.
 - 18.6 In addition to Specification 5500-4 each manhole adjustment will be measured as a single unit.

- 18.7 Contrary to Specification 5500-5.02, payment for adjustments to manholes, and catch basins, will be at the applicable contract price per unit. The contract unit price will be full compensation for completing the work.

19. FAILURE REPAIR

- 19.1 Geotextile fabric shall be placed in the bottom of the excavated area as directed by the Engineer.
- 19.2 The excavated areas shall be backfilled with suitable earth material and compacted as directed by the Engineer.
- 19.3 The Contractor shall be responsible for the repaired failures for the period between repairing and completion of the surfacing structure at no direct expense to the Agency.
- 19.4 Payment for Failure Repair will be in accordance with the Specifications for the commodities involved and the applicable contract unit prices. The Contract unit prices will be full compensation for all Work including but not limited to excavating the failure areas, laying geotextile, and backfilling the failure areas.

20. WATERING

- 20.1 Water will be available from a hydrant in the town of Waskesiu.
- 20.2 The Contractor shall comply with the conditions contained in the water withdrawal permit if one is required.
- 20.2.1 The Engineer will provide the Contractor with the required permits.

21. GRANULAR BACKFILL IN PLACE

- 21.1 Contrary to Specification 6600 For Granular Backfill, the Contractor shall supply the granular backfill material.
- 21.1.1 Traffic Gravel shall be used as Granular Backfill.
- 21.2 In addition to Specification 6600-3.04, the density for the granular backfill material will be determined in accordance with STP 205-7 for Density-In-Place By Nuclear Gauge.
- 21.3 Payment for Granular Backfill In Place will be made at the unit price for Traffic Gravel Behind Construction Including Hauling, Contractor Supply. The Contract unit price will be full compensation for all Work.

22. CRUSHED FINES, CONTRACTOR SUPPLY

22.1 Description of Work

22.1.1 Crushed fines shall be produced and supplied by the Contractor to contain no less than 90% of the material passing the 5.0 mm square opening sieve with a minimum fractured face percentage of 50%.

22.1.2 The existing asphalt pathway shall be excavated and removed from the limits of PANP at no additional expense to the Agency. The existing concrete curb shall remain in place.

22.1.3 The subgrade shall be levelled and approximately 75 mm of crushed fines shall be placed and well keyed into place as shown on the plans and as directed by the Engineer.

22.1.4 A suitable asphalt swale must be installed across the pathway at station 10+220 where overland drainage is to outlet over the path and through the seawall. This will be paid for at the applicable contract unit prices.

22.2 Payment for the work will be at the Contract unit price for Crushed Fines, Contractor Supply. The Contract unit price will be full compensation for all Work including but not limited to the supply of all materials, excavation of the existing asphalt walkway, loading, hauling, dumping, levelling, placing the crushed fine and keying into place.

23. CATCH BASINS

23.1 Contrary to Specification 5500 For Storm Sewers, the Contractor shall supply all materials required to complete the work.

23.2 The catch basin and grate material shall meet or exceed industry standards and be fit for the purpose and the installation method used.

23.3 A catch basin grate with a minimum diameter of 300 mm shall be supplied and installed by the Contractor.

23.4 The culvert shall be fit into the catch basin structure and grouted to provide a watertight seal.

23.4.1 Contrary to Specification 5005-2.02, the grout material shall be in compliance with the Specification for Manufactured Materials (SMM 401) – Grout/Flowable Fill

23.4.2 The grout shall not be allowed to freeze prior to setting.

- 23.5 The suitability of materials used for the catch basin installation shall be subject to the approval of the Engineer prior to the commencement of the Work. The Engineer has the sole right to reject material that in his opinion will not adequately meet the expected longevity of a new culvert installation. The Contractor shall have no claim against the Agency for all or part of material rejected and shall remove and dispose of rejected material at his own expense.
- 23.6 Payment for catch basins will be at the Contract unit price for Catch Basins, Type As Specified In Special Provisions. The Contract unit prices will be full compensation for all Work including but not limited to the supply of all materials, installation, excavation, granular backfill and grout.

24. INSTALLING CULVERTS, CONTRACTOR SUPPLY

- 24.1 In addition to Specification 5000-1.01 For Installing Pipe Culverts, the Work may also consist of installing polyethylene culverts.
- 24.2 Contrary to Specification 5000-2.01, the Contractor shall supply the culvert material, including but not limited to the culvert itself, couplers (including all mounting material) and applicable end sections.
- 24.3 The new culverts at stations 0+660 and 0+775 shall be tied into the existing culverts, with a suitable coupler wrapped in geotextile, approximately 6 m back from the sea wall.
- 24.3.1 Existing utilities including waterline and underground power may have to be crossed. The Contractor shall hand expose or hydrovac any utilities that may interfere with the culvert excavation to ensure no damage is done during the culvert installation at no direct expense to the Agency.
- 24.4 The Contractor may elect to supply and install the equivalent size corrugated steel pipe (CSP), reinforced concrete pipe (RCP), or open or closed profile polyethylene (PE) culvert to that shown on the Plans. The culvert equivalencies shall be as follows:

CSP Diameter* (mm)	Equivalent RCP or Open/Closed PE Diameter* (mm)
500	375
600	450
800	610
900	750

* All diameters shown are inside culvert diameters.

- 24.4.1 Other culvert alternatives will be considered by the Agency.

24.4.1.1 Certification will be required from the supplier showing the material has appropriate structural strength and is appropriate for the location and installation method. The Certification must be signed by a Professional Engineer.

24.5 In addition to General Provision 1520.3.1, the Agency may request a mill certificate.

24.6 The following minimum requirements shall apply:

24.6.1 For CSP culverts

- Meet CSA Specification CAN3-G401-07 or the most current CSA G401 at the time of tender
- 2.0 mm minimum thickness (1.6 mm thickness allowable for approach culverts)
- 68 mm x 13 mm corrugations for culverts less than 1 200 mm in diameter
- 125 mm x 25 mm corrugations for culverts 1 200 mm or greater in diameter
- Minimum 6 metre section lengths
- Annular ends

24.6.1.1 Separate sections shall be joined with CSP corrugate couplers. The couplers shall comply with the following:

- 1.6 mm gauge
- corrugations same as adjacent culvert sections
- 61 cm (24") wide couplers with gaskets

24.6.2 For RCP culverts

- Meet CSA Specification A257 and ASTM Specifications C76 for Class III, or the most current specification at the time of tender.
- Class III

24.6.2.1 Separate sections shall be joined in a manner acceptable to the Engineer. Gaskets shall be used at connections.

24.6.3 For Polyethylene culverts

- Certified to Specification CAN/CSA B182.8-11, or the most current specification at the time of tender
- Pipe stiffness of 320 kPa at 5% deflection for pipe sizes up to and including 900 mm

- Type 1 (water tight) joints
- Permanent blocking shall not be used to bring pipe to grade

24.6.3.1 Depending on the local soil type(s) and conditions, the bedding and backfill requirements specified under Standard Plan No. 24510 may be considered insufficient, in which case the manufacturer's requirements will govern.

- 24.7 The Contractor shall clean out the entire length of all new and existing culverts.
- 24.8 Contrary to Specification 5000-3.06, reinforced concrete pipe culverts shall be placed starting at the downstream end, with the bell end of the sections pointing upgrade.
- 24.9 Various culverts and culvert extensions may not have the minimum cover specified for the culvert. The Contractor shall take necessary precautions to prevent damage to these culverts. In accordance with Specification 5000-3.13, the Contractor shall repair or replace, at no direct expense to the Agency, any culverts damaged by his operation.
- 24.10 Contrary to Specification 5000-4.02, culvert diameters of 60 cm shall be replaced by culvert diameters of 610 mm for the purpose of reading this section.
- 24.11 Contrary to Specification 5000-4.02, culverts will be grouped for payment according to the CSP equivalent group size for Group B and Group C culverts.
- 24.12 Contrary to Specification 5000-5, payment for Installing Culverts Group B, Contractor Supply will also be full compensation for de-watering the site; supply, delivery, unloading, storing, handling and hauling of all culvert materials; preparation of the bed; repairing and removing damaged ends of culverts to be extended; assembling the culvert; compacting the earth backfill; and cleaning new and existing culverts.

25. TRAFFIC GRAVEL BEHIND CONSTRUCTION INCLUDING HAULING

- 25.1 Contrary to Specification 4305 For Traffic Gravel Behind Construction, the Contractor shall supply the traffic gravel material.
- 25.2 Only traffic gravel Type 104 will be permitted.
- 25.3 Traffic Gravel shall be keyed into place as designated in the contract drawings and as directed by the Engineer.
- 25.4 Payment for Traffic Gravel Behind Construction Including Hauling will be made at the contract unit price per tonne. The contract unit price will be full compensation for all Work required including but not limited to supplying the aggregate, crushing, screening, loading, hauling, placing, grading, and compacting the traffic gravel.

26. GRANULAR BASE COURSE IN PLACE, CONTRACTOR SUPPLY

- 26.1 Only base course Type 33 will be permitted.
- 26.2 In addition to Specification 3505-1.02 (h) For Granular Base Course, excessive pumping of fine aggregate to the surface during watering and compaction will be considered a surface defect.
- 26.3 The Contractor shall supply the Engineer with the test results from the processing of the Base Mix 5 days prior to the commencement of the base operation.
- 26.4 Any Granular Base Course not meeting the type 33 specification will be rejected by the Engineer. The Contractor shall have no claim against the Agency for all or part of material rejected and shall remove and dispose of rejected material at his own expense.
- 26.5 In addition to Specifications 3505-3.20 (a)(i), 3.20 (b)(i), 3.21 (a)(i) and 3.21 (b)(i), the Engineer may elect to leave the surface as a gravel surface over the seasonal shutdown period.

27. SURFACE MIXING AND COMPACTION IN PLACE

- 27.1 The following surfaces shall be surfaced mixed to a minimum depth of 100 mm prior to grading activities taking place:
 - km 0.000 to 0.760
 - km 10.000 to 10.230
- 27.2 In accordance with Specification 3050.2.1 For Surface Mixing And Compaction, the granular base course placed on the Pavement Structure shall be incorporated into the Mixed Course as shown on the drawings and as directed by the Engineer.
- 27.3 The following surfaces shall be surfaced mixed and compacted to a total minimum depth of 150 mm including granular base course:
 - km 0.760 to 0.999
 - km 10.230 to 10.337
 - km 20.000 to 20.134
 - km 30.000 to 30.172
 - km 40.000 to 40.037
- 27.4 Contrary to Specification 3050.3.3.1, the Mixed Course shall be dried to at least the optimum moisture content and compacted to an average of not less than 98% of the maximum density.
 - 27.4.1 Contrary to Specification 3050.3.3.2, the density on any section will be considered satisfactory when the density test results average not less than 98% of the maximum density and all individual density tests are greater than 96% of the maximum density.

27.4.2 Contrary to Specification 3050.3.3.7.3, if excess moisture originating from external causes including but not limited to precipitation and/or the Contractor's operation is present in the Mixed Course during the period between acceptance of the Mixed Course and the acceptance of the completed surfacing structure, the Contractor shall dry the Mixed Course to the optimum moisture content and compact the Mixed Course to not less than 98% of the maximum density at no direct expense to the Agency. If the Engineer determines that the excess moisture originated from below the Mixed Course, the repair Work will be considered Failure Repair.

27.5 The Contractor shall bear the cost of maintenance, except snow and ice removal, on sections of Roadway where the road surface has been disturbed by the construction operations.

28. SAMPLING OF ASPHALT

28.1 The Contractor shall obtain a representative and uncontaminated sample from each load of asphalt that is delivered to the Project site in the presence of the Engineer. The sample shall be obtained in accordance with STP 102 for Sampling Asphalt Materials. the Agency will provide the approved containers.

29. PRIME, TACK AND FLUSH COAT, CONTRACTOR SUPPLY

29.1 Emulsion materials shall meet the requirements of Specification 103 For Manufactured Materials. Pay reductions for material not meeting these requirements will be applied to the Contractor's final payment.

29.1.1 The Contractor shall provide copies of the delivery slips to the Engineer.

29.2 In addition to Specification 4000.2.1, the Contractor may elect to use an emulsified asphalt primer or road-mixed SS-1 in lieu of prime coat for prime coat.

29.3 If road-mixed SS-1 is used, the following shall apply:

29.3.1 Contrary to specification requirements relating to the surface application of asphalt prime coat, including but not limited to those contained in Specification 3505 For Granular Base Course and Specification 4000, the Contractor shall road-mix the diluted SS-1 into the top 25 mm to 50 mm of the base course.

29.3.2 The underlying base course (below 25 mm to 50 mm) shall be compacted to the requirements of Specification 3505-5.01 prior to placing the top 25 mm to 50 mm of base mix.

- 29.3.3 The Contractor shall determine the amount of dilution and the application rate of the SS-1 and water mixture subject to the approval of the Engineer.
- 29.3.4 The base mix in the top 25 mm to 50 mm shall not be spread and compacted without the addition of the diluted SS-1. The diluted SS-1 shall be incorporated homogeneously throughout the entire incorporation layer.
- 29.3.5 Contrary to Specification 4000.3.5.1, road-mixing SS-1 will be allowed after September 15 subject to weather limitations.
- 29.3.6 Contrary to Specification 4000.3.5.2.2, road-mixing SS-1 will be allowed during periods of mist or light rain subject to the approval of the Engineer.
- 29.3.7 The Engineer may direct the Contractor to apply a light surface application of diluted SS-1 to the compacted base course surface.
- 29.4 In addition to Specification 4000.2.1, SS-1 emulsified asphalt diluted with an equal amount of water shall be used as a tack coat.

30. ASPHALT CONCRETE IN PLACE, CONTRACTOR SUPPLY

- 30.1 In accordance with Specification 4100 For Asphalt Concrete, Table 4100.3.T1, only Mix Design Type 3 will be permitted.
- 30.2 Contrary to Specification 4100.3.5.1, the Contractor shall prepare and submit an asphalt mix design to the Agency for approval by the Engineer.
 - 30.2.1 The mix design shall be submitted 5 days prior to the commencement of the paving operation.
 - 30.2.2 The Engineer will not accept any asphalt mix produced prior to the Contractor receiving written approval of the mix design.
- 30.3 Contrary to Specification 4100.2 For Asphalt Concrete, the Contractor shall supply the asphalt and the anti-stripping agent.
 - 30.3.1 Type 200 – 300A asphalt shall be used as bituminous binder. This material shall meet the requirements of SMM 101 For Asphalt Cements. Pay reductions for material not meeting these requirements will be applied to the Contractor's final payment.
 - 30.3.2 Hydrated lime shall be used as an anti-stripping agent on this Contract. Any substitution must be approved by the Engineer.

30.3.2.1 Supply and incorporation of an Anti-stripping agent will not be paid for directly but will be considered as a subsidiary obligation of the Contractor under this Contract.

30.3.3 The Contractor shall provide copies of the delivery slips to the Engineer.

30.3.4 In addition to the requirements of Table 4100.3.T1, the Percent Manufactured Fines shall be 50% for Mix Design Type 3.

30.3.4.1 Percent Manufactured fines (%MF) is defined as that proportion of material passing the 5 mm square opening sieve in the combined hot mix aggregate blend that is crusher-processed. Percent Manufactured Fines is calculated using the following formula:

$$\%MF = ((\%CC_{mix} * \%FinesCC) + (\%CF_{mix} * \%FinesCF)) / \%Fines_{mix}$$

Where: $\%CC_{mix}$ = % Crushed Coarse aggregate in the combined aggregate blend
 $\%FinesCC$ = % passing the 5 mm sieve in the Crushed Coarse aggregate
 $\%CF_{mix}$ = % Crushed Fines aggregate in the combined aggregate blend
 $\%FinesCF$ = % passing the 5 mm sieve in the Crushed Fines aggregate
 $\%Fines_{mix}$ = % passing the 5 mm sieve in the combined aggregate blend

30.4 The Contractor shall shim and level any pavement depressions designated by the Engineer in accordance with Specification 4100.3.10.5.

30.5 In addition to Specification 4100.3.10.6, longitudinal construction joints from one lift to the next shall be separated by at least 100 mm.

30.6 Contrary to Specification 4100.5.3.3.2, the Contractor shall perform all Class II repairs.

30.6.1 Contrary to Specification 4100.5.3.1.7.2.1, the slurry seal mixture for a Class II repair shall meet the requirements for a Type II mix under Section 4 of the International Slurry Surfacing Association's (ISSA) Recommended Performance Guidelines For Emulsified Asphalt Slurry Seal (A105 (Revised), May 2005).

30.7 Contrary to Specification 4100.7.1.1 For Asphalt Concrete, pay adjustments for Field Density shall not be applied to this Contract. Should the test results show that the Field Density is outside of the acceptable limits, the Contractor will be required to perform a Class I repair in accordance with Specification 4100.5.3.1.7.1 at no additional cost to the Agency.

30.8 Contrary to Specification 4100.7.1.1 For Asphalt Concrete, pay adjustments for Smoothness shall not be applied to this Contract. Should the test results show that the Smoothness is outside of the acceptable limits, the Contractor will be required to perform a Class I repair in accordance with Specification 4100.5.3.1.7.1 at no additional cost to the Agency.

- 30.9 Some handwork shall be required to finish asphalt on the walkway area and parking lot swales. The contract unit price for Asphalt Concrete In Place, Contractor Supply will be full compensation for all Work required to complete the work as shown in the contract drawings and as directed by the Engineer.

31. TIED CONCRETE BLOCK EROSION CONTROL MAT

- 31.1 The Contractor shall supply the Tied Concrete Block Erosion Control Mat. Tied Concrete Block Erosion Control Mat shall be Flex-a-mat or approved equivalent.
- 31.2 Tied Concrete Block Erosion Control Mat shall be placed as per manufacturer's specifications in accordance with the lines, grades and dimensions as shown in the contract documents and as directed by the Engineer.
- 31.3 The contract unit price for Supply And Install Tied Concrete Block Erosion Control Mat will be full compensation for all Work including but not limited to supply, loading, hauling, placing, compacting and installing the tied concrete block erosion control mat as per manufacturer's specifications.

32. SUPPLY AND INSTALL TRAFFIC CONTROL DEVICES

- 32.1 The Contractor shall supply and install the following traffic control devices:
- 1 - Yield Sign (RA-02)
- 32.2 The signs shall be in accordance with the Ministry of Highways Saskatchewan Traffic Control Devices Manual.
- 32.3 The Contractor shall remove and re-install any existing signs or structures that interfere with construction. Removal and replacement of these sign and structures will not be paid for directly, but will be considered as a subsidiary obligation of the Contractor under this Contract.
- 32.4 The contract unit price for Supply And Install Traffic Control Devices will be full compensation for all Work including but not limited to supply of all materials, loading, hauling, placing, compacting and installing the traffic control devices.

33. REMOVAL OF CONCRETE

- 33.1 The Contractor shall saw-cut the existing concrete curb and cut through the existing steel sea-wall to outlet drainage at each drainage run.

33.1.1 All work required to outlet the drainage through the curb and sea-wall will not be paid for directly but will be considered as a subsidiary obligation of the Contractor under this Contract.

33.2 The Contractor shall remove and dispose of existing concrete pads and concrete barriers as noted on the plans and as directed by the Engineer.

33.2.1 The material shall be disposed of outside of the limits of PANP.

33.2.2 Removal and disposal of the material will not be paid for directly, but will be considered as a subsidiary obligation of the Contractor under this Contract.

34. SUPPLY AND INSTALL EROSION CONTROL BLANKET

34.1 Contrary to Specification 6020, the Contractor shall supply the Erosion Control Blanket. Erosion Control Blanket shall be North American Greens SC150 or approved equivalent.

34.2 The erosion control blanket shall be composed of processed natural or polymer fibers mechanically, structurally or chemically bound together to form a continuous matrix to provide erosion control and facilitate vegetation establishment.

34.3 Erosion Control Blanket shall be staked using biodegradable stakes in accordance with the manufacturer's recommendations.

34.4 Payment for Supply And Install Erosion Control Blanket will be at the contract unit price per square metre. The unit price will be full compensation for supply of all materials and completing the Work.

35. SUPPLY AND INSTALL SEDIMENT LOGS

35.1 The Contractor shall supply and install the sediment logs. Sediment logs shall be Stenlog or approved equivalent with a diameter of 6 inches (15.2 cm).

35.2 Sediment logs shall be staked using biodegradable stakes in accordance with the manufacturer's recommendations.

35.3 Payment for Supply And Install Sediment Logs will be at the contract unit price per metre. The unit price will be full compensation for supply of all materials and completing the Work.

36. SEEDING

36.1 Seeding shall be completed within the following periods unless otherwise authorized by the Engineer:

- Spring seeding period: by June 15th
- Fall seeding period: October 15th to freeze up

36.2 Contrary to Specification 6025.2.1 For Seeding, the Contractor shall supply the seed material.

36.3 All areas having disturbed topsoil replaced will be seeded.

36.3.1 The Seed material shall contain the following blend of seeds by weight:

Native Seed Mix Common Name	% of Mix
Slender Wheatgrass	30
Northern Wheatgrass	24
Western Wheatgrass	34
Canada Wildrye	10
June Grass	2

36.4 The seeding rate shall be 7.0 kg/ha if seeded by drill and 14.0 kg/ha if seeded by broadcasting.

37. SUPPLY AND INSTALL PAVEMENT MARKING

37.1 The work shall consists of the supply and installation of a double solid yellow centerline from approximately station 0+000 to 0+500.

37.2 The Contractor shall supply all materials required to complete the work.

37.3 All pavement marking materials shall meet or exceed industry standards. The suitability of materials used for the pavement markings shall be subject to the approval of the Engineer prior to the commencement of the Work. The Engineer has the sole right to reject material that in his opinion will not adequately meet the expected longevity of new pavement markings. The Contractor shall have no claim against the Agency for all or part of material rejected and shall remove and dispose of rejected material at his own expense.

37.4 Payment for Supply And Install Pavement Marking will be at the applicable Contract unit price. The Contract unit price will be full compensation for all Work including but not limited to supply of materials and installation.

38. WARRANTY

- 38.1 The Contractor shall promptly correct defects or deficiencies in the Work which appear within one year from the date on which the Work is completed at no additional cost to the Agency. The Engineer will give the Contractor written notice of defects and deficiencies.
- 38.2 If the Contractor fails to do the repairs promptly or to the satisfaction of the Engineer, the Engineer may arrange to have the repairs done by others, the cost of which shall be paid by the Contractor to the Agency.

39. RATES AND SURCHARGES

- 39.1 The following are the current rates and surcharges for use, where applicable on this Contract, unless otherwise specified in these Special Provisions.

39.1.1 General Provisions

Subject	Reference	Rate or Surcharge
Force Account all-inclusive labour rate (includes surcharge and board loss)	1800.5.3.2	\$60.75 / hour
Force Account surcharge applied to the final estimate	1800.7.2	0.75%
Board compensation for meals for Agency staff provided by Contractor	1900.7.2	\$15.00 / meal, per day maximum of \$45.00

39.1.2 Earthwork

Subject	Reference	Rate or Surcharge
Deep-type borrow pit excavation, material excavated from 6 m to 10 m below original ground.	1510.2.3.11.2	Contract unit price plus \$1.00 / m ³
Deep-type borrow pit excavation, material excavated from depths greater than 10 m below original ground.	1510.2.3.11.2	Contract unit price plus \$1.50 / m ³

39.1.1 Base Course

Subject	Reference	Rate or Surcharge
Additional density test > 3 tests	3505-5.03 (b)	\$20 / test

39.1.1 Asphalt Concrete

Subject	Reference	Rate or Surcharge
Charge to Contractor for appeal testing that does not decrease pay adjustments; or for retests of rejected Work that has been remedied.	4100.4.4.1.4 4100.5.3.1.4	\$50 / core \$30 / hr for nuclear gauge density testing \$100 / hr for high speed profiling \$125 / test for segregation

39.1.2 Standard Haul Rates

Haul Distance	Loading Fee	Haul Fee	
		Primary Weights	Secondary Weights
< 12.0 km	\$1.10 / t	\$0.22 / t.km	\$0.25 / t.km
12.0 to 20.0 km	\$0.83 / t	\$0.22 / t.km	\$0.25 / t.km
> 20.0 km	\$0.00 / t	\$0.22 / t.km	\$0.25 / t.km
The conversion factor from cubic metres to tonnes will be 1.7.			

40. MISCELLANEOUS

- 40.1 The words “Parks Canada Agency” shall be substituted for “Department”, “Department of Highways and Transportation”, “Ministry of Highways and Infrastructure”, “Ministry” or “Agency” as and where necessary for the correct reading of documents throughout this Contract.
- 40.2 Contrary to General Provision 1100.5.2, Goods and Services Tax (GST) shall be in addition to the Unit Price for each Bid Item shown on the Bid Form.
- 40.3 Contrary to General Provisions 1100.7.3, 1100.8.3 and 1100.9.3, electronic Bid submission is unavailable at this time.
- 40.4 In addition to General Provision 1400.4, the Contractor shall provide the Engineer 48 hours notice prior to the commencement or re-commencement of any work or change in work patterns affecting Agency staffing levels. Work performed within the 48 hour notice period or work performed outside the normal work pattern within that 48 hour period will be considered unauthorized work in accordance with General Provision 1400.7.3.
- 40.5 In addition to General Provisions 1650.2.5 and 1650.2.7, all equipment shall arrive on site in a clean condition and shall be maintained to be free of fluid leaks.
- 40.6 In addition to General Provision 1650.2.8, the Contractor shall wash, refuel and service equipment; and store fuel and other materials for the equipment at locations at least 100 metres from the high water mark on each side of a waterbody.

SPECIAL PROVISIONS

- 40.7 If outstanding minor Work remains to complete the Contract at the time of final inspection and acceptance and the Contractor does not wish to complete this Work, the Contractor may (subject to the discretion of the Engineer) be charged a fee as determined by the Engineer to compensate the Agency for having others complete the Work.
- 40.8 During tendering, inquiries pertaining to the interpretation of the Bid Package documents shall be directed to:

Mr. Michael J. Caswell, Asset Management Advisor III
Parks Canada Agency
#310, 101 – 22nd St E
Saskatoon, SK S7K 0E1
Phone: (306) 975-6469 Cell: (306) 227-6511 Fax: (306) 975-4675