

## **01 21 00 ALLOWANCES**

### **Part 1 General**

#### **1.1 REFERENCES**

- .1 General Conditions.

#### **1.2 PRIME COST SUM**

- .1 Included in Contract Price a total Prime Cost Sum of **\$250,000.00**
- .2 Do not include in the Contract Price, additional contingency allowances for products, installation, overhead or profit.
- .3 Prime Cost Sum provided for in the Lump Sum Arrangement Table is not a sum due to the Contractor. Rather, payment will be made against it for miscellaneous work not included in the unit price table under the General Conditions of the Contract.
- .4 No interpretation of the items listed under Prime Cost Sum Allowances shall indicate that work will be included under the Prime Cost Sum. Items, tasks, and activities included in the Works elsewhere in the Contract, including Unit price and Lump Sum Items, shall be paid as indicated in those sections and not under the Prime Cost Sum.
- .5 Any and all additional work must be approved in writing by the Departmental Representative prior to commencement.
- .6 All expenditures must be substantiated with verified invoices and/or accepted daily extra work reports as noted in Measurement and Payment Procedures below.
- .7 Such work may include, but not be limited to:
  - .1 **Additional** supply and delivery of bituminous materials including asphalt prime, anti-stripping agent, and warm mix A/C admixtures;
  - .2 Additional supply and installation of asphalt concrete pavement;
  - .3 Installation of integral asphalt curb;
  - .4 Additional pavement removal;
  - .5 Crack filling, pot hole patching and other related minor asphalt repairs;
  - .6 Relocation or removal and disposal of existing signs, guardrail, guide posts and other miscellaneous items;
  - .7 Supply and installation of permanent signs (not construction signs);
  - .8 Removal and disposal or plugging of existing culverts;
  - .9 Additional supply and installation of lane markings;
  - .10 Supply and installation of specialty items at Day Use Areas including, but not limited to, dry toilets, picnic tables, and garbage bins;
  - .11 Additional survey resulting from changes made by the Departmental Representative;
  - .12 Relocation / protection of existing utilities, including payment of utility service provider costs;
  - .13 Road structure repairs;
  - .14 Drainage improvements; ditching; culvert repairs; and cleaning;
  - .15 Sub-drainage not specified in the tender documents;

- .16 Additional supply and installation of precast concrete barrier;
- .17 Supply and installation of barrier drains;
- .18 Removal and disposal of existing guardrail or precast concrete barrier;
- .19 Additional supply and installation of raised reflective road and barrier markers
- .20 Asphalt EPS unit price adjustments;
- .21 Additional installation of milled rumble strips;
- .22 Rehabilitation work in gravel pits;
- .23 Shoulder graveling;
- .24 Traffic control equipment additional to is required by the applicable regulations and standards.
- .25 Relocation of existing structures;
- .26 Miscellaneous work as directed by the Departmental Representative.
- .8 The Contract Price, and not Prime Cost Sum, includes Contractor's overhead and profit in connection with the Work.

### 1.3 MEASUREMENT AND PAYMENT PROCEDURES

- .1 Payment for Work under the **“Lump Sum Price Item 3 – Prime Cost Sum”** made using negotiated rates or by material, labour and equipment rates as per the following:
  - .1 Rental rates will be in accordance with current British Columbia Roadbuilders and Heavy Construction Association schedule, and will be all inclusive and fully operated.
  - .2 Vehicles (ie. Pickup trucks) will be paid either at daily rates as per the British Columbia Roadbuilders and Heavy Construction Association or by mileage using National Joint Council (NJC) rates. The Contractor will not be permitted to claim both daily rental and mileage rates.
  - .3 Hourly rental of equipment will be measured in actual working time and necessary travel time within project limits. Transportation time to and from site to be reimbursed only if equipment is used exclusively for additional work.
  - .4 Equipment paid on standby will be paid on 50% of the relevant Less Operator rates to a maximum of 10hrs per day.
  - .5 When based upon actual costs for additional works under Prime Cost Sum, payment will be based upon supplied invoices and other work records.
  - .6 The Prime Contractor may apply a 10% mark-up to subcontractor or supplier invoices only, as accepted by the Departmental Representative. No mark-up will be allowed on relevant equipment and labour rates.
  - .7 A claim for additional payment will be considered submitted when all required documentation has been received by the Departmental Representative.
  - .8 The Departmental Representative's signature on extra work reports is an agreement to the hours worked that day. Labour and equipment rates are to be reviewed by the Departmental Representative against the appropriate accepted rates when submitted for payment.

### Part 2 Products

- .1 Products shall be in accordance with BC MoTI Standard Specifications for Highway Construction (latest edition) or as directed by the Departmental Representative.

**Part 3 Execution**

- .1 Work shall be in accordance with BC MoTI Standard Specifications for Highway Construction (latest edition) or as directed by the Departmental Representative.

**END OF SECTION**

## **32 12 16 ASPHALT CONCRETE PAVEMENT (EPS)**

### **Part 1 General**

#### **1.1 REFERENCES**

- .1 BC MoTI - Standard Specifications for Highway Construction (latest edition).

#### **1.2 WORK DESCRIPTION**

- .1 Work shall consist of supplying, loading, hauling and placing BC MoTI Medium Mix Class 1 Asphalt Concrete Pavement (EPS) as per on the Contract Documents, or as directed by the Departmental Representative
- .2 For the asphalt mix, asphalt aggregate used shall consist of a 19mm Medium Mix Asphalt Aggregate in accordance with BC MoTI – Standard Specifications for Highway Construction Section (latest edition), Section 502 – Asphalt Pavement Construction (EPS).
- .3 Asphalt Cement used shall be PG 58-37 penetration grade in accordance with BC MoTI – Standard Specifications for Highway Construction (latest edition), Section 502 – Asphalt Pavement Construction (EPS).
- .4 Owner supplied pit run will be made available to the Contractor at Ottertail Pit.
- .5 Recycled Asphalt Pavement (RAP) will be permitted in the asphalt pavement mix design in accordance with BC MoTI Standard Specifications for Highway Construction (latest edition), Section 502 – Use of Reclaimed Asphalt Pavement in Asphalt Pavement Construction.
- .6 Perform mix designs for BC MoTI Class 1 Asphalt Concrete Pavement using Asphalt Cement PG 58-37 and 19mm Asphalt Aggregate. Mix design is subject to acceptance by the Departmental Representative.
- .7 Milled Rumble Strips to be installed as detailed herein and as directed by the Departmental Representative.
- .8 The edge of pavement shall have sloped paved shoulders following the existing side slope for the length of the paving limits, except where there is guardrail or concrete barrier, and shall be constructed in conjunction with all lifts of ACP, as shown on the IFC Drawings or as directed by the Departmental Representative. Payment for this Work to be incidental to asphalt Unit Price items.
- .9 Acceptance and/or rejection of all placed Asphalt Concrete Pavement shall be determined in accordance with the EPS. The Contractor shall be fully responsible for the removal and replacement of rejected materials.

#### **1.3 MEASUREMENT AND PAYMENT PROCEDURES AND UNIT PRICE ADJUSTMENTS**

- .1 Accepted asphalt concrete pavement will be measured in tonnes and will be paid for under **“Unit Price Item 2a - Asphalt Concrete Pavement (EPS) – BC MoTI Class 1 – 19mm Medium Mix Asphalt Concrete”**.
  - .1 Payment under **“Unit Price Item 2ai – Overlay”** shall be full compensation for the supply of asphalt concrete mix including supply and application of tack coat, **supply of asphalt cement**, processing, plant mixing, loading, hauling, paver

laying, compacting, finishing surface, raking, interim lane marking, quality control testing, safety, maintenance, crushing, ACP placement at milled tie ins and sloped ACP at the edge of pavement, cleaning of existing pavement shoulders, and all materials.

- .1 Owner will supply 20,000 cubic meters of pit run aggregate. The Contractor may use Owner supplied pit run aggregate without any additional cost to the Contractor. The Contractor shall bear all risk associated with using owner supplied aggregate and will still be required to meet asphalt mix requirements. No additional payment will be made for any Contractor supplied aggregate used.
- .2 Payment under **“Unit Price Item 2a ii – Paving Milled Areas Km 108.82 – 114.3”** shall be full compensation for the supply of asphalt concrete mix including supply and application of tack coat, **supply of asphalt cement**, processing, plant mixing, loading, hauling, paver laying, compacting, finishing surface, raking, interim lane marking, quality control testing, safety, maintenance, crushing, cleaning of existing pavement shoulders, and all materials.
  - .1 Owner will supply 20,000 cubic meters of pit run aggregate. The Contractor may use Owner supplied pit run aggregate without any additional cost to the Contractor. The Contractor shall bear all risk associated with using owner supplied aggregate and will still be required to meet asphalt mix requirements. No additional payment will be made for any Contractor supplied aggregate used.
- .3 Payment under **“Unit Price Item 2a iii – Paving Milled Areas Km 114.3 – 118.3”** shall be full compensation for the supply of asphalt concrete mix including asphalt aggregate, supply and application of tack coat, **supply of asphalt cement**, processing, plant mixing, loading, hauling, paver laying, compacting, finishing surface, raking, interim lane marking, quality control testing, safety, maintenance, cleaning of existing pavement shoulders, and all materials.
  - .1 Owner will supply 20,000 cubic meters of pit run aggregate. The Contractor may use Owner supplied pit run aggregate without any additional cost to the Contractor. The Contractor shall bear all risk associated with using owner supplied aggregate and will still be required to meet asphalt mix requirements. No additional payment will be made for any Contractor supplied aggregate used.
- .2 Applicable payment adjustments (additions or subtractions as applicable) shall be applied to top lift only in accordance with BC MoTI – Standard Specifications for Highway Construction Section 502 – Asphalt Pavement Construction (EPS) and any current Special Provisions. Payments shall be under **“Lump Sum Price Item 3 – Prime Cost Sum”**.
- .3 Supply, installation, maintenance, calibration of weight scales and a scale house, or alternately electronic calibrated silo scales, at the plant by the Contractor shall be considered incidental to **“Unit Price Item 2 - Asphalt Concrete Pavement (EPS)”** and no additional payment will be measured for payment. A scale person will be provided if required.
- .4 Preparing asphalt mix designs (including anti-stripping test), in accordance with 01 45 00 Quality Control and 01 33 00 Submittal Procedures, shall be considered incidental to

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ASPHALT CONCRETE PAVEMENT (EPS)

- “Unit Price Item 2 – Asphalt Concrete Pavement (EPS)”** and no additional payment will be measured for payment.
- .5 The movement of equipment and crew, shall be considered incidental to the Work for the type of asphalt placed. A move is defined as the Contractor moving equipment and crew to the next section to pave after having completed, in its totality, the previous section.
  - .6 No overhaul will be considered for payment under this Contract.
  - .7 Supply and delivery of asphalt cement shall be incidental to **“Unit Price Item 2 - Asphalt Concrete Pavement (EPS)”**.
  - .8 Anti-stripping agent(s), if required and accepted by the Departmental Representative, shall be paid under **“Lump Sum Price Item 3 –Prime Cost Sum”**.
  - .9 Measurement for the installation of the Milled Rumble Strips shall be measured per kilometer installed as per the Contract documents and accepted by the Departmental Representative. Payment shall be made under **“Unit Price Item 2b – Asphalt Concrete Pavement (EPS) - Milled Rumble Strips”**.
  - .10 Use of processed Reclaimed Asphalt Pavement (RAP) material in hot mix asphalt construction is permitted to maximum 15% in accordance with BC MoTI Section 505 (latest edition) and as approved by the Departmental Representative. Any costs associated with this process including labour, equipment or materials shall be considered incidental to **“Unit Price Item 2 – Asphalt Concrete Pavement – EPS”**.
  - .11 The edge of pavement shall have a 4:1 paved let down for the length of the paving limits and shall be constructed in conjunction with the top lift of ACP, as shown on the IFC Drawings or as directed by the Departmental Representative. Payment for this Work to be incidental to asphalt unit price items.
  - .12 Traffic Control required for this Work shall be incidental to **“Lump Sum Price Item 2 - Traffic Accommodation”** and no separate payment will be made to the Contractor.
  - .13 Mobilization and demobilization required for this Work shall be incidental to **“Lump Sum Price Item 1 – Mobilization / Demobilization”** and no additional payment will be made.
  - .14 Environmental mitigations required in accordance with Section 01 35 43 – Environmental Procedures, for the Work in this Section shall be incidental to the Contract and no separate payment will be made to the Contractor.

## **Part 2 Products**

### **2.1 MATERIALS**

- .1 PG 58-37 Asphalt Cement shall be used on the TCH.
- .2 Asphalt Aggregate:
  - .1 Materials used shall be in accordance with BC MoTI – Standard Specifications for Highway Construction Section 502 – Asphalt Pavement Construction (EPS) (latest edition).
  - .2 Owner supplied pit run at Ottertail pit is available for Contractor use as directed by the Departmental Representative.
- .3 Reclaimed Asphalt Pavement (RAP):

- .1 RAP to be processed by crushing and/or screening into a consistent material with uniform gradation, AC content and other properties prior to being utilized in accordance with the BC MoTI Standard Specifications for Highway Construction (latest edition), Section 502 – Use of Reclaimed Asphalt Pavement in Asphalt Pavement Construction.
- .2 Use of processed Reclaimed Asphalt Pavement (RAP) material in hot mix asphalt construction is permitted to maximum 15% in accordance with BC MoTI Section 505 (SS 505) Category A Road Classification and as approved by the Departmental Representative.
- .3 Only RAP sourced from the TCH shall be considered Classified RAP and no Unclassified RAP will be permitted.
- .4 The Contractor shall fulfill or exceed the requirements of SS 505 Appendix 1 – RAP Management Best Practices for the management of RAP materials from the time of collection through processing, mix design, and quality control practices during the production of asphalt mixtures containing RAP as confirmed through the Contractor's Quality Control documentation.
- .5 RAP testing is required in accordance with SS 505.07 Quality Control.
- .6 The Contractor shall process and crush the RAP so as to ensure compliance with all gradation requirements of their approved Job Mix Formula.

### **Part 3 Execution**

#### **3.1 QUALITY CONTROL**

- .1 Contractor is responsible for all Quality Control required in accordance with BC MoTI–Standard Specifications for Highway Construction Section 502 - Asphalt Pavement Construction (EPS) (latest edition) and Section 01 45 00 – Quality Control.
- .2 Contractor is to provide a full time Road Checker during all times of asphalt placement that shall be responsible for providing a daily Road Checker's Summary in accordance with BC MoTI –Standard Specifications for Highway Construction Section 502 - Asphalt Pavement Construction (EPS) (latest edition).
- .3 The Road Checker's Summary shall be provided to the Departmental Representative no less than 24 hrs after the relevant shift end.
- .4 To assist in the Road Checker's role, the Contractor shall layout and stake stations at the appropriate intervals to achieve the desire accuracy throughout the Work Site. All survey and marking stakes shall be removed prior to completion of the Works.

#### **3.2 METHODOLOGY**

- .1 ACP placement:
  - .1 Asphalt concrete mix shall not be placed when the air temperature is below 4°C, or when rain is forecasted.
  - .2 Asphalt concrete mix shall be placed only on clean, dry, and unfrozen surfaces.
  - .3 Unless otherwise shown on the plans, the asphalt concrete mix shall be placed in the following lift thicknesses:
    - .1 in a single lift when the design compacted total thickness is 75 mm or less.

- .2 in two or more lifts when the design compacted total thickness is greater than 75 mm. The lift thickness selection shall be determined by the Contractor except that:
  - .1 the maximum thickness of any lift shall be 75 mm.
  - .2 the minimum thickness of a final lift shall be 50 mm.
  - .3 On widenings, the thickness of asphalt concrete mix up to 75 mm may be placed in one lift. Over 75 mm thickness, the asphalt concrete shall be placed in two lifts.
- .2 Milled Rumble Strips shall be installed in accordance with BC MoTI – Supplement to TAC Geometric Design Guide Section 650 – Rumble Strips. The Milled Rumble Strips shall be continuous SRS and are to be installed at various locations along the TCH or as directed by the Departmental Representative.
- .3 Environmental mitigations required in accordance with Section 01 35 43 – Environmental Procedures, for the Work in this Section shall be incidental to the Contract and no separate payment will be made to the Contractor.

### 3.3 EQUIPMENT, PLANT AND MIXING REQUIREMENTS

- .1 Execution of the Work shall be in accordance with BC MoTI - Standard Specifications for Highway Construction (latest edition), Section 502 – Asphalt Pavement Construction (EPS) and Section 504 – Pavement Drainage
- .2 The Contractor will only be permitted to setup a Mobile Asphalt Plant or use a Stationary Asphalt Plant at Ottertail Pit after **September 5, 2017**. If used, mobile asphalt plant shall be set up at Ottertail Pit at the direction of the Departmental Representative.
- .3 Asphalt plant to be used on this project, regardless of location, shall be a minimum of 200 tonne per hour production plant, equipped with a dry bag system for pollution control, in addition to, or in replacement of standard cyclone dust collectors, to effectively eliminate emissions of dust and smoke pollutants into the atmosphere. Use of secondary dust collection systems, requiring discharge of dust polluted water into settling ponds or drainage system will not be permitted. In addition, Asphalt plant must comply with all environmental pollution control regulations applicable in the asphalt plant area. The plant operator must make daily inspections of the emission control components, to ensure proper working order and provide the most recent stack monitoring results for viewing by the Departmental Representative or their designate.

**END OF SECTION**