

**1. GENERAL**

1.1 RELATED WORK

- .1 Section 31 24 13 – Roadway Excavation, Embankment and Compaction.
- .2 Section 32 11 23 – Granular Base.
- .3 Section 32 12 16 – Hot Mix Asphaltic Pavement.
- .4 Section 33 05 13 – Miscellaneous Removals and Adjustments.

1.2 MEASUREMENT FOR PAYMENT

- .1 Asphaltic Surface Course Removal
  - .1 Will be measured in square metres of asphaltic surface course removed in accordance with the Engineer's instructions and based on the Engineer's field measurements. Payment will be made at the unit price per square metre to the specified thickness, as specified within the Bid Forms.
  - .2 There will be no payment for asphaltic surface course removal and/or replacement beyond the limits specified or agreed to on site by the Engineer.
  - .3 The unit price for asphaltic surface course removal shall include the supply of all material, labour and supervision, equipment, tools, and all other incidentals required to perform all saw cutting, breaking out, removal, disposal including disposal fees, and general cleanup.
- .2 Pavement Structure Removal
  - .1 Will be measured in square metres of pavement structure removed in accordance with the Engineer's instructions and based on the Engineer's field measurements made along and perpendicular to the centrelines of the various sections of pavement removed. Payment will be made at the unit price per square metre regardless of the depth of the pavement structure, as specified within the Bid Forms.
  - .2 There will be no payment for pavement structure removal and/or replacement beyond the limits specified or agreed to on Site by the Engineer.
  - .3 The unit price for pavement structure removal shall include the supply of all material, labour and supervision, equipment, tools, and all other incidentals required to perform all saw cutting, breaking out, removal, loading, hauling, disposal including disposal fees, and general cleanup for the removal of the asphalt, granular base course and subgrade materials.
- .3 Cold Milling
  - .1 Payment for cold milling shall be made at the unit price per square metre or linear metre as specified within the Bid Forms.
  - .2 This unit price shall include all costs for the supply of all material, labour and supervision, equipment, supplies, mobilization, loading, hauling, and stockpiling or spreading of asphalt and/or aggregate cuttings, cleaning and flushing of all gutters, manholes, valves, catch basins, or other obstructions within the paved areas, cleanup, barricades, flagmen, and all other personnel and equipment necessary to complete the Work.
  - .3 Payment for cold milling adjacent to concrete gutters will be on a linear metre basis as measured along the lip of the gutter, at the width specified in the Bid Forms.

- .4 Payment for cold milling other areas will be on a square metre basis, as determined by the Engineer and Contractor at time of milling operation.  
There will be no payment for cold milling beyond the limits specified or agreed to on site by the Engineer.
- .4 There will be no payments to the Contractor for identifying and marking all aboveground and/or underground utilities and structures/facilities; include such cost in the unit prices for related work.

## **2. PRODUCTS**

### 2.1 MATERIALS

- .1 Asphaltic surface course material shall be considered as asphaltic surface course material only, removed to accommodate the repair of joints or other surface course failures.
- .2 Pavement structure material shall be considered as a combination of existing asphaltic surface course and cement stabilized base course structure or asphaltic surface course and asphaltic base course structure. No differentiation will be made between whole or broken pieces of pavement structure.
- .3 Millings shall remain the property of the Owner, unless determined otherwise by the Engineer.

## **3. EXECUTION**

### 3.1 EQUIPMENT

- .1 Cold Planer shall: be self-propelled; be capable of milling 4000 square metres of pavement surface per 8-hour shift; be capable of loading millings into haul vehicles; have a cutting head of a minimum width of 1.50m and a maximum width of 3.75m; be of sufficient power, traction, and stability to cut a minimum 75mm depth in one pass; have automatic slope and grade adjustment controls; be capable of cutting flush to all gutters, curb walls, manholes, valves, catch basins, or other obstructions within the paved area; and have a means of controlling dust. Equipment using heaters must have adequate shielding to prevent damage to property in the vicinity of the milling.
- .2 For small, isolated repair areas, the Engineer may approve the use of a cold planer mounted on a skid-steer loader; minimum width of 0.45m.

### 3.2 ASPHALTIC SURFACE COURSE REMOVAL

- .1 Existing asphaltic surface course, authorized for removal by the Engineer, shall be removed and hauled to an approved disposal site. Existing sections of asphaltic surface course to be removed will include, but shall not be limited to, sections of asphaltic surface course in which joints need to be repaired or in which surface failures exist.
- .2 The Contractor shall cut back into the existing asphaltic surface course so as to expose the complete cross-section of the existing surface course. The cuts shall be made perpendicular and parallel to the centreline of the roadway unless directed otherwise by the Engineer.

- .3 A concrete or asphalt saw, or an approved cutting wheel, shall be used for cutting along all edges of asphaltic surface course to be removed. All cuts shall be of sufficient depth so that the asphaltic surface course breaks clean and square at the surface with no jagged edges.

### 3.3 PAVEMENT STRUCTURE REMOVAL

- .1 Existing pavement structures, authorized for removal by the Engineer, shall be removed and hauled to an approved disposal site. Existing sections of pavement structure to be removed will include, but shall not be limited to, sections of failed pavement structure and sections of pavement structure to be removed to allow for the construction of concrete structures (allowed to accommodate setting of forms).
- .2 The Contractor shall cut back into the existing pavement structure so as to expose the complete cross-section of the existing pavement structure. The cuts shall be made perpendicular and parallel to the centreline of the pavement structure unless directed otherwise by the Engineer.
- .3 Where required by the Engineer, the Contractor shall use a compressor and jack hammer or saw for cutting and breaking out sections of pavement structure.

### 3.4 ROADWAY EXCAVATION

- .1 Roadway excavation in accordance with Section 31 24 13 – Roadway Excavation, Embankment and Compaction.

### 3.5 SUBGRADE FILLS

- .1 Subgrade fills consisting of clay or sand materials shall be constructed as per Section 31 24 13 – Roadway Excavation, Embankment and Compaction.

### 3.6 DISPOSAL AREAS

- .1 The City of Lloydminster Landfill site or designated areas shown on the Drawings may be used for disposing of pavement structure and surplus or unsuitable subgrade material. Other disposal areas may be arranged for by the Contractor with consent of the Engineer.
- .2 All arrangements for use of the areas shown or other proposed disposal areas shall be approved by the Engineer. All disposal areas shall be left in a neat and tidy condition satisfactory to the Engineer.

### 3.7 ASPHALT PATCHING

- .1 The asphalt patching mixture shall be supplied and placed in accordance with Section 32 12 16 – Hot Mix Asphalt Pavement.

### 3.8 COLD MILLING

- .1 Prior to commencing the cold milling operation, the Contractor is to inspect and verify with the Engineer the areas, depths, and cross-section lines of asphalt pavement to be removed.

- .2 Acceptable tolerances on the milled surface are 5mm of reference grade and cross section but not uniformly high or low. Matching of adjacent milled surfaces to be within 3mm.
- .3 Personnel and equipment must be provided to ensure that all cuttings are removed from the ground surface immediately following the milling operation. Stockpiling of milled material is not permitted on the Site.
- .4 Sufficient passes or cuts must be made such that all irregularities or high spots are eliminated and that 100% of the surface is milled to the design grade or to the satisfaction of the Engineer. The Contractor must provide all necessary labour and supervision, materials, and equipment to load the asphalt millings and hauled to a disposal area designated by the Engineer. All material recovered in the milling process is considered the property of the Owner.
- .5 Upon completion of cold milling operations, the surface must be left in such condition that it can be reopened to traffic as soon as the loose materials have been removed. Temporary ramping or bridging is to be provided within twenty-four (24) hours of cold milling and to be placed at swale crossings or other transverse cuts to accommodate vehicular traffic.
- .6 "BUMP" signs, conforming to the TAC Manual of Uniform Traffic Control Devices for Canada, shall be installed on all transverse milled butt joints as directed by the Engineer.
- .7 Supply, haul, place, and compact asphaltic surface course mix for patching and/or levelling courses in accordance with the Engineer's directions.
- .8 Cold millings are to remain the property of the Owner. Millings are to be stockpiled at a designated location at the City of Lloydminster Operations Center located at 6623 – 52 Street, or as directed by the Engineer. The Owner reserves the right to have millings stockpiled at any location within the City of Lloydminster corporate limits, including the City of Lloydminster Airport.
- .9 Unless otherwise specified, arterial and collector roads must be paved within three (3) days of milling and local roads must be paved within one (1) week of milling. If the Contractor is in contravention of these timelines such that undue deterioration of the milled surface occurs, including asphalt surface course and granular base course failure, raveling and or cracking, the Contractor will be responsible for the costs associated with all repairs deemed reasonable prior to the placement of the final asphalt concrete pavement overlay.

### 3.9 TIE-INS TO EXISTING PAVEMENT

- .1 Where a new pavement structure ties into an existing pavement structure, the Contractor shall cut back into the existing pavement structure so as to expose the complete cross section of the existing pavement structure. The cut shall be made perpendicular to the centreline of the pavement structure.
- .2 All pavement removed shall be hauled to the landfill site or to a disposal site approved by the Engineer.

### **END OF SECTION**