

**04070 Infrared Asphalt Heating**

**Index**

04070-1	General	2
1.1	Description of Work	2
04070-2	Materials	2
2.1	Asphalt Mix Type	2
04070-3	Equipment	2
04070-4	Construction	2
4.1	Preparation	2
4.2	Heater Placement	2
4.3	Heating Temperature	3
4.4	Raking	3
4.5	Rejuvenating	3
4.6	Addition of New Asphalt	3
4.7	Compaction	4
4.8	Cold Weather Application	4
04070-5	Testing	4

**Figures**

Figure 1: Heater Placement Area Location (not to scale).....	3
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**04070-1     General****1.1           Description of Work**

The work under this section includes, but is not limited to, the supply of all superintendence, traffic control, labour, material, equipment and tools required to perform pavement repairs using infrared heater equipment.

**04070-2     Materials****2.1           Asphalt Mix Type**

Type 2 and Type 4 asphalt concrete and reclaimed asphalt product (RAP) shall be used and will follow the City of Saskatoon Specification unless otherwise approved by the Engineer.

**04070-3     Equipment**

All tools, machinery, plant and equipment used in handling materials and executing any part of the work shall be subject to the approval of the Engineer. All such equipment shall be maintained in efficient working order and where any of the machinery plant or equipment is found to be unsatisfactory; it shall be improved or replaced by the Contractor to the satisfaction of the Engineer.

**04070-4     Construction****4.1           Preparation**

Upon arriving on site, the construction area shall be swept to remove any standing water, loose asphalt, and dirt.

**4.2           Heater Placement**

The area to be restored as shown in Figure 1 shall be squared off at least 150 mm away from the damaged area (pothole).

The area to be heated as shown in Figure 1 shall be squared off at least 150 mm away from the area to be restored.

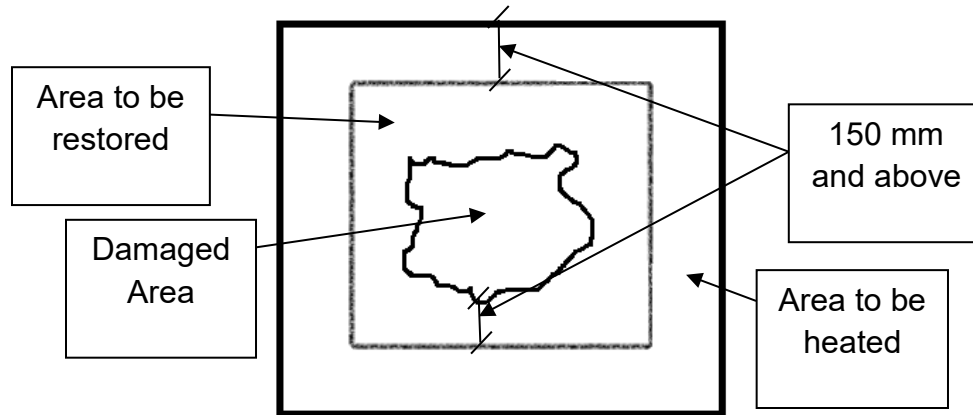


Figure 1: Heater Placement Area Location (not to scale)

The infrared burners shall be 250mm above the highest point in the damaged area.

#### **4.3 Heating Temperature**

The Contractor shall heat the asphalt pavement to 135°C to 175°C evenly throughout the area to be heated as shown in Figure 1 without burning the asphalt pavement.

#### **4.4 Raking**

The Contractor shall rake the heated asphalt in the area to be restored as shown in Figure 1, while not disturbing the area to be heated.

The Contractor shall roughly level the area to be restored with a slight trough at the edges.

#### **4.5 Rejuvenating**

The Contractor shall spray a small amount of rejuvenator that is listed on the City approved product list.

#### **4.6 Addition of New Asphalt**

In a case where a new asphalt is required, the Contractor shall use Type 2 and Type 4 asphalt concrete and reclaimed asphalt product (RAP) unless otherwise approved by the Engineer.

**4.7            Compaction**

The Contractor shall have available at all times the necessary labour, equipment and tools required to compact the asphalt and base in the area to be heated as shown in Figure 1.

**4.8            Cold Weather Application**

During when the temperature is below 4°C the Contractor shall maintain the temperature of asphalt pavement above 135°C during the duration of construction.

**04070-5      Testing**

The City of Saskatoon shall appoint an independent testing consultant to perform all tests for quality control of the mix to determine compliance with specification during production (process control), and quality assurance to determine acceptance and payment adjustments to material supplied and placed.

Sampling for quality assurance will be done using a random sampling procedure as identified by the Engineer. Where there is continuous production uninterrupted by plant shutdown due to quality control only the predetermined random sampling frequency will be used to determine payment adjustments to the unit bid price.

The quality assurance random sampling will also be the basis for quality control for generating control charts and determining plant shutdown. In addition to the quality assurance sampling the Engineer may also initiate supplementary tests independent of the quality assurance random sampling procedure to supplement the quality control tests for determining process control. These additional tests will not be used for payment adjustment factors unless it results in plant shutdown prior to the sampling for quality assurance in that specific lot of material. The supplementary test in this case will then be used for payment adjustment on that portion of the untested lot. If the supplementary test results in termination of production the Contractor will be required to pay for the test.

The Contractor shall retain and pay an independent testing consultant to perform all materials certification tests and mix designs required in this section.

**End of Specification 04070**