SECTION 212 – WIDE CRACK REPAIR

1. SCOPE

The work covered by these specifications consist of furnishing all labor, equipment, and materials in performing all operations necessary in connection with the application of a wide crack repair material in complete and strict accordance with these specifications.

2. DESCRIPTION

This work shall consist of the application of hot-applied, pourable, self-adhesive materials used for maintenance and repair of asphalt pavement in accordance with these specifications. The work under this item consists of the cleaning and sealing of wide cracks and joints 1-1/2 inches or greater in width or as directed by the Engineer/Inspector.

3. MATERIALS

The joint/crack sealant shall consist of a hot applied, pourable, self adhesive, petroleum based product with select aggregate (such as Crafco PolyPatch, manufactured by CRAFCO, Inc. of Halls, TN, Deery Level & Go, manufactured by Deery American, Grand Junction, CO) *or an approved equal*. The material is to be heated and applied as recommended by the manufacturer.

4. PREPARATION OF SURFACE

All cracks to be sealed shall be heat lanced to remove all foreign materials and moisture which would prevent bonding between the sealant and the faces of the joints and cracks. Contaminants on the surface adjacent to the cracks shall also be removed. Do not burn the pavement (indicated by smoke) with the heat lance. Heat lancing may be deemed unnecessary by the Inspector if pavement is sufficiently dry.

Loose pavement material shall be removed prior to sealant installation. The cracks shall be inspected and approved by the Inspector prior to placing the crack sealant material. Final crack cleaning will be the same day of the sealing operation except as otherwise approved by the Inspector. Foreign materials shall be removed to a depth of two times the width of the crack to be sealed or as directed by the inspector.

Contractor shall control dust from the cleaning operation. Measures shall be taken to prevent damage to adjacent property from the cleaning operation. Debris that results from the cleaning operation shall be removed from the streets and adjacent properties.

5. EQUIPMENT

All equipment, tools, and machines used in the performance of this work shall be maintained in satisfactory working order at all times.

The material shall be placed into and heated in an appropriate indirectly heated melter with sufficient agitation.

Automatic temperature controls and an automatic safety shut-off system shall be used. The tank must be capable of circulating the heating oil.

The unit shall be equipped with all lights necessary for safe and legal operation on public roads.

Dial-type temperature gauges shall be mounted so as to allow monitoring of the temperature of the product in the tank and the heating oil. The tank shall be insulated.

The mixing shall be accomplished by a paddle-type agitator. Direction of rotation and speed of the auger or paddles are to be controlled hydraulically.

6. MAINTENANCE OF TRAFFIC/PUBLIC SAFETY

A. Closing of streets for this work shall be at the direction of the Engineer/Inspector and coordinated to result in the least practicable delay and inconvenience to traffic.

B. **The contractor shall submit a traffic control plan to be approved by the City Engineer or the Inspector.**

C. All vehicles shall be equipped with flashing lights to indicate construction in progress.

D. Any worker within the work zone shall be required to wear a class II garment conforming to Occupational Safety and Health Administration requirements.

E. Unless otherwise directed, all roads shall have one lane of traffic open in each direction at all times. The lanes being sealed shall be closed and guarded until cured out and open to traffic. In the case of a full street closure, the contractor must door hang and/or notify residents or businesses that are inconvenienced by the construction.

F. If the distance between the beginning of the operation and the uncured sealant exceeds 200 feet, then additional flagmen may be required on higher traffic streets.

G. Sufficient flagmen, warning signs, flashing arrow panels (truck mounted or stand-alone), and barricades shall be provided by the Contractor to properly control traffic and to prevent traffic from traveling in the freshly applied materials. The Contractor at no cost to the Owner shall repair any damage to the uncured sealant/membrane surface. F.

H. Barricades and barricading, flashing arrow panels, signs and other warning devices will be in accordance with the Federal Highway Administration "Manual on Uniform Traffic Control Devices" provisions for "Traffic Controls for Street and Highway Construction and Maintenance Operations." Flashing arrow panels shall be required for all operations.

7. MIXING AND APPLYING MATERIAL

The material shall be heated, agitated and installed according to the manufacturer's recommended heating times, temperatures and procedures. If the temperature of the material is

allowed to exceed the temperatures and heating times recommended by the manufacturer, then that material is unacceptable and must not be incorporated into the project.

The material shall be placed on all roadway cracks 1.5 inches wide and greater as directed by the Engineer/Inspector. The material can be poured directly from the melter into the prepared area, into an appropriate pouring bucket and then applied or poured into an appropriate material handler and installed. The material must be applied at least 6" beyond the work area and centered over the wide-crack to a depth exceeding the depth of the crack by ½ inch. Just after applying the material to the pavement it must be leveled to the surface level using a metal squeegee or shoebox.

Before the street is opened to traffic, a straight edge will be laid across the filled cracks to determine that the finished material surface is level in relation to the pavement surface within a 1/16 inch tolerance (between1/16 inch low and 1/16 inch high). Crack material that is found to outside the acceptable tolerance shall be removed and the crack shall be refilled properly before the contractor is allowed to continue sealing more streets.

Traffic shall not be allowed under normal conditions on the sealant until it has cured and the possibility of tracking does not exist. Dust with fine aggregate or spray with a liquid soap/water mixture, if necessary, to prevent pick up of the sealant if traffic is allowed on the pavement prior to proper cure time. The Engineer will determine, in conjunction with the Contractor, when this condition exists.

8. QUALITY CONTROL

The Contractor shall bear the responsibility for product quality and installation quality. Operations and procedures, which are considered by the manufacturer's technical representative as being detrimental to the effectiveness of the sealant, will not be permitted.

9. WEATHER LIMITATIONS

No material shall be applied unless the atmospheric temperature is 40° F. and rising nor when the temperature has been below 35° F. in the preceding 24 hours. No material shall be applied while the surface is wet nor when the impending weather conditions are such that proper curing may not be obtained.

10. BASIS OF PAYMENT

WIDE CRACK REPAIR shall be paid for by the pounds of crack filler applied in strict accordance with section 216, entitled "Wide Crack Repair" and Section 50, entitled "Miscellaneous Items."

Measurements for payment shall be based upon total weight of material applied and not upon the area or length of individual joints/cracks actually sealed.