

**SECTION 14 - RESTORATION OF SURFACES**  
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## **SECTION 14 RESTORATION OF SURFACES**

### **14-1 GENERAL**

All existing curbs, gutters, sidewalks, driveways, road shoulders, pavement, and similar items removed, damaged or displaced during the Work shall be restored by the Contractor. Restoration shall be done using the same types of materials as in the original construction, and to not less than the original dimensions, subject to minimum requirements specified herein, as shown or as specified in the Contract, or as directed by Agency. All work shall be constructed to match current standards and shall match the appearance of the existing improvements.

### **14-2 PRIVATE ROADS**

Trench compaction shall conform to the requirements in Section 19, "Trench Excavation, Bedding and Backfill", of these Specifications. Where asphalt surfacing exists, the surface restoration shall be a minimum of four inches (4") of aggregate base and two inches (2") of asphalt concrete, but in no case shall the thickness of either the asphalt or the thickness of the aggregate base be less than the thickness of the corresponding portions of the existing private road. Aggregate base and asphalt concrete shall be as specified in Section 14-3, "Streets and Parking Lots", in this Section of these Specifications. Where gravel, stone, or crushed rock surfacing exists, surface restoration shall consist of a minimum of four inches (4") of aggregate base, but in no case shall the thickness of the aggregate base be less than the thickness of the existing surface of the private road. The remaining gravel or stone roadway shall be reshaped to preconstruction cross section and given an application of a minimum of two inches (2") of three-quarter inch (3/4") maximum size gravel or crushed rock compacted into place. The restored surface of a private road shall be at least equivalent to the preconstruction surface condition.

### **14-3 STREETS AND PARKING LOTS**

Attention is directed to the requirements specified in Section 12, "Construction Area Traffic Control", of these Specifications.

Repaving of trench areas in bituminous pavement shall be in accordance with Standard Drawing 4-31. The asphalt concrete shall be placed as specified in Section 23, "Asphalt Concrete", of these Specifications.

#### **14-3.01 Aggregate Base**

The aggregate base materials and placement shall meet the requirements of Section 22, "Base Material", of these Specifications.

#### **14-3.02 Asphalt Concrete**

Immediately prior to placing asphalt concrete pavement, the top four inches (4") of base material, or more where greater depth of paving is shown on the Plans, shall be recompacted to a minimum relative compaction of ninety-five percent (95%). Base or underlying material that is wet, loose, or otherwise unsuitable for supporting the new paving shall be removed, to a maximum of twelve inches (12"), and replaced with aggregate base material and compacted in layers not exceeding six inches (6") in depth to a minimum relative compaction of ninety-five percent (95%). If unsuitable material is evident, see Section 18-5, "Unsuitable Material Excavation", of these Specifications. Edges of trenches that are broken or damaged shall be removed and neatly trimmed back to stable and undisturbed base and surface materials.

The edges of the existing pavement shall be given a tack coat of asphaltic emulsion. The trench shall then be filled and compacted, in layers not to exceed two inches (2"), with asphalt concrete, Type "A", conforming to Section 23, "Asphalt Concrete", of these Specifications until the trench has been brought to approximately three-quarter inch (3/4") below the finish grade and cross section of the street. The Contractor shall immediately repair any settlement more than one inch (1") below finish grade.

Prior to placement of the second lift, the surface of the first lift of pavement and the edges of the existing pavement shall be given a tack coat of asphaltic emulsion. The trench shall then be filled and compacted with asphalt concrete Type "A", one-half inch (1/2") maximum gradation, as specified above, until the pavement has been brought to the final grade and cross section of the street.

Unless otherwise noted, a single seal coat (see Section 14-3.03.A) shall be applied after placement of the final lift of asphalt concrete.

Final pavement surface for trenches greater than three feet (3') in width that are mostly parallel to the centerline of the street shall not vary from the edge of a 10-foot straight edge (placed parallel and perpendicular to the trench) by more than 3/8-inch, except at intersections or changes in grade.

Final pavement surface for trenches three feet (3') or less in width, bore holes having an area less than fifty (50) square feet, and trenches of any width that are not mostly parallel to the centerline of the street shall match the smoothness of the existing pavement, except final pavement surface grade shall not exceed three-eighths of an inch (3/8") above a line between the existing pavement surface at each edge of the excavation. Final pavement below this line is not acceptable.

Pavement not meeting the above requirements shall be removed and replaced to a minimum depth of one and one-half inches (1-1/2") for the full width of the trench. The minimum length of removal along the trench shall extend to four feet (4') beyond the ends of the non-conforming areas, but in no case shall the removal and replacement exceed the limits of the original excavation.

Density of compacted asphalt concrete may be tested at the discretion of the inspector. Core samples taken for testing compaction of asphalt concrete shall be tested in accordance with ASTM D2726-89 and shall be ninety-two percent (92%) or greater of the maximum Theoretical Density as determined by ASTM D-2041 (based on the full depth of the asphalt section).

### **14-3.03 Seal Coats**

Seal coat treatment shall be applied at locations specified, as shown on the Plans or as directed by the Agency. Seal coat shall not be placed until at least seventy-two (72) hours after placement of the final paving lift.

#### **14-3.03.A Single Seal**

**Alternate 1** - Slurry seal shall be furnished and placed as specified in Section 37-2, "Slurry Seal", of the State Specifications, with the exception that the fifth paragraph of Section 37-2.06, "Placing", shall be modified to provide that the thickness of application of slurry seal shall be adjusted to provide one (1) layer not less than one-eighth inch (1/8") thick nor greater than one-quarter inch (1/4") thick. The requirement for wetting surface prior to placement of slurry seal is waived.

**Alternate 2** - Sand seal shall be furnished and placed as specified in Section 37-1, "Seal Coats", of the State Specifications with the exception of the requirements for the asphaltic binder and aggregate. Asphaltic binder and aggregate shall be as follows:

- The asphaltic materials for the construction of sand seal shall conform to the requirements in Section 50-17, "Asphalt, Liquid Asphalt, and Asphaltic Emulsion", of these Specifications. The asphaltic materials shall be CRS 1.

- The rate of application of CRS 1 shall vary between 0.08 and 0.15 gallons per square yard as directed by the Agency, depending upon the surface condition and weather.
- Aggregate for sand seal shall conform to Section 37-2.02C, “Aggregate”, of the State Specifications and shall be spread at the rate of six (6) to ten (10) pounds per square yard, or as directed by the Agency.

Preparation of seal coat, applying bituminous binder, spreading, and finishing shall be in accordance with Section 37, “Bituminous Seals”, of the State Specifications, with the exception that steel wheeled rollers for sand seal may be eliminated and the pneumatic roller used for all seal operations.

All bituminous pavement replacements and seal shoulders sealed under one of the above alternates shall receive the seal coat for the full width of the trench or pavement replacement, plus a minimum of twenty-four inches (24”) on each side of the trench, except that seals shall not overlap concrete curb and gutter.

#### **14-3.03.B Double Seal**

The areas shown on the Plans or directed by the Agency shall receive a double seal coat treatment. The first seal coat of the double seal shall be the course seal coat specified in Section 37, “Bituminous Seals”, of the State Specifications. The final seal shall be as specified in Section 14-3.03.A, “Single Seal”, in this Section of these Specifications, for a single seal.

#### **14-3.04 Shoulders**

Surface restoration of trenches located in a shoulder within six feet (6’) of the traveled way shall consist of a structural section equal to the original, or as shown on the Plans, but having a minimum of five inches (5”) of aggregate base compacted to a relative compaction of ninety-five percent (95%). This aggregate base shall then receive a double seal coat treatment as specified in Section 14-3.03.B, in this Section of these Specifications unless otherwise specified in the Special Provisions or directed by the Agency.

#### **14-3.05 Cuts in New Pavement**

Cuts in pavement that has been constructed or overlaid with asphalt concrete greater than one inch (1”) in depth within the last three to five (3 to 5) years shall be treated as follows:

The existing pavement around the cut shall be planed to a depth of one and one-half inches (1-1/2”) in accordance with the requirements of Section 26, “Cold Plane Asphalt Concrete Pavement”, of these Specifications. The planed area shall extend on each side of the cut as shown on Standard Drawing 4-31. The planed area shall be given a tack coat of asphaltic emulsion and paved with one and one-half inches (1-1/2”) of asphalt concrete, Type A, and compacted as specified in these Specifications. A seal coat is not required.

Cuts in pavement less than three (3) years old shall not be made without the approval of the Director of Transportation and may require special mitigation measures beyond those indicated above.

### **14-4 CONCRETE**

Repairs to concrete curbs, gutters, sidewalks, driveways, and other concrete surfaces shall be made by removing and replacing the entire portions between joints or scores, except as follows:

- Curb and gutter shall be replaced between saw cuts so that the remaining or new curb and gutter will not be less than four feet (4’) in length, measured from the saw cut to the nearest score mark, expansion joint, construction joint or weakened plane joint.

- The entire width of sidewalk shall be replaced between saw cuts for a length of not less than four feet (4') providing the remaining sidewalk shall not be less than four feet (4') in length, measured from the saw cut to the nearest score mark, expansion joint, construction joint or weakened plane joint.
- Driveways shall be replaced as directed by the Agency, either completely or partially by saw cutting in the middle of the driveway.

Replacement shall be in accordance with the applicable requirements, including the placement of Aggregate Base Class 2 under the new concrete as specified in Section 27, "Curbs, Gutters, Sidewalks, and Drainage Structures", of these Specifications, except provisions for payment, for the type and classification of work set forth in other Sections of these Specifications. Pedestrian access shall be maintained in accordance with Section 6-12.02, "Pedestrian Access", of these Specifications.

#### **14-5 PAVEMENT MARKINGS**

Except where specified otherwise in these Specifications or the Special Provisions, the Contractor will replace all crosswalks and other permanent pavement markings and raised markers that have been disturbed, destroyed, or covered by the Work. If the Special Provisions indicate that the Agency will replace pavement markings, the Contractor shall pay the current prices per square foot for pavement markings or unit price per marker to the Agency, and Agency forces will replace the markers or markings on the completed surface. The current prices per square foot for pavement markings or unit price per marker are specified in the Contract.

#### **14-6 TEMPORARY PAVING**

Temporary paving shall be placed at locations and maintained at locations wherever excavation is made through pavement, sidewalk or driveways, as shown on the Plans, or as directed by the Agency. Temporary paving shall be placed as soon as the condition of the backfill is suitable to receive it and shall remain in place until the condition of the backfill is suitable for permanent resurfacing. Asphalt concrete Type "A", conforming to Section 23, "Asphalt Concrete", of these Specifications, shall be used as temporary paving on all major streets. Temporary paving in all other paved areas may be asphalt plant-mix cutback, unless otherwise directed by the Agency. Thickness of temporary paving shall be one and one-half inches (1-1/2") unless otherwise shown on the Plans. In sidewalk areas, the temporary bituminous surface shall be at least one inch (1") thick. Temporary paving shall be maintained at the same level as the existing pavement until the permanent surfacing is placed. In no case shall temporary pavement be allowed to remain for a period greater than thirty (30) calendar days unless approved in writing by the Agency.

All temporary paving shall be identified by painting the words "TEMPORARY PAVEMENT" along with the name of the contractor responsible for maintaining the temporary paving material and the date in which the material was placed. Painted text shall be in white lettering at the beginning, ending, and along the length of the temporary paving at maximum intervals of five hundred feet (500'). The text shall be neatly stenciled a minimum five inches (5") in height and shall be maintained in a neat and legible condition.

Temporary pavement and/or portions of temporary pavement totaling one thousand feet (1000') or greater in length shall also be identified with a construction sign placed along the edge of the roadway and constructed in accordance with Section 34-3 of these specifications. Temporary pavement signs shall be thirty inches by thirty inches (30" X 30") in a diamond configuration and shall be orange with five-inch (5") black lettering. Signs shall be installed at the beginning, ending and at maximum intervals of one thousand feet (1000') and shall be installed within the road right of way whenever possible. Signs shall not be installed in a location

that would obstruct visibility or create an obstacle for pedestrians. The property owner's permission must be obtained if signs are placed on private property.

#### **14-7 MEASUREMENT AND PAYMENT**

The lump sum price paid for items of work included in the Contract for restoration of surfaces removed, damaged, or displaced by the Work includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved, complete in place, as shown or as specified in the Contract, specified in these Specifications, and as directed by the Agency.

If no item is included in the Contract for restoration of surfaces, full compensation for conforming to the provisions in this Section (Section 14), not otherwise provided for, is included in the prices paid for the various items of work involved, and no separate payment will be made.

Temporary paving will be measured for payment by weight of asphalt concrete placed in the Work, in accordance with Section 39-8.01, "Measurement", of the State Specifications.

The price paid per ton for temporary paving includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in temporary paving, complete in place, as shown or specified in the Contract, specified in these Specifications, and directed by the Agency.

If there is no item in the Contract for temporary paving, full compensation for conforming to the provisions in this Section, not otherwise provided for, is included in the prices paid for the various items of work involved, and no separate payment will be made.