

**CHAPTER 3.17  
RESTORATION OF SURFACE IMPROVEMENTS**

Sections:

- 3.17.005 General
- 3.17.010 Gravel Surface.
- 3.17.015 Bituminous Surface.
- 3.17.020 Concrete Surfaces.
- 3.17.025 Pavement Patching.

**3.17.005 GENERAL.** The Contractor shall be responsible for the protection and the restoration or replacement of any improvements existing on public or private property at the start of work or placed there during the progress of the work. All restoration of improvements shall comply with the requirements of Chapter 3.02, "Permit Requirements for Work in the Public Way." Existing improvements shall include but are not limited to permanent surfacing, curbs, gutters, sidewalks, planted areas, ditches, driveways, culverts, fences, and walls. All improvements shall be reconstructed to equal or better conditions in all respects than the existing improvements removed.

**3.17.010 GRAVEL SURFACE.** Where trenches are excavated through gravel surfaced areas such as roads and shoulders, parking areas, unpaved driveways, etc., the gravel surface shall be restored and maintained as follows:

- A. The gravel shall be placed deep enough to provide a minimum of eight (8) inches of material.
- B. The gravel shall be placed in the trench at the time it is backfilled. The surface shall be maintained by blading, sprinkling, rolling, adding gravel, etc., to maintain a safe, uniform surface satisfactory to the City Engineer. Excess material shall be removed from the premises immediately.
- C. Material for use on gravel surfaces shall be obtained from sound, tough, durable gravel or rock meeting the following requirements for grading:

	<u>Ideal</u>	<u>Tolerance</u>	
Passing 1 inch sieve	100	0	
Passing ½ inch sieve	85	∇ 6	
Passing No. 4 sieve		55	∇ 6
Passing No. 16 sieve		31	∇ 4
Passing No. 200 sieve		9	∇ 2

**3.17.015 BITUMINOUS SURFACE.** Where trenches are excavated through bituminous surfaced roads, driveways, parking areas, etc., the surface shall be restored and maintained as follows:

- A. A temporary gravel surface shall be placed and maintained as required in Section 3.17.010 above after the required backfill and compaction of the trench has been accomplished.
- B. The gravel shall be placed to such depth as to provide eight (8) inches thickness below the bottom of the asphalt pavement and shall be brought flush with the paved surface.
- C. The area over trenches to be resurfaced shall be graded and rolled to provide a subgrade which is firm and unyielding. Density of the subgrade materials shall be ninety five (95) percent AASHTO T-180. Mud or other soft or spongy material shall be removed and the void filled with gravel and rolled and tamped thoroughly in layers not exceeding six (6) inches in thickness. The edges of trenches which are broken down during the making of subgrade shall be removed and trimmed neatly before resurfacing.
- D. Before any permanent resurfacing is placed, the Contractor shall trim the existing paving to clean, straight lines as nearly parallel to the centerline of the trench as practicable. Said straight lines shall be thirty (30) feet minimum length and no deviations from such lines shall be made except as specifically permitted by the City Engineer.

E. Existing bituminous paving shall be cut back a minimum of six (6) inches beyond the limits of any excavation or cave-in along the trench so that the edges of the new paving will rest on at least six (6) inches of undisturbed soil.

F. As soon as is practical, weather permitting, the bituminous surface shall be restored by standard paving practices to the thickness shown on the Drawings and/or defined in the Proposal, or matching the existing pavement cut during excavation.

G. Pavement restoration shall include priming of pavement edges and sub-base with Type MC-70 bituminous material and placing and rolling plant hot mix bituminous material to the level of the adjacent pavement surfaces.

**3.17.020 CONCRETE SURFACES.** All concrete curbs, gutters, sidewalks and driveways shall be removed and replaced to the next joint or scoring line beyond the actually damaged or broken sections; or in the event that joints or scoring lines do not exist or are three (3) or more feet from the removed or damaged section, the damaged portions shall be removed and reconstructed to a neat "saw cut" vertical plane face. All new concrete shall match, as nearly as possible, the appearance of adjacent concrete improvements. Where necessary, lamp black or other pigments shall be added to the new concrete to obtain the desired results. All concrete work shall conform to the requirements of Chapter 3.05 of this Title.

**3.17.025 PAVEMENT PATCHING.** This work shall consist of the patching of various types of pavement cuts, the performance of which shall be in accordance with the requirements outlined hereinafter as shown on the standard Drawing.

A. All materials shall conform to the requirements specified for material in other sections of these standard Specifications.

B. Pavement patching shall be scheduled to accommodate the demands of traffic and shall be performed as rapidly as possible to provide maximum safety and convenience to public travel.

C. Failure on the part of the Contractor at any time to maintain the roadway or structures in a satisfactory condition will result in the City Engineer immediately notifying the Contractor to comply with the required maintenance provisions. In the event that the Contractor fails to remedy unsatisfactory maintenance within twenty-four (24) hours after receipt of such notice, the City Engineer will immediately proceed with adequate forces and equipment to maintain the project and the entire cost of this maintenance shall be deducted from monies due the Contractor on his contract.

D. The placing and compaction of the trench backfill, and the preparation and compaction of the subgrade shall be in accordance with the requirements of the various applicable sections of these specifications.

E. Before the patch is constructed, all pavement cuts shall be trued so that the marginal lines of the patch will form a rectangle with straight edges and vertical faces. The use of a concrete saw will not be required unless provided for in the special provisions.

F. Proper signs, barricades, lights, and other warning devices, as may be approved by the Engineer, shall be maintained all twenty four (24) hours of the day until the patch is completed and ready for traffic.

G. The Contractor shall furnish, place and maintain until final settlement, to the satisfaction of the City Engineer, a two (2) inch thick cold asphalt plant mix patching over trench areas when and where directed by the Engineer. Also, such temporary crushed base and asphalt concrete pavement may be required by the Engineer at any time the roadway is needed for vehicular traffic and permanent pavement cannot be placed. Stockpile of the crushed base and plant mix shall be provided on the site by the Contractor. The Contractor shall remove the temporary base and asphalt, clean the exposed face of the existing concrete and restore the concrete pavement herein specified at the time directed by the Engineer.

H. Streets which have rigid type pavements resurfaced with asphalt concrete shall be patched as shown on the standard Drawing, or as otherwise specified. The surface of the cement concrete portion of the patch shall be left

low enough to accommodate the asphalt portion of the patch. Brush finishing will not be required. Joints shall be placed if directed by the Engineer.

I. Asphalt concrete or bituminous plant mix shall not be placed until the day after the cement concrete has been placed unless otherwise permitted by the City Engineer. The edges of the existing asphalt pavements and castings shall be painted with hot asphalt cement or asphalt emulsion immediately before placing the asphalt patching material. The asphalt concrete pavement shall then be placed, leveled, and compacted to conform to the adjacent paved surface. Immediately thereafter, all joints between the new and original asphalt pavement shall be painted with hot asphalt or asphalt emulsion and be covered with dry paving sand before the asphalt solidifies.

J. After the subgrade has been prepared as shown on the standard Drawing, or as directed by the City Engineer, asphalt concrete pavement shall be placed to a thickness of the existing asphalt pavement depth, or to a minimum of two (2) inches, whichever depth is the greater.

K. All incidental work required to complete the patching of street surfaces as specified, including joints where required, shall be considered as incidental to the patching and the costs thereof shall be included in the items for which payment is provided.

L. On all public works contracts the Contractor shall perform all work backfilling of excavations made under existing pavements, and the restoration of pavement cuts and patching in accordance with these specifications unless otherwise provided in the special provisions of the proposals.