

CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS
SECTION 02950 REMOVAL AND REPLACEMENT OF PAVEMENTS AND INCIDENTALS

PART 1 – SCOPE

This Work shall consist of the removal and replacement of pavements, sidewalks, driveway aprons, curbs and gutters, driveways, paved areas, and curbs made necessary by the construction of drainage facilities, sanitary sewers, traffic control conduit, and other items of construction that require temporary cuts. Such replacement shall be to a condition at least equal to the condition existing prior to removal and of in-kind material and shall be compliance with the Plans, these Specifications, or as directed by the Owner. The Work which will be included in the Contract and for which the Contractor shall be compensated therefore is limited to that area within the rights-of-way and construction easements for the Project. The Contractor will not be compensated for the removal and replacement of facilities outside the rights-of-way, easements, and limits of construction of the Project.

PART 2 – MATERIALS AND EQUIPMENT

2.01 MATERIALS

A. Concrete: Concrete materials shall meet the requirements of Specification Section 03050, Portland Cement Concrete for Class A concrete.

B. Curing Material: Curing materials shall conform to the applicable provisions of Specification Section 02750 Paragraph 2.01 C.

C. Asphaltic Concrete Wearing Surface and Asphalt Curb: Asphaltic concrete wearing surfaces and asphalt curb shall meet the requirements of Specification Section 02741 Paragraph 2.01 D., "Composition of Mixtures", for Mix No. 1.

D. Asphalt Driveway Pavement: Asphalt driveway pavement shall meet the requirements of Specification Section 02741 Paragraph 2.01 D., "Composition of Mixtures", for Mix No. 2.

E. Expansion Joint Filler: Prefomed expansion joint filler shall be of the bituminous type, shall conform to eh requirements of AASHTO M 213 and shall not be more than 1 inch or less than 1/2 inch in thickness. The filler shall be cut to the full depth of pavement, curb and gutter, sidewalk, or driveway being replaced.

F. Gravel Pavement or Base: Camden gravel or crushed limestone meeting the requirements of Specification Section 02720 Paragraph 2.01, Aggregates for Gradation No. 1, 2 or 3 shall be used to replace graveled areas disturbed by construction.

2.02 EQUIPMENT

A. Equipment and tools necessary for cutting, removal, and hauling of existing items; handling and placement of new material; and all equipment necessary to perform all parts of the Work shall be at the job site sufficiently ahead of the start of construction operations to be examined and approved by the Owner.

B. When saws are used to cut pavement, the Contractor shall provide sawing equipment adequate in power to complete the sawing to a minimum of 1-1/2 inches below the pavement surface in one pass. An ample supply of saw blades shall be maintained at the site of the Work at all times during sawing operations.

C. Other types of pavement cutting equipment shall be capable of cutting the pavement to a neat straight line of 1-1/2 inch minimum depth below the pavement surface in one pass.

D. The Contractor shall provide equipment capable of removal of pavements, sidewalks, driveway aprons, curbs and gutters, driveways, paved areas, and curbs without disturbance of adjacent items to remain in place.

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E. Equipment necessary for the handling, placement, and finishing of concrete shall meet the applicable requirements of Specification Section 02750 Paragraph 2.02, "Portland Cement Concrete Pavement"; Specification Section 02775 Paragraph 2.02, "Portland Cement Concrete Sidewalks and Driveways"; and Specification Section 02770 Paragraph 2.02, "Curb, Curb and Gutter, and Water Table" .

F. Equipment necessary for the handling, placement, and compaction of asphalt shall meet the requirements of Specification Section 02741 Paragraph 2.02.

PART 3 – CONSTRUCTION REQUIREMENTS

3.01 REMOVAL OF ASPHALT PAVEMENT

Asphalt pavement shall be removed to a clean straight line as detailed on the Plans. Pavement shall be cut by saw or other equipment approved by the Owner in advance. Edges of existing asphalt pavement adjacent to trenches where damaged shall be recut in a clean straight line within the limits of damaged pavement only. Such recuts shall be parallel to the original cuts and perpendicular to the pavement surface.

3.02 REMOVAL OF CONCRETE PAVEMENT

A. Concrete pavement shall be removed to a neat straight line as detailed on the Plans. Care shall be used to avoid damage to pavements and to the pavement base remaining in place.

B. Concrete pavement may, at the Contractor's option, be removed by saw cutting to a neat straight line. Saw cuts shall be made to a minimum depth of 1-1/2 inches and at a location to provide a cutback edge in accordance with the Design Standards. The edges of the existing concrete pavement adjacent to trenches where damaged subsequent to saw cutting of pavement shall again be saw cut in a neat straight line to remove the damaged pavement areas. Such saw cuts shall be parallel to the original saw cuts and perpendicular to the pavement surface.

3.03 REMOVAL OF CONCRETE SIDEWALK, CURB AND GUTTER, AND DRIVEWAY

Concrete sidewalks, curbs and gutters, and driveways shall be removed to the nearest contraction or expansion joint. Care shall be used to avoid damage to sidewalks, curbs and gutters, and driveways remaining in place.

3.04 REMOVAL OF GRAVEL PAVEMENT

Gravel surfaces encountered in construction shall be removed to the limits shown on the Plans.

3.05 REPLACEMENT OF PAVEMENT

A. Asphalt or Surface Treated Pavements: Replacement of asphalt or surface treated pavement and base shall consist of 8 inches of Class A concrete base and 1 inch of asphaltic concrete surface course Mix No. 1 for the entire cross-section of pavement removal area, including all areas where pavement was re-cut subsequent to the initial pavement removal.

B. Concrete Pavements

1. Concrete pavement shall be replaced with Class A concrete pavement equal in thickness to the pavement removed but not less than 8 inches thick. Concrete pavement and base replacement shall be constructed for the entire cross-section of pavement removal area including all areas where pavement was re-cut subsequent to the initial pavement removal.

2. Reasonable efforts shall be made to avoid contrast in the color and texture of existing and restored surfaces.

C. Placing, Curing, and Protection of Concrete

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1. After the backfill in the trench has been brought to the appropriate subgrade elevation shown on the Plans, compacted to the specified density, and permission has been given by the Owner, a concrete slab of the appropriate thickness shall be placed within the entire disturbed area.

2. Any loose or disturbed pavement or base shall be removed prior to placement of the concrete. Concrete shall be placed only on a moist subgrade and shall not be placed unless the ambient temperature is 35° F and rising. In no case shall concrete be placed on a frozen or frosty subgrade. After the concrete is placed, it shall be struck off in an approved manner to the appropriate grade as shown on the Plans and shall be finished with floats and straight edges until the required surface texture has been obtained.

3. Curing and cold weather protection shall be performed as provided for under Specification Section 02750 Paragraph 3.11. No vehicles or loads shall be permitted on any concrete until the Owner has determined that the concrete has obtained sufficient strength for such loads. The contractor shall construct and place such barricades and protection devices as are necessary to protect the concrete.

D. Placing Asphaltic Concrete Wearing Surface: After the concrete base has been placed and adequately cured, an asphaltic concrete wearing surface of the minimum specified thickness shall be placed and compacted as specified in Specification Section 02710.4 Paragraphs 3.01 – 3.11, Asphaltic Concrete, Construction Requirements.

3.06 REPLACEMENT OF SIDEWALKS, DRIVEWAY APRONS, CURBS AND GUTTERS, DRIVEWAYS AND OTHER PAVED AREAS, AND CURBS

A. Concrete sidewalks and driveway aprons shall be replaced in accordance with the requirements of Specification Section 02775 Paragraphs 3.01 – 3.08, "Portland Cement Concrete Sidewalks and Driveways, Construction Requirements". Any expansion joint material removed shall be replaced at the original locations. Existing concrete edges shall be cleaned prior to placement of concrete. The finished concrete elevation, texture, and color shall conform to the adjacent concrete surfaces.

B. Unless otherwise directed, curb and gutter shall be replaced with new concrete curb and gutter of the same cross-section and at the same top of curb elevation and flow line as that removed. Where curb and gutter of a different type than existing is to be used for replacement, the replacement flow line shall match existing and a transitions section provided between the existing and replacement cross-sections. Curb heights shall be transitioned at a rate of 1 inch in 5 feet. Granite curb shall be replaced with new concrete curb whose height matches existing adjacent curb top elevations. New concrete curb and gutter construction shall conform to the requirements of Specification Section 02770 Paragraphs 3.01 – 3.10, "Curb, Curb and Gutter, and Water Table, Construction Requirements". Any expansion joint material removed shall be replaced at the original locations. Existing concrete edges shall be cleaned prior to placement of concrete. The finished curb and gutter cross-section, elevations, texture, and color shall conform to the adjacent concrete surfaces.

C. Replacement of paved areas other than street pavement; concrete, asphalt, or gravel driveways; and asphalt or concrete curb within the right-of-way or construction easement limits shall be in kind for those cross-sections removed, unless directed otherwise by the Owner.

3.07 DAMAGE DUE TO SETTLEMENT

A. The Contractor shall be responsible for any damage caused by settlement of backfill placed beneath pavements, sidewalks, driveway aprons, curbs, curbs and gutters, driveways, paved areas other than street pavement, and asphalt or concrete curb within the right-of-way or construction easement limits. This includes any damage which may occur at any time prior to,

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and during a period of one year from and after the date of Final Acceptance of the Work covered by the Contract.

B. During such period, the Contractor shall at his own cost and expense refill all excavations where settlement damage has occurred and replace damaged pavements, sidewalks, driveway aprons, curbs, curbs and gutters, paved areas, driveways, and all other damaged items to the satisfaction of the City. Should the Contractor fail to repair settlement damage which may occur as described above within 30 days after being given notice thereof, the City shall have the right to repair such settlement and charge the cost of such repairs to the Contractor.

3.08 DAMAGE OUTSIDE CONSTRUCTION EASEMENT LIMITS

A. The Contractor will be held responsible for all damage to roads, highways, shoulders, curbs and gutters, ditches, embankments, bridges, culverts, and other property, caused by him or any of this Subcontractors in hauling or otherwise transporting materials to and from the several sites of Work, regardless of the location of such damage. The Contractor shall make arrangements relative to the payment for, or repair or replacement of, such damage or damaged surfaces or structures which are satisfactory and acceptable to the owner or owners of such damaged surfaces or structures, or to their legally responsible officers, agents, or other representatives, at the Contractor's cost and expense.

PART 4 – MEASUREMENT

4.01 PAVEMENT REMOVAL AND REPLACEMENT

Pavement removal and replacement shall be measured for payment by the square yard, complete in place.

4.02 CONCRETE SIDEWALK REMOVAL AND REPLACEMENT

Sidewalk removal and replacement shall be measured for payment by the square foot, complete in place.

4.03 CONCRETE DRIVEWAY APRON REMOVAL AND REPLACEMENT

Driveway apron removal and replacement shall be measured for payment by the square foot, complete in place.

4.04 CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT

Curb and gutter removal and replacement shall be measured for payment by the linear foot, complete in place.

4.05 ASPHALT OR CONCRETE DRIVEWAY AND PAVED AREA REMOVAL AND REPLACEMENT

Asphalt or concrete driveway and paved area removal and replacement shall be measured for payment by the square foot, complete in place.

4.06 GRAVEL DRIVEWAY AND GRAVEL AREA REMOVAL AND REPLACEMENT

Gravel driveways and gravel area removal and replacement shall be measured for payment by the ton of Camden gravel or crushed limestone, complete in place.

4.07 ASPHALT AND CONCRETE CURB REMOVAL AND REPLACEMENT

Asphalt and concrete curb removal and replacement shall be measured for payment by the linear foot along the face of curb, complete in place.

PART 5 – PAYMENT

5.01 PAVEMENT REMOVAL AND REPLACEMENT

The accepted quantities of pavement removal and replacement shall be paid for at the contract unit price per square yard for the type specified, which price will be full compensation for cutting and recutting pavement; removal and disposal of pavement and base; preparing the subgrade; placing, finishing,

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curing, and protection of concrete; and placing and compacting asphaltic concrete wearing surfaces, complete in place.

5.02 CONCRETE SIDEWALK REMOVAL AND REPLACEMENT

The accepted quantities of sidewalk removal and replacement shall be paid for at the contract unit price per square foot, which price will be full compensation for removal and disposal of sidewalk; preparing the subgrade; and placing, finishing, curing and protection of concrete, complete in place.

5.03 CONCRETE DRIVEWAY APRON REMOVAL AND REPLACEMENT

The accepted quantities of driveway apron removal and replacement shall be paid for at the contract unit price per square foot for the type specified, which price will be full compensation for removal and disposal of driveway apron; preparing the subgrade; and placing, finishing, curing, and protection of concrete, complete in place.

5.04 CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT.

The accepted quantities of curb and gutter removal and replacement shall be paid for at the contract unit price per linear foot for the type specified, which price will be full compensation for removal and disposal of curb and gutter; preparing the subgrade; and placing, finishing, curing and protection of concrete, complete in place.

5.05 ASPHALT OR CONCRETE DRIVEWAY AND PAVED AREA REMOVAL AND REPLACEMENT

The accepted quantities of asphalt or concrete driveway and paved area removal and replacement shall be paid for at the contract unit price per square foot for the type specified, which price will be full compensation for cutting and recutting; pavement removal and disposal of pavement and base; preparing the subgrade; placing, finishing, curing, and protection of concrete; and placing and compacting asphalt, complete in place.

5.06 GRAVEL DRIVEWAY AND GRAVEL AREA REMOVAL AND REPLACEMENT

The accepted quantities of gravel driveway and gravel area removal and replacement shall be paid for at the contract unit price per ton of Camden gravel or crushed limestone, which price will be full compensation for preparing the subgrade and replacing the gravel, complete in place.

5.07 ASPHALT AND CONCRETE CURB REMOVAL AND REPLACEMENT

The accepted quantities of asphalt and concrete curb removal and replacement shall be paid for at the contract unit price per linear foot, which price will be full compensation for removal and disposal of curb and placing new curb, complete in place.

5.08 PAYMENT WILL BE MADE UNDER:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02950-01	PAVEMENT REMOVAL AND REPLACEMENT	Square Yard
02950-01.01	Asphaltic Concrete Pavement	Square Yard
02950-01-02	Concrete Pavement	Square Yard
02950-02	CONCRETE SIDEWALK REMOVAL AND REPLACEMENT	Square Foot
02950-03	CONCRETE DRIVEWAY APRON REMOVAL AND REPLACEMENT	Square Foot
02950-03.____	(Description)	Square Foot
02950-04	CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	Linear Foot
02950-04.____	(Description)	Linear Foot

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02950-05	ASPHALT OR CONCRETE DRIVEWAY AND PAVED AREA REMOVAL AND REPLACEMENT	Square Foot
02950-05.01	Asphalt Driveway and Paved Area	Square Foot
02950-05.02	Concrete Driveway and Paved Area	Square Foot
02950-06	GRAVEL DRIVEWAY AND GRAVEL AREA REMOVAL AND REPLACEMENT	Ton
02950-06.01	Replacement with Camden Gravel	Ton
02950-06.02	Replacement with Crushed Stone	Ton
02950-07	ASPHALT AND CONCRETE CURB REMOVAL AND REPLACEMENT	Linear Foot
02950-07.01	Concrete Curb	Linear Foot
02950-07.02	Asphalt Curb	Linear Foot

END OF SECTION 02950