

## Division 2 - Site Work

### Section 02600 - Paving and Surfacing

#### Sub-Section 02614.1 - Portland Cement Concrete Street Paving

Scope: This section of the technical provisions, together with the applicable detail sheet and general & special conditions, shall include everything necessary for and incidental to all Portland Cement Concrete removal and replacement of street pavement and curbs and gutters.

Material: All Portland Cement Concrete shall be a 6.5 sack mix per cubic yard using Type I cement, Meramec sand (F.A.), Meramec gravel (C.A.) having 6% air-entrainment ( $\pm 1\%$ ) and 3-4 inch slump. This concrete shall attain 100% of the required 28-day compressive strength of 4000 psi to be accepted.

Forms shall be of steel, straight, smooth, clean, free of dents and warps and being of sufficient length.

All material and debris resulting from this work shall become the property of the Contractor, shall be removed promptly from the site, and properly disposed of.

Tests must be conducted by an approved independent testing laboratory as outlined in "Section 01400 of these specifications with testing costs to be included in their respective unit prices. The Director, or his representative, reserves the right to reject and require replacement of any material which does not conform to these specifications, or to Section 501, 502 and/or other applicable sections of the 2004 Missouri Standard Specifications for Highway Construction. **Any additional admixtures may not be used without prior approval of the Director.**

All exposed concrete surfaces shall be cured/sealed/hardened immediately with Ashford Formula by AMSTAR or an approved equal; to be applied per the manufacturer's recommendations. The local supplier must be notified and be able to certify in writing that their product was applied properly.

All expansion joint material shall consist of 1/2" wide 6" deep pre-molded asphalt impregnated filler strips sufficiently pliable to make any bends required on the project, and shall conform to ASTM Standard Specifications for Pre-formed Expansion Joint Fillers for Concrete D1551-60T, to match existing, as required.

All base aggregate, required to improve the subgrade, shall be Type 5 Aggregate as specified in Section 1007 of the 2004 Missouri Standard Specifications of Highway Construction.

Execution: Work may proceed when the weather forecast is in the 50 degrees F. during the day, upper 30 degrees F. at night for the entire week; dry and sunny to partly sunny during the day. Open slab holes will be limited over the weekend. All work to be coordinated with Jason Timme, Superintendent of Streets at 314-839-7653.

Pavement removal shall be performed using a hydra hammer, backhoe with breaker or other pre-approved method. Care must be taken not to chip or otherwise damage driveway approaches, or adjacent sidewalks.

The Contractor is responsible for location of all underground utilities prior to any excavation.

Sawcutting shall be done using a 65 H.P. Target Saw with Diamond Edge Water Cooled Blade, or approved equal. The cut will be a minimum depth of 2.3 inches of the street pavement, through the PCC concrete layer. Sawcutting must also proceed at a rate of 800 L.F. to 1000 L.F. per day.

Before placement of any P.C.C. concrete, the subgrade shall be inspected and approved by the Director or his representative prior to placing base aggregate and compacting to at least 90% of maximum density, modified proctor standard, ASTM D1557/AASHTO T180.

Forms shall be cleaned and thoroughly oiled each time they are used before concrete is placed against them. Forms shall rest firmly for their entire length upon a firm subbase. They shall be joined neatly and tightly. All forms shall be braced by using at least three (3) bracing pins or stakes for each 10' length of form. Forms shall be supported and not deviate vertically more than 1/8" from the true grade line during the entire operation of placing, finishing, and curing the concrete.

Concrete shall be placed on a damp base, properly consolidated using vibratory means (vibratory screed or "dick" vibrator, sparingly), receive a light brush/broom finish, immediately seal after finishing and leave forms in place for 24 hours.

Barricades and/or flagging shall be used to prevent traffic on walks for 24 hours and on driveways for 5 days during the curing period. All Barricades must (in all cases) meet the Type II standard as identified in the Manual of Uniform Traffic Control Devices, Sec. 6C-9. Barricades placed in the street, as opposed to the gutter area, must have Type A Low Intensity Flashing Warning Lights per Sec. 6E-5, or shall be the Drum type per Sec. 6C-6 without lights.

The Contractor shall protect and maintain all public and/or private property adjacent to work areas, and shall restore all public and private property adjacent to sidewalk, driveway walk, or driveway approach work. Any damage shall be repaired or restored at Contractor's expense, with particular attention to trees, shrubs, flowers, bushes, and type of grass/sod. All restoration shall conform to Sections 801.2 and 803.2 of the 2004 Missouri Standard Specifications for Highway Construction.

In cold weather, suitable precautions shall be taken to maintain the temperature of the concrete at 40 degrees F. or more for three days.

In hot weather, suitable precautions shall be taken to maintain the temperature of the concrete at 90 degrees F. or less for three days.

All required adjustments at utilities or because of utilities, shall be made by the Contractor or by the utility companies at the Contractor's expense, prior to placement of concrete material.

Contractor will not excavate more than 6 inches behind existing curb or pavement to set forms for new P.C.C. pavement or curbs.

The Contractor shall perform all site restoration work.

Payment: For all "7" P.C.C. Street Pavement Replacement" work specified under this section, including all labor, equipment, tools, materials, traffic control, testing, base aggregate, all base and subgrade preparations and site restoration, the Contractor shall receive the square yard (S.Y.) unit price, as stated in his proposal.