

SPECIAL SPECIFICATION**3061****Fast Track Concrete Pavement**

1. **Description.** Construct fast track concrete pavement, on a prepared subgrade, in accordance with the typical sections shown on the plans. Use fast track concrete pavement on small pavement areas, or leave-outs as shown on the plans for both continuously reinforced and jointed concrete pavements.
2. **Materials.**
 - A. **Hydraulic Cement Concrete.** Unless otherwise shown on the plans or approved by the Engineer, provide Class HES concrete conforming to Item 421, "Hydraulic Cement Concrete," with a minimum average flexural strength of 425 psi in 16 hours. Test in accordance with Tex-448-A.
 - B. **Reinforcing Steel.** Provide reinforcing steel in accordance with Section 360.2.B, "Reinforcing Steel."
 - C. **Curing Materials.** Provide curing materials in accordance with Section 420.2.H, "Curing Materials." Provide insulating blankets for curing concrete pavement with a minimum thermal resistance (R) rating of 0.5 hour-square foot F/BTU. Use insulating blankets that are free from tears and are in good condition.
 - D. **Epoxy.** Provide epoxy in accordance with Section 360.2.D, "Epoxy."
 - E. **Evaporation Retardant.** Provide evaporation retardants in accordance with Section 360.2.E, "Evaporation Retardant."
 - F. **Joint Sealants and Fillers.** Provide joint sealants and fillers in accordance to Section 360.2.F, "Joint Sealants and Fillers."
3. **Equipment.** Provide equipment in accordance with Article 360.3, "Equipment."
4. **Construction.** Obtain approval for adjustments to plan grade-line to maintain thickness over minor subgrade or base high spots while maintaining clearances and drainage. Maintain subgrade or base in a smooth, clean, compacted condition in conformity with the required section and established grade until the pavement concrete is placed. Keep subgrade or base damp with water sufficiently in advance of placing pavement concrete. Adequately light the active work area for all nighttime operations. Provide and maintain tools and materials to perform testing.
 - A. **Paving and Quality Control Plan.** Submit a paving and quality control plan in accordance to Section 360.4.A, "Paving and Quality Control Plan."

- B. Job-Control Testing.** Perform job-control testing in accordance to Section 360.4.B, “Job-Control Testing.”
- C. Reinforcing Steel and Joint Assemblies.** Provide reinforcing steel and joint assemblies in accordance to Section 360.4.C, “Reinforcing Steel and Joint Assemblies.”
- D. Joints.** Provide joints in accordance to Section 360.4.D, “Joints.”
- E. Placing and Removing Forms.** When needed, place and remove forms in accordance to Section 360.4.E except, do not remove forms until at least 6 hours after concrete has been placed. The time for the form removal may be extended, by the Engineer, if weather or other conditions make it advisable.
- F. Concrete Delivery.** Deliver concrete in accordance with Section 360.4.F, “Concrete Delivery.”
- G. Concrete Placement.** Place concrete in accordance with Section 360.4.G, “Concrete Placement.”
- H. Spreading and Finishing.** Spread and finish concrete in accordance with Section 360.4.H, “Spreading and Finishing.”
- I. Curing.** Keep the concrete pavement surface from drying by water fogging or with the use of evaporation retardants until curing material has been applied. Maintain curing and promptly repair damage to curing materials on exposed surfaces of concrete pavement until opening to traffic or until directed.
 - 1. **Wet Mat Curing.** Provide wet mat curing unless otherwise shown on the plans or as directed by the Engineer. Cure the pavement in accordance to Section 420.4.J.2.a, “Wet Mats.” If the air temperature is below 65°F and insulating blanket is used, then apply membrane curing in lieu of wet mat curing.
 - 2. **Membrane Curing.** As approved, provide membrane curing in accordance to Section 360.4.I.1, “Membrane Curing.”
 - 3. **Asphalt Curing.** As approved, provide asphalt curing in accordance to Section 360.4.I.2, “Asphalt Curing.”
- J. Sawing Joints.** Saw joints in accordance to Section 360.4.J, “Sawing Joints.”
- K. Protection of Pavement and Opening to Traffic.**
 - 1. **Protection of Pavement.** Protect pavements in accordance to Section 360.4.K.1, “Protection of Pavement.” When air temperature is below 65°F, cover the pavement with insulating blankets in accordance to Table 1 unless otherwise directed.

**Table 1
Insulating Blanket Curing**

Ambient Air Temperature	Opening Time, Hr				
	8	16	24	36	48
<50°F	Yes	Yes	Yes	Yes	No
50°F-65°F	Yes	Yes	Yes	No	No

2. **Opening Pavements to Traffic.** Close pavement to all traffic, including Contractor vehicles, until the concrete is at least 8 hours old. This time may be extended, by the Engineer, if weather or other conditions make is advisable.

The pavement may be opened to traffic after the concrete has been cured for at least 8 hours and has obtained a minimum a flexural strength of 275 psi or as directed by the Engineer. Determine the flexural strength in accordance with Tex-448-A, "Flexural Strength of Concrete Using Simple Beam Third-Point Loading" using concrete beams cured at the job site under the same conditions as the pavement, or in accordance with Tex-426-A, "Estimating Concrete Strength by the Maturity Method". Opening the pavement does not relieve the Contractor from the responsibility for the work in accordance with Item 7, "Legal Relations and Responsibilities to the Public." Seal all joints and clean the pavement before opening the pavement to traffic.

3. **Emergency Opening to Traffic.** When directed in writing, open the pavement to traffic before the minimum requirements specified above have been attained. Remove all obstructing materials, place stable material against the pavement edges, and perform other work involved in providing for the safety of traffic as required for emergency opening.

L. Pavement Thickness. Verify pavement thickness in accordance to Section 360.4.L, "Pavement Thickness."

M. Ride Quality. Unless otherwise shown on the plans, measure ride quality in accordance with Item 585, "Ride Quality for Pavement Surfaces."

5. **Measurement.** Measure pavement in accordance to Article 360.5, "Measurement."

6. **Payment.** These prices are full compensation for materials, equipment, labor, tools, and incidentals.

A. Fast Track Concrete Pavement. The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the adjusted unit price bid for "Fast Track Concrete Pavement" of the type and depth specified as adjusted in accordance with Section 6.B, "Deficient Pavement Thickness."

Excavation and embankment required by this Item in the preparation of the subgrade and for the completion of the shoulders and slopes will be measured and paid for in accordance with the provisions of Item 110, "Excavation," or Item 132, "Embankment," with the provisions that yardage will be measured and paid for once only regardless of the manipulation involved; or, where shown on the plans, such work will be measured and paid for in accordance with the provisions of Item 150, "Blading." Measurement of subgrade excavation for payment will be limited to a total width of the pavement plus 1 foot on each side. Payment under excavation items will not be allowed within the areas designated for "Blading."

Sprinkling and rolling, required for the compaction of the rough subgrade in advance of fine-grading is subsidiary to this Item. Maintenance of a moist condition of the subgrade or base in advance of fine-grading and concrete is subsidiary work, as provided above.

- B. Deficient Pavement Thickness.** Where the average thickness of pavement is deficient in thickness by more than 0.2 in. but not more than 0.75 in., payment will be made using the adjusted factor as specified in Table 2 applied to the bid price for deficient area for each unit as defined under Section 360.4.L.3, “Pavement Units for Payment Adjustments.”

Table 2
Deficient Thickness Price Adjustment Factor

Deficiency in Thickness Determined by Cores (in.)	Proportional Part of Contract Price Allowed (adjustment factor)
Not Deficient	1.00
Over 0.00 through 0.20	1.00
Over 0.20 through 0.30	0.80
Over 0.30 through 0.40	0.72
Over 0.40 through 0.50	0.68
Over 0.50 through 0.75	0.57

- C. Curb.** Work performed and furnished in accordance with this Item and measured as provided under “Measurement” will be paid for at the unit price bid for “Curb” of the type specified.