

2021 TECHNICAL SPECIFICATIONS UPDATES

Summary of Changes

Revisions shown in bold italics

S-105 SAMPLING AND TESTING

1. All sampling and testing deemed necessary by the Engineer shall be performed by the City or by a Testing Laboratory selected by the City on Federally or City funded projects, ***unless otherwise specified.***
2. Added ***KT-13 & KT-51*** as method for aggregate base.
3. Added ***Cement, Lime and Lime Kiln Dust*** for stabilization.
4. Added ***Temperature*** as a test required for concrete pavement.

S-204 COMPACTION OF EARTHWORK

1. Added the following to the method of measurement; ***shall be based on plan quantities, provided the project is constructed essentially to the lines and grades shown on the Plans. Where the Plans have been altered or in case of disagreement between the Contractor and Engineer as to the accuracy of the plan quantities, either party shall have the right to request and cause the quantities involved to be measured by the average end area method. When the quantities are measured for payment the original cross sections or contour data plotted on the Plans shall be used as original field cross sections, unless errors have been found or the original ground has been disturbed prior to commencing work. Additional original cross sections may be interpolated or determined by other means, at certain points where necessary to more accurately determine the quantities. Other methods of measurement may be acceptable when agreed upon by both the Contractor and the Engineer.***

S-212 SUBGRADE

1. Revised the second paragraph of section A. 2. The geotechnical report must also indicate the methods to be used for placement and compaction of the subgrade. The subgrade for all streets shall be treated with fly ash, ***cement, lime kiln dust***, lime, or other approved material ***per section S-1106 Modified Subgrade or KDOT Standard Specifications, latest edition.*** The geotechnical report shall detail the treatment, placement, incorporation and compaction procedures to be used. The contractor is responsible for regulating the sequence of work, processing a sufficient quantity of material, providing full depth as specified on the plans, using proper amounts of fly ash, ***cement, lime kiln dust***, lime or

approved material, maintaining the work, and reworking areas necessary to meet requirements. The contractor shall cover the treated subgrade before it is subject to freezing. Proof-rolling with a loaded tandem dump truck which has a minimum GVW of 15 tons (30,000 lbs) will be required before acceptance of finish grade.

S-300 ASPHALTIC CONCRETE

1. Revised section B. 8. Material Transfer Devices to the following; ***A material transfer device (MTD) shall be used for the placement of asphalt during surface paving operations. An MTD, however, is not required for paving in parking lots, on driveways, and on side streets. The MTD equipment shall be approved by the Engineer prior to its use. Remix pavers will NOT be allowed. Refer to KDOT Standard Specifications, latest edition, for more information.***
2. Added the following to section B. 8. Heavy Pneumatic-Tired Rollers; ***Combination rollers are not allowed.***
3. Added the following to section B. 10. Sampling Pavement for Density; ***The cores shall be full depth for the pavement section that is in place at the time of coring.***
4. Revised section B. 12. Weather Limitations to the following; Placement of bituminous material shall not be permitted within 24 hours of a rain event. ***Do not place asphalt mixtures on any wet or frozen surface or when weather conditions otherwise prevent the proper handling and finishing of the mixture.***
5. Added the following to section B. 14. Tack Coat; ***Tack shall be placed prior to any lift of asphalt.***

S-302 CRACK REPAIR MEMBRANE

1. Revised section A. 1. To the following; Repair Operations: The cracks shall be thoroughly ***dry and*** cleaned of all foreign material (oil, asphalt, sealant, adhesives, etc.)....

S-401 CONCRETE CONSTRUCTION

1. Revised section A. 17. Second bullet point to the following; Fly Ash ***and slag*** proportioning and batching equipment shall be subject to the same controls as required for cement. Fly ash ***and slag*** may be weighed cumulatively with the cement or separately. If weighed cumulatively, the cement shall be weighed first.
2. Added Form Removal section;

20. Form Removal: The removal of forms shall be accomplished in such a manner as will prevent injury to the concrete. Forms shall not be removed before the expiration of the minimum time indicated below, except when specifically authorized by the Engineer. During cold weather the time limits may be increased at the discretion of the Engineer depending upon the amount of protection provided. Permission to remove forms shall not

constitute authority to backfill structures. Backfill shall proceed only upon approval of the Engineer and shall be based on concrete attaining 75% of design strength.

Pavement, Curb and Slabs -----12 hours*
Walls and Vertical Faces-----2 days*
Columns -----7 days
Unsupported Beams & Slabs:
Spans less than 10'-----4 days*
Spans from 10' to 20'-----7 days
Spans over 20' -----10 days

***Curing of surfaces exposed by form removal is required.**

S-403 CURBS AND GUTTERS

1. Added the following to section A. 2.; **Cure shall be placed on all exposed surfaces when forms are removed prior to the expiration of the curing time frame.**
2. Added the following to section A. 4.; Joints shall be sawed or troweled **to D/4** into the curb as soon as the concrete has hardened sufficiently to allow sawing or trowelling.

S-404 FIBEROUS REINFORCEMENT

1. Section removed.

S-410 RESIDENTIAL, COMMERCIAL & INDUSTRIAL DRIVES

1. Revised Section B. Basis of Payment to state 6" **Residential** and 8" **Commercial**.

S-503 UNDERDRAIN AND SUMP PUMP CONNECTION

1. Revised to the following; This work shall consist of installing underdrain and sump pump connection(s) according to these Specifications, the Plans, and the Contract Documents. New underdrains, existing foundation drains, roof drains, and sump pump drains shall be connected to the proposed storm sewer system, **edgedrain** or ditch liner at locations indicated on the Plans or as directed by the engineer. Connections to an existing shall be made by coring a hole in the side or back of the structure that is 2" larger in diameter than the connecting pipe. The edge of the cored hole shall be a minimum of 6" from the inside wall of the box. The area around the connecting pipe shall be filled with non-shrink **hydraulic cement**. Connection to the storm sewer pipe shall be made by coring a clean hole in the upper 1/3 of the pipe and securing an Insert A-tee or other device as approved by the engineer. **Connections to an edgedrain shall be made with a**

4"X4" HDPE tee. Grouting the drain tile onto the storm sewer pipe shall not be acceptable.

S-507 REINFORCE CONCRETE BOX CULVERT

1. Revised section A to the following; Construction shall meet the requirements of "Concrete Construction" and "Reinforcing Steel". **Reinforced Concrete Box Culverts shall be designed to utilize KCMMB 5K concrete.**

S-509 STORM INLETS AND MANHOLES

1. Added the following to section D; **Backfilling shall not occur for a minimum of 12 hours after placement of concrete for collars.**

S-510 STORM SEWERS

1. Revised section H to the following; Plastic joint compound **or O-rings** shall be used to joint the sections of RCP's and applied in accordance with the manufacturer's recommendations.

S-511 UNDERDRAINS

1. Revised section A. to adjust the flow line depth of underdrains to be consistent with the Standard Details. The new flow line is **1.25** feet below the curb line.
2. Revised section F to the following; **Minimum trench width is 18"**.

S-702 BIOLOGICAL PLANTINGS

1. Revised section B. 5. Fourth bullet point to the following; Remove burlap and wire baskets **from top of ball after tree is placed in hole.**

S-716 SODDING

1. Added the following to section I; **Fertilizer shall be placed per section S-706 prior to laying sod.**

S-800 TRAFFIC SIGNALS

1. Added new 58 to section A.; For each Pan, Tilt, and Zoom (PTZ) camera, four-way fixed video camera, and/or license-plate reader camera, the camera data wiring for each camera shall be Cat6a Shielded, installed no longer than 330 feet, performance-tested after install with Fluke DSX CableAnalyzer (or similar), and shall deliver a performance report for each cable showing that the installed cable meets Ethernet specifications. Cabling shall be terminated at the camera with Cat6a shielded RJ45 end. Cable shall be terminated in the traffic signal cabinet in a 1U Cat6a Shielded patch panel.

S-803 PERMANENT SIGNING

1. Added the following to section A. 2.; ***Anchors for stop sign assemblies that will include street name signs will be 2.25" square by 48" long.***
2. Added the following to Section A. 5.; ***Circular or square forms shall be used to set the anchors and the concrete finished to avoid any standing water near the anchor assembly.***
3. Revised section A. 9. to the following; ***For sign assemblies that are mounted in the medians, the Contractor shall core drill a 6" diameter hole and utilize Xcessories Squared part no. HDA200-30-G anchors, or approved equal. Anchors shall be set in concrete using a circular or square form so the finished grade of the concrete matches the grade of the median.***

S-804 STREET LIGHTING

1. Removed shorting cap from section A. 11. and 12.
2. Added new section A. 13. ***A luminaire smart control node shall be installed on each luminaire. The node shall be attached and connected via the 7 pin photocell receptacle.***
3. Added luminaire small control node to section D. 1.
4. Added new 11 to section A.; For all new street light pole base installations, the conduit shall extend 2 inches above the top of the handhole opening – approximately 24 inches on poles without breakaway bases and 33 inches on all poles with breakaway bases. The 3 lug connectors should be made up and installed before the pole is installed on the base. The 3 lug connectors shall be placed above the top of the handhole with the No. 14 AWG pole and bracket cable installed and shall extend down the pole to be connected in the handhole opening. All street light poles requiring a breakaway base shall have the City of Lenexa approved anti-theft device installed between the pole and the breakaway base.
5. Revised section D. Method of Measurement note 2 to the following; Cable: per linear foot, measured from center of feed point to center of pole plus 5 feet and from center of pole to center of pole plus 10 feet. Pole and bracket cable shall be subsidiary to the pole, installed and accepted.
6. Revised section D. Method of Measurement note 5 to the following; Street Lighting Conduit: per linear foot plus 3 feet per conduit up the pole for anti-theft device, installed and accepted.

S-1100 BASE STABILIZATION

1. Revised section A. 3. From Type AA MR-5 to ***Type AA MR5-5.***

S-1106 FLY ASH MODIFIED SUBGRADE

1. Revised title to MODIFIED SUBGRADE.
2. Revised entire section to include cement.

S-1115 PEDESTRIAN RAIL

1. Revised section E to the following; All fabrication, welding, casting, erection, and painting shall conform to the applicable portions of the section of the Standard Specifications dealing with Structural Steel Construction. **All steel handrail shall have a duplex coating system with a finish coat of black. Galvanize all handrail components in accordance with ASTM A123, prepare galvanized surfaces in accordance with ASTM D6386, apply Sherwin Williams Recoatable Epoxy Primer with a dry film thickness of 4.0-6.0 mils, apply Sherwin Williams Hi-Solids Polyurethane with a dry film thickness of 3.0-5.0 mils** or approved equals unless otherwise specified in the plans. Field painting of steel handrail shall be in accordance with the provisions for painting structural steel unless otherwise shown in the Plans.