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| ITEM | CONSTRUCTION OR MATERIAL TYPE | TESTS REQUIRED | TEST METHOD | ACCEPTANCE SAMPLES AND TESTS |
|  | **COMPACTION OF EARTHWORK** |
|  |  | Field Density Tests | KT-13, KT-51 | a | 600 sy2 of prepared subgrade. Not less than 4 per day per equipment spread.  |
|  | Structure Backfill | Field Density Tests | KT-13, KT-51 |  | 1 per structure minimum (each side) |
|  |  | Moisture Tests | KT-11, KT-51, or g | a | 600 sy2 of prepared subgrade. Not less than 4 per day per equipment spread.  |
|  | Structure Backfill | Moisture Tests | KT-11, KT-51, or g |  | 1 per structure minimum (each side) |
|  | **SUBGRADE MODIFICATION** |
|  | Aggregates | Plasticity Tests | KT-10 | b,c | 500 TONS or yd3 |
|  |  | Sieve Analysis of Aggregate | KT-2 | a | 500 TONS or yd3 |
|  |  | Material Passing the No.200 Sieve by the Wash Method | KT-3 | a | 500 TONS or yd3 |
|  |  | Sticks in Aggregate | KT-35 | e |  |
|  |  | Clay Lumps in Aggregate | KT-7 | e |  |
|  |  | Shale or Shale‑like Materials in Aggregate | KT-8 | e |  |
|  |  | Field Density Tests | KT-13 or KT-41 | a,b | 1 000 ft |
|  |  | Moisture Tests | KT-11 or g | e |  |
|  | **AGGREGATE BASE COURSE** |
|  | Combined Aggregate | Sieve Analysis of Aggregate | KT-2 | a | 1 000 ft each lift or if total aggregate each 500 TONS |
|  |  | Plasticity Tests | KT-10 | a,c | 1 000 ft each lift or if total aggregate each 500 TONS |
|  |  | Moisture Tests | KT-11 or g | e |  |
|  | Completed Base | Field Density Tests | KT-13 or KT-41 | a | 200 ft |
|  |  | Moisture Tests | KT-11, KT-41 or g | e |  |

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| ITEM | CONSTRUCTION OR MATERIAL TYPE | TESTS REQUIRED | TEST METHOD | ACCEPTANCE SAMPLES AND TESTS |
| **3A.** | **AGGREGATE BASE COURSE (OP SPECIAL)** |
|  | Combined AggregateCompleted Work | Sieve Analysis of AggregateSoundness, Wear, Absorption and Specific GravityLiquid Limit and Plasticity IndexSieve Analysis of AggregateLiquid Limit and Plasticity IndexField Density Tests | ASTM C 117-04ASTM C 136-06Methods stated in the Standard Specifications, Subsection 1117ASTM D 4318-05ASTM C 117-04ASTM C 136-06ASTM D 4318-05Test strip roller pattern | ahh | Preconstruction and when source of material changes835 TONS with a minimum of one for each days placement Verification of roller pattern |
|  | **STABILIZED SHOULDERS (Aggregate, Non‑Bituminous)**  |
|  | Combined Aggregate | Sieve Analysis of Aggregate | KT-2 | a | 500 TONS |
|  |  | Plasticity Tests | KT-10 | a,c | 500 TONS |
|  |  | Moisture Tests | KT-11 or g | e |  |
|  | Completed Shoulder | Field Density Tests | KT-13 or KT-41 | b | 200 ft or 150 TONS |
|  |  | Moisture Tests | KT-11, KT-41 or g | b | 200 ft or 150 TONS |
|  | **GRANULAR SUBBASE** |
|  | Combined Aggregate | Sieve Analysis of Aggregate | KT-2 | a | 1 000 ft, 500 TONS, or 500 yd3 |
|  |  | Plasticity Tests | KT-10 | a | 1 000 ft, 500 TONS, or 500 yd3 |
|  |  | Moisture Tests | KT-11 or g | e |  |
|  | Completed Work | Field Density Tests | KT-13 or KT-41 | a | 200 ft |
|  |  | Moisture Tests | KT-11, KT-41 or g | a | 200 ft |
|  | **SURFACE OR RESURFACING AGGREGATE** |
|  |  | Sieve Analysis of Aggregate | KT-2 | a | 500 TONS |
|  |  | Material Passing the No. 200 Sieve by Wash Method | KT-3 | a | 500 TONS |
|  |  | Sticks in Aggregate | KT-35 | e |  |
|  |  | Soft or Friable Particles in Aggregate | KT-7 | e |  |
|  |  | Moisture Tests | KT-11 or g | e |  |

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| ITEM | CONSTRUCTION OR MATERIAL TYPE | TESTS REQUIRED | TEST METHOD | ACCEPTANCE SAMPLES AND TESTS |
|  | **PORTLAND CEMENT CONCRETE STRUCTURES AND MISCELLANEOUS CONSTRUCTION** |
|  |  | SlumpUnit WeightAir ContentTemperature | KT-21KT-20KT-18, KT-19, or KT-20ASTM C 1064-05 | h | As needed to control product, minimum 1 set of tests every 50 yd3. Select initial sample from first 2 or 3 loads and then on a random basis or as conditions indicate. Perform tests with every set of test cylinders. |
|  |  | Cylinders | KT-22 |  | Bridge DecksMinimum 1 set of seven 6”x12” cylinders and one 4”x8” cylinder per 100 yd3 or major mix design changeStructuresMinimum 1 set of 7 per 100 yd3Sidewalk and FlatworkMinimum 1 set of 7 per 500 yd2Curb and GutterMinimum 1set of 7 per 500 lfAll cylinders shall be tested for compressive strength in accordance with ASTM C 39-05 at the following intervals:Two cylinders each at 7 days, 14 days, and 28 days. One cylinder shall be reserved for additional testing, if required. |
|  |  | Permeability of Concrete | ASTM C 1202-97 |  | Bridge Decks One 4”x8” cylinder shall be tested at 28 days using standard moist curing (2 tests per cylinder). |
|  |  | Density of Fresh Concrete | KT-36 | a,b | 150 yd3 for Bridge Decks, Thin Overlays, and Bridge Deck Surfacing |
|  |  | KCMMB Test #1 | As specified in “Procedure for Analysis of Non-Specified Aggregate within Freshly Mixed Concrete” on file with the City Engineer. | a | As needed to control product, beginning of every project and every 150 cubic yards. |

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| ITEM | CONSTRUCTION OR MATERIAL TYPE | TESTS REQUIRED | TEST METHOD | ACCEPTANCE SAMPLES AND TESTS |
|  | **CONCRETE PAVEMENT** |
|  |  | SlumpUnit WeightAir ContentTemperature | KT-21KT-20KT-18, KT-19, or KT-20ASTM C 1064-05 | h | As needed to control product, minimum 1 set of tests per each half day and/or per 4 000 yd2. Perform tests with every set of test beams. |
|  |  | Beams | KT-22 & KT-23 | a | 1 set of 3 on initial pour. 1 set per week and/or major mix design change. |
|  |  | Profilograph | KT-46 | b | Testing by Contractor, results reviewed by City of Overland Park |
|  |  | Thickness Cores |  |  | See Std. Spec. Sec. 502.03(k). |
|  |  | Density of Fresh Concrete | KT-38 | a,b | Initially, 1 complete transverse profile, thereafter 5 tests per day. |
|  |  | KCMMB Test #1 | As specified in “Procedure for Analysis of Non-Specified Aggregate within Freshly Mixed Concrete” on file with the City Engineer. | a | As needed to control product, beginning of every project and every 150 cubic yards. |
|  | **ASPHALTIC CONCRETE QUALITY ASSURANCE TESTING** |
|  | Bituminous Mixtures | Test showing the information required on table “Superpave Asphaltic Concrete Test (Verified Mix Design)”Mix Cured 4 hours before testing.City Engineer shall receive test results in approximately 7 hours. | Note: Procedure is specified in “Overland Park Technical Specification for Overland Park Superpave Asphaltic Concrete, subparagraph Superpave Asphaltic Concrete Mix Design Method”, available in the office of the City Engineer. | a | One for two of the contractor test or as directed by the City Engineer. |
|  |  | Resistance to moisture damage | AASHTO T283-03 | a | 1 per year and every 10,000 tons as directed by the City Engineer. |
|  | Completed Road Work | Field Density Tests |  |  |  |
|  |  | Cores | KT-15 Procedure 3 or AASHTO T166 | a | Surface & Base Courses1 set of 3-4” cores per 1000 tons placed as directed by the City Engineer. |

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| ITEM | CONSTRUCTION OR MATERIAL TYPE | TESTS REQUIRED | TEST METHOD | ACCEPTANCE SAMPLES AND TESTS |
|  | **SLURRY SEAL**  |
|  |  | Sieve Analysis of Aggregate | KT-2 | a | 250 TONS |
|  | **AGGREGATE FOR CONCRETE** |
|  |  | Sieve Analysis of Aggregate | KT-2 | a | 250 TONS |
|  |  | Material Passing the No. 200 Sieve by the Wash Method | KT-3 | a | 250 TONS |
|  |  | Sticks in Aggregate | KT-35 | e |  |
|  |  | Clay Lumps in Aggregate | KT-7 | e |  |
|  |  | Shale or Shale‑like Materials in Aggregate | KT-8 | e |  |
|  |  | Unit Weight (light weight aggregate only) | Section 1102(d)(3) | e |  |
|  | **PORTLAND CEMENT TREATED BASE** |
|  |  | Sieve Analysis of Aggregate | KT-2 | a | 1 in A.M. and 1 in P.M. or each 500 TONS |
|  |  | Plasticity Tests | KT-10 | a,b,c | 1 in A.M. and 1 in P.M. or each 500 TONS |
|  |  | Moisture Tests | KT-11 or g | e | Minimum of 1 per day |
|  |  | Density Standard | KT-12 | e | Minimum of 1 per day |
|  |  | Field Density Tests | KT-13 or KT-41 | a | 1 000 ft/width laid or 2 000 ft/lane |
|  |  | Field Moisture Tests | KT-11 or KT-41 | a | 1 000 ft/width laid or 2 000 ft/lane |
|  | **UNDERDRAIN AGGREGATE** |
|  |  | Sieve Analysis of Aggregate | KT-2 | a | 250 TONS |
|  |  | Sticks in Aggregate | KT-35 | e |  |
|  |  | Clay Lumps in Aggregate | KT-7 | e |  |
|  | **CRUSHED STONE FOR BACKFILL** |
|  |  | Sieve Analysis of Aggregate | KT-2 | a | 500 TONS |
|  |  | Clay Lumps in Aggregate | KT-7 | e |  |
|  | **STONE FOR RIPRAP, WASH CHECKS & OTHER MISC. USES** |
|  |  | Sieve Analysis of Aggregate | KT-2 | a | 500 TONS or yd3Note: Tests to be conducted at production site. |

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| ITEM | CONSTRUCTION OR MATERIAL TYPE | TESTS REQUIRED | TEST METHOD | ACCEPTANCE SAMPLES AND TESTS |
|  | **FLY ASH** |
|  |  | Moisture/Density and Compressive Strength TestsInplace Moisture | D4609AASHTO 217 | e | 4 series of Standard Proctors Moisture/Density relationships for each earth fill material. Two series incorporating 16% fly ash by dry weight, at delays of 0 and 2 hours. Two series incorporating 13% fly ash by dry weight at compaction delays of 0 to 2 hours. Find compressive strength for both series after 7 days at 100.4 degrees Fahrenheit. Min. 5 test specimens per series. Perform in place moisture tests using the gas pressure (“Speedy”) method, at a rate of 1 per 718 sq. yard as during initial subgrade preparation and thereafter as directed by the engineer. |

Code Instruction

a Normal operation. Minimum frequency for exceptional conditions may be reduced by the Project Engineer on a project basis, written justification shall be made to the City Engineer and placed in the project documents

b Applicable only when specifications contain those requirements.

c If, for a given project, no Plastic Index results of ten (10) consecutive tests are closer than 1 Plastic Index to the specifications limit, the specified testing frequency may be reduced by fifty percent (50%). When operating at a reduced testing frequency, should any two (2) consecutive Plastic Index results exceed the test limit results required for reduced testing frequency, testing shall be resumed at the original specified frequency. The original specified testing frequency shall be resumed should any one test result exceed the specification limits. Following a return to the original specified testing frequency, the reduced frequency may be resumed providing the original criteria for reduced frequency are met.

e Engineer's discretion. Frequency of tests shall be agreed upon by the Field Engineer and the Project Engineer. Frequency will be governed by field conditions. Written documentation of the agreed upon testing frequency shall be included in the project records.

g For determining moisture content of a material, KT‑43, Moisture Content of Asphalt Mixtures or Mineral Aggregates ‑ Microwave Oven Method, can be used in conjunction with KT‑2, KT‑3, KT‑4, KT‑8, KT‑12, KT‑13, and KT‑34.

h Initial frequency. Frequency may be reduced on a project basis, by authority of the Project Engineer, upon continued satisfactory and uniform production. Authorization for reductions in testing frequency shall be documented in the project records.

GENERAL NOTES

Note 1: All sampling and testing frequencies listed are minimum. Additional or other tests will be conducted, as required, to control the work.

Note 2: Frequencies are based on two lane roadways. For four or more lane roadway construction, double the frequencies shown per unit length.

Note 3: All aggregate acceptance tests are to be conducted at the point of usage except for Item 15, Stone for Riprap, Wash Checks, and Other Miscellaneous Uses.

Note 4: For a better explanation of metric (SI) units, see section 5.9 of the KDOT Construction Manual SAMPLING AND TEST METHODS FORWARD.

Note 5: All test methods listed as “KT” are Kansas Test methods and may be found in the KDOT Construction Manual Part V.