

Name of Lab: \_\_\_\_\_

Date of Inspection: \_\_\_\_\_

**ADOT MATERIALS GROUP, QUALITY ASSURANCE SECTION**

**LISTING OF TEST PROCEDURES  
FOR WHICH INSPECTION COVERAGE IS AVAILABLE**

**QUALITY MANUAL**

- R 18      Establishing and Implementing a Quality System for Construction Materials Testing Laboratories.  
(Mandatory for all ADOT approved labs. Documentation should be available for review)

**SOILS AND AGGREGATES**

- AZ 201      Sieving of Coarse and Fine Graded Soils and Aggregates
- AZ 210      Specific Gravity and Absorption of Coarse Aggregate  
\*(Requires prior AAP accreditation for AASHTO T-85)
- AZ 211      Specific Gravity and Absorption of Fine Aggregate  
\*(Requires prior AAP accreditation for AASHTO T-84)
- AZ 212      Percentage of Fractured Coarse Aggregate Particles
- AZ 225      Maximum Dry Density and Optimum Moisture of Soils by Proctor Method A  
\*(Requires prior AAP accreditation for AASHTO T-99)
- AZ 233      Flakiness Index of Coarse Aggregate
- AZ 236      Determining pH and Minimum Resistivity of Soils and Aggregates
- AZ 237      Determining pH and Soluble Salts of Soils
- AZ 238      Percent Carbonates in Aggregate
- AZ 242      Sand Equivalent Test for Mineral Aggregate for Asphaltic Concrete Friction Course  
\*(Requires prior AAP accreditation for AASHTO T-176)
- AZ 245      Maximum Dry Density and Optimum Moisture of Soils by Proctor Alternate Method D  
\*(Requires prior AAP accreditation for AASHTO T-99)
- AZ 247      Particle Shape and Texture of Fine Aggregate Using Uncompacted Void Content
- AZ 248      Alternate Procedures for Sieving of Coarse and Fine Graded Soils and Aggregates

**LISTING OF TEST PROCEDURES  
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**SOILS AND AGGREGATES (cont'd.)**

- AASHTO T19 Unit Weight and Voids in Aggregate  
\*(Requires prior AAP accreditation for AASHTO T-19)
  
- AASHTO R58 Dry Prep of Disturbed Soil and Agg. Samples for Test  
\*(Requires prior AAP accreditation for AASHTO R58)
  
- AASHTO T89 Determining the Liquid Limit of Soils  
\*(Requires prior AAP accreditation for AASHTO T-89)
  
- AASHTO T90 Determining the Plastic Limit and Plasticity Index of Soils  
\*(Requires prior AAP accreditation for AASHTO T-90)
  
- AASHTO T96 Resistance to Abrasion of Small Size Coarse Aggregate by use of the Los Angeles Machine  
\*(Requires prior AAP accreditation for AASHTO T-96)
  
- AASHTO T176 Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test  
\*(Requires prior AAP accreditation for AASHTO T-176)
  
- AASHTO T248 Reducing Field Samples of Aggregates to Testing Size  
\*(Requires prior AAP accreditation for AASHTO T-248)
  
- AASHTO T255 Total Moisture Content of Aggregate by Drying  
\*(Requires prior AAP accreditation for AASHTO T-255)
  
- AASHTO T265 Laboratory Determination of Moisture Content of Soils  
\*(Requires prior AAP accreditation for AASHTO T-265)
  
- ASTM D 4791 Flat and Elongated Particles in Coarse Aggregate  
\*(Requires prior AAP accreditation for ASTM D 4791)

**CONCRETE**

- AZ 314 Compressive Strength of Cylindrical Concrete Specimens (Bonded)  
(Bonded)  
\*(Requires prior AAP accreditation for AASHTO T-22 / ASTM C39)  
\*(Requires prior AAP accreditation for AASHTO T-23 / ASTM C31)  
\*(Requires prior AAP accreditation for AASHTO T-231 / ASTM C617)
  
- AZ 314 Compressive Strength of Cylindrical Concrete Specimens (Unbonded)  
(Unbonded)  
\*(Requires prior AAP accreditation for AASHTO T-22 / ASTM C39)  
\*(Requires prior AAP accreditation for AASHTO T-23 / ASTM C31)  
\*(Requires prior AAP accreditation for AASHTO ASTM C1231))

**LISTING OF TEST PROCEDURES  
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**BITUMINOUS MIXTURES**

- AZ 240 Sieve Analysis and Separation of Salvaged AC Pavement Particles for Recycled Asphaltic Concrete
- AZ 406 Moisture Content of Bituminous Mixtures
- AZ 410 Compaction and Testing of Bituminous Mixtures Utilizing Four Inch Marshall Apparatus  
\*(Requires prior AAP accreditation for AASHTO T-245)
- AZ 415 Bulk Specific Gravity of Compacted Bituminous Mixtures  
\*(Requires prior AAP accreditation for AASHTO T-166, optional PP-75)
- AZ 416 Preparing, Splitting, and Testing of Bituminous Mixtures
- AZ 417 Maximum Theoretical Specific Gravity of Field Produced Bituminous Mixtures (Rice Test)  
\*(Requires prior AAP accreditation for AASHTO T-209)
- AZ 421 Bituminous Material Content of Asphaltic Concrete Mixtures by the Nuclear Method
- AZ 424 Determination of Voids in Compacted Bituminous Mixtures  
\*(Requires prior AAP accreditation for AASHTO T-269)
- AZ 427 Asphalt Binder Content of Asphaltic Concrete Mixtures by the Ignition Furnace Method  
\*(Requires prior AAP accreditation for AASHTO T-308)
- AZ 428 Asphalt Binder Content of Asphaltic Concrete Mixtures (RAP) by the Ignition Furnace Method  
\*(Requires ADOT approval of AZ 427 and AZ 240)
- AASHTO T312 Preparing Hot Mix Asphalt Specimens by Means of the Superpave Gyratory Compactor  
\*(Requires prior AAP accreditation for AASHTO T-312)

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**MIX DESIGN \*\***

- |                          |        |   |
|--------------------------|--------|---|
| <input type="checkbox"/> | AZ 802 | Effect of Water on Strength of Compacted Bituminous Mixtures (Immersion Compression Test)<br>*(Requires prior AAP accreditation for AASHTO T 167) |
| <input type="checkbox"/> | AZ 806 | Maximum Theoretical Specific Gravity of Laboratory Prepared Bituminous Mixtures (Rice test)<br>*(Requires ADOT approval of AZ 417)                |
| <input type="checkbox"/> | AZ 815 | Marshall Mix Design Method for Asphaltic Concrete<br>*(Requires ADOT approval of AZ 410 and AZ 415)   |
| <input type="checkbox"/> | AZ 832 | Marshall Mix Design Method for Asphaltic Concrete (Asphalt-Rubber) [AR-AC]<br>*(Requires ADOT approval of AZ 815)                                 |
| <input type="checkbox"/> | AZ 833 | Marshall Mix Design Method for Asphaltic Concrete with Reclaimed Asphalt Pavement (RAP)<br>*(Requires ADOT approval of AZ 815)                    |

\*\*Requires ADOT approval of the following related test procedures.

- AZ 201 Sieving of Coarse and Fine Graded Soils and Aggregates
- AZ 210 Specific Gravity and Absorption of Coarse Aggregate
- AZ 211 Specific Gravity and Absorption of Fine Aggregate
- AZ 212 Percentage of Fractured Coarse Aggregate Particles
- AZ 238 Percent Carbonates in Aggregate
- AZ 240 Sieve Analysis and Separation of Salvaged AC Pavement Particles for Recycled Asphaltic Concrete
- AZ 247 Particle Shape and Texture of Fine Aggregate Using Uncompacted Void Content
- AASHTO T96 Resistance to Abrasion of Small Size Coarse Aggregate by use of the Los Angeles Machine
- AASHTO T176 Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test

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**BITUMINOUS MATERIALS**

- |                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | AZ 502                   | Percentage of Uncoated Particles Using Asphalt Emulsions  |
| <input type="checkbox"/> | AZ 504                   | Vacuum Recovery of Asphalt Emulsion Residue   |
| <input type="checkbox"/> | AZ 505                   | Asphalt Rejuvenating Agent Residue Insoluble in Petroleum Ether   |
| <input type="checkbox"/> | AZ 509                   | Rapid Determination of Asphaltenes and Chemical Reactivity of Asphalts  |
| <input type="checkbox"/> | AZ 511                   | Recovery of Asphalt from Extraction Solution  |
| <input type="checkbox"/> | AZ 512                   | Residue by Evaporation.   |
| <input type="checkbox"/> | AASHTO R28               | Accelerated Aging of Asphalt Binder Using a Pressurized Aging Vessel (PAV)<br>*(Requires prior AAP accreditation for AASHTO R-28) |
| <input type="checkbox"/> | AASHTO R59               | Recovery of Asphalt Binder from Solution by Abson Method<br>*(Requires prior AAP accreditation for AASHTO R-59)                   |
| <input type="checkbox"/> | AASHTO T44<br>ASTM D2042 | Solubility of Bituminous Materials<br>*(Requires prior AAP accreditation for AASHTO T-44 / ASTM D2042)                            |
| <input type="checkbox"/> | AASHTO T48               | Flash and Fire Points by Cleveland Open Cup<br>*(Requires prior AAP accreditation for AASHTO T-48)                                |
| <input type="checkbox"/> | AASHTO T49<br>ASTM D5    | Penetration of Bituminous Materials<br>*(Requires prior AAP accreditation for AASHTO T-49 / ASTM D5)                              |
| <input type="checkbox"/> | AASHTO T50               | Float Test for Bituminous Materials<br>*(Requires prior AAP accreditation for AASHTO T-50)  |
| <input type="checkbox"/> | AASHTO T51               | Ductility of Bituminous Materials<br>*(Requires prior AAP accreditation for AASHTO T-51)  |
| <input type="checkbox"/> | AASHTO T53<br>ASTM D36   | Softening Point of Bitumen (Ring and Ball Apparatus)<br>*(Requires prior AAP accreditation for AASHTO T-53 / ASTM D36)            |
| <input type="checkbox"/> | AASHTO T55               | Water in Petroleum Products and Bituminous Materials by Distillation<br>*(Requires prior AAP accreditation for AASHTO T-55)       |
| <input type="checkbox"/> | AASHTO T59               | Testing Emulsified Asphalts (Saybolt Furol Viscosity (77°and 122°F.)<br>*(Requires prior AAP accreditation for AASHTO T-59)       |
| <input type="checkbox"/> | AASHTO T59               | Testing Emulsified Asphalts (Settlement and Storage)<br>*(Requires prior AAP accreditation for AASHTO T-59)                       |
| <input type="checkbox"/> | AASHTO T59               | Testing Emulsified Asphalts (Sieve Test)<br>*(Requires prior AAP accreditation for AASHTO T-59)                                   |

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**BITUMINOUS MATERIALS (cont'd.)**

- AASHTO T59     Testing Emulsified Asphalts (Particle Charge)  
                          \*(Requires prior AAP accreditation for AASHTO T-59)
  
- AASHTO T59     Testing Emulsified Asphalts (Demulsibility)  
                          \*(Requires prior AAP accreditation for AASHTO T-59)
  
- AASHTO T59     Testing Emulsified Asphalts (Residue by Evaporation)  
                          \*(Requires prior AAP accreditation for AASHTO T-59)
  
- AASHTO T59     Testing Emulsified Asphalts (Residue by Distillation)  
                          \*(Requires prior AAP accreditation for AASHTO T-59)
  
- AASHTO T72     Saybolt Viscosity  
                          \*(Requires prior AAP accreditation for AASHTO T-72)
  
- AASHTO T78     Cut-Back Distillation  
                          \*(Requires prior AAP accreditation for AASHTO T-78)
  
- AASHTO T79     Tag Flash  
                          \*(Requires prior AAP accreditation for AASHTO T-79)
  
- AASHTO T102    Spot Test of Asphaltic Materials  
                          \*(Requires prior AAP accreditation for AASHTO T-102)
  
- AASHTO T164    Quantitative Extraction of Asphalt Binder from Hot-Mix Asphalt (HMA) – Method A  
                          \*(Requires prior AAP accreditation for AASHTO T-164)
  
- AASHTO T201    Kinematic Viscosity of Asphalts  
                          \*(Requires prior AAP accreditation for AASHTO T-201)
  
- AASHTO T202    Viscosity of Asphalts by Vacuum Capillary Viscometer  
                          \*(Requires prior AAP accreditation for AASHTO T-202)
  
- AASHTO T228    Specific Gravity of Semi-Solid Bituminous Materials  
                          \*(Requires prior AAP accreditation for AASHTO T-228)
  
- AASHTO T240    Effect of Heat and Air on a Moving Film of Asphalt (Rolling Thin Film Oven Test)  
                          \*(Requires prior AAP accreditation for AASHTO T-240)
  
- AASHTO T301    Elastic Recovery Test of Bituminous Materials by Means of a Ductilometer  
                          \*(Requires prior AAP accreditation for AASHTO T301)
  
- AASHTO T313    Method for Determining the Flexural Creep Stiffness of Asphalt Binder Using the BBR  
                          \*(Requires prior AAP accreditation for AASHTO T313)
  
- AASHTO T314    Method for Determining the Fracture Properties of Asphalt Binder in Direct Tension  
                          \*(Requires prior AAP accreditation for AASHTO T314)

**LISTING OF TEST PROCEDURES  
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**BITUMINOUS MATERIALS (cont'd.)**

- AASHTO T315 Method for Determining the Rheological Properties of Asphalt Binder Using a Dynamic Shear Rheometer  
\*(Requires prior AAP accreditation for AASHTO T315)
- AASHTO T316 Viscosity Determination of Asphalt Binder Using Rotational Viscometer  
\*(Requires prior AAP accreditation for AASHTO T316)
- ASTM D 2007 Standard Test Method for Characteristic Groups in Rubber Extender and Processing Oils  
\*(Requires prior AAP accreditation for ASTM D 2007)
- ASTM D 5404 Standard Practice for Recovery of Asphalt from Solution Using the Rotary Evaporator  
\*(Requires prior AAP accreditation for ASTM D 5404)
- ASTM D 5329 Resilience (for Asphalt Rubber Designs)  
\*(Requires prior AAP accreditation for ASTM D 5329)
- ASTM D 5546 Solubility of Asphalt Binders in Toluene by Centrifuge  
\*(Requires prior AAP accreditation for ASTM D 5546)

**GEOTECHNICAL**

- AZ 249 Remolded Ring Samples for Direct Shear, Swell, and Consolidation
- AZ 733 Sulfate in Soils
- AZ 736 Chloride in Soils
- AASHTO T88 Particle Size Analysis of soils (Hydrometer Analysis)  
\*(Requires prior AAP accreditation for AASHTO T-88)
- AASHTO T190 Resistance R-Value  
\*(Requires prior AAP accreditation for AASHTO T-190)
- AASHTO T208 Unconfined Compressive Strength  
\*(Requires prior AAP accreditation for AASHTO T-208)
- AASHTO T216 One-Dimensional Consolidation  
\*(Requires prior AAP accreditation for AASHTO T-216)
- AASHTO T297 Consolidated Undrained Triax  
\*(Requires prior AAP accreditation for AASHTO T-297)
- ASTM D 4546 One-Dimensional Swell or Settlement Potential  
\*(Requires prior AAP accreditation for ASTM D 4546)
- ASTM D 7012 Unconfined Compressive Strength of Intact Rock Core Specimens  
\*(Requires prior AAP accreditation for ASTM D 7012)