TABLE OF CONTENTS
Chapter 8: Materials Testing, Sampling, Acceptance

Section 8-10  Materials - General
8-10.1.....Control of Materials
8-10.2.....Approval of Materials
8-10.3.....Quality Management Program
8-10.4.....Nonconforming Materials
8-10.5.....Noncontractual Price Reduction Guidelines

Section 8-13  Weighed Materials
8-13.1.....General
8-13.2.....Truck Scales
8-13.3.....Conveyor Scales
8-13.4.....Storage Hopper Scales
8-13.5.....Plant Scales
8-13.6.....Loader Scales

Section 8-15  Density Testing
8-15.1.....General
8-15.2.....Nuclear Gauges
8-15.3.....Nuclear Density Gauge Safety
8-15.4.....Annual Bureau of Technical Services Gauge Block Calibration Procedures
8-15.5.....Nuclear Density Testing HMA
8-15.6.....Project Nuclear Density Testing
8-15.7.....QMP QC and QV Nuclear Density Gauge Comparison
8-15.8.....HMA QMP Reference Site Monitoring
8-15.9.....Non QMP HMA Nuclear Density Reference Site Monitoring
8-15.10...Use of Nuclear Moisture/Density Gauges on HMA
8-15.11...Procedure for Determining Limits of Unacceptable Material
8-15.12...Soils Reference Site Monitoring
8-15.13...Test Strip Requirements for Stone Matrix Asphalt (SMA) and Coarse (Gap-graded) mixes
8-15.14...Reports Forms
8-15.15...Acceptance and Incentive/Disincentive
8-15.16...Density Data Submittal

Section 8-20  Independent Assurance Program
8-20.1.....General

Section 8-30  QMP - General
8-30.1.....Scope
8-30.2.....Quality Management Program
8-30.3.....Highway Technician Certification Program (HTCP)
8-30.4.....Verification and Quality Assurance
8-30.5.....Contractor Quality Control
8-30.6.....Quality Control Laboratory and Equipment
8-30.7.....Quality Control Start Up Activities
8-30.8.....Inspection
8-30.9.....Sampling and Testing
8-30.10...Corrective Action
8-30.11...Testing Precision
8-30.12...Testing Resolution
8-30.13  Contractor Non-Performance of QMP Sampling & Testing

**Section 8-32  QMP - Subgrade**
- 8-32.1  Quality Management Plan Description
- 8-32.2  Contract Quality Control Plan
- 8-32.3  Pre-Startup Activities
- 8-32.4  Excavations Below Subgrade
- 8-32.5  Field Density/Moisture Control Testing
- 8-32.6  Documentation
- 8-32.7  Corrective Action
- 8-32.8  Quality Assurance Aspects for the Contractor

**Attachment 1  Pooled t-Test Procedure**

**Section 8-34  QMP - Aggregate**
- 8-34.1  Sampling and Testing
- 8-34.2  Department Testing
- 8-34.3  Dispute Resolution
- 8-34.4  Aggregate for Concrete Pavement

**Section 8-35  QMP - Concrete**
- 8-35.1  Concrete Pavement and Concrete Structures
- 8-35.2  Ancillary Concrete

**Section 8-36  QMP - HMA**
- 8-36.1  General
- 8-36.2  Personnel Requirements (Through HTCP)
- 8-36.3  Laboratory Requirements
- 8-36.4  Sampling Hot Mix Asphalt
- 8-36.5  Sample Identification
- 8-36.6  Required Testing and Calculated Properties
- 8-36.7  HMA Quality Management Program Documentation
- 8-36.8  Documentation
- 8-36.9  Quality Verification Program
- 8-36.10  Example Worksheet

**Section 8-38  Ride Quality**
- 8-38.1  Profile Testing for Ride Quality
- 8-38.2  Equipment and Personnel
- 8-38.3  Testing
- 8-38.4  Pavement Categories
- 8-38.5  Localized Roughness
- 8-38.6  Segment IRI Pay Adjustments
- 8-38.7  Documentation and Reporting
- 8-38.8  Diamond Grinding

**Section 8-40  Materials Sampling**
- 8-40.1  General
- 8-40.2  Sampling Responsibility
- 8-40.3  Personnel
- 8-40.4  Selection of Sampling Method
- 8-40.5  Submittal of Samples to Central Materials Laboratory
- 8-40.6  Source of Materials Report, Department Form DT1349
- 8-40.7  Material Specifications Transition Period

**Section 8-45  Materials Testing and Acceptance - General**
- 8-45.1  General
- 8-45.2  Materials Approval Methods
- 8-45.3  Diary Documentation and Visual Inspection
- 8-45.4  Acceptance of Small Quantities
<table>
<thead>
<tr>
<th>Section</th>
<th>Materials Testing and Acceptance Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exhibit 1</td>
<td>Materials Testing and Acceptance Guide</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>Materials Testing and Acceptance - Earthwork</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-55.1</td>
<td>Field Test Procedures for Moisture-Density Relationship of Gravelly Soils</td>
</tr>
<tr>
<td>8-55.2</td>
<td>Field Determination of Density for Embankments</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>Materials Testing and Acceptance - Aggregates</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-60.1</td>
<td>General</td>
</tr>
<tr>
<td>8-60.2</td>
<td>Aggregate Source Approval</td>
</tr>
<tr>
<td>8-60.3</td>
<td>Aggregate Acceptance</td>
</tr>
<tr>
<td>8-60.4</td>
<td>Marginal Source Testing</td>
</tr>
<tr>
<td>8-60.5</td>
<td>Sampling Aggregates</td>
</tr>
<tr>
<td>8-60.6</td>
<td>Reducing Samples of Aggregate to Test Size</td>
</tr>
<tr>
<td>8-60.7</td>
<td>Aggregate Particle Shape</td>
</tr>
<tr>
<td>8-60.8</td>
<td>Field Determination of Moisture Content of Fine and Coarse Aggregates</td>
</tr>
<tr>
<td>8-60.9</td>
<td>Field Test Procedures for Sieve Analysis of Aggregates</td>
</tr>
<tr>
<td>8-60.10</td>
<td>Aggregate Acceptance Tests</td>
</tr>
<tr>
<td>8-60.11</td>
<td>Field Determination of Density for Aggregate Courses</td>
</tr>
<tr>
<td>8-60.12</td>
<td>Field Density Testing by the Sand Cone Method Part 1</td>
</tr>
<tr>
<td>8-60.13</td>
<td>Field Density Testing by the Sand Cone Method Part 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>Asphaltic Binder Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-65.1</td>
<td>General</td>
</tr>
<tr>
<td>8-65.2</td>
<td>Sampling Asphaltic Materials</td>
</tr>
<tr>
<td>8-65.3</td>
<td>Certification Method of Acceptance for Asphalt Binders</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>Asphalt Mixture Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-66.1</td>
<td>Asphaltic Mixture Design</td>
</tr>
<tr>
<td>8-66.2</td>
<td>Laboratory Standard Method of Asphaltic Mix Design (previously called WisDOT Test Method 1559)</td>
</tr>
<tr>
<td>8-66.3</td>
<td>Mixture Design Life</td>
</tr>
<tr>
<td>8-66.4</td>
<td>Amended JMF Reports and JMF Report Reviews</td>
</tr>
<tr>
<td>8-66.5</td>
<td>Non Traditional or Non-Standard Mixture Design Reports</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>Materials Testing and Acceptance - Concrete</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-70.1</td>
<td>General</td>
</tr>
<tr>
<td>8-70.2</td>
<td>Concrete Mixtures and Materials</td>
</tr>
<tr>
<td>8-70.3</td>
<td>Concrete Production and Equipment</td>
</tr>
<tr>
<td>8-70.4</td>
<td>Concrete Sampling and Testing</td>
</tr>
<tr>
<td>8-70.5</td>
<td>Acceptance</td>
</tr>
</tbody>
</table>

Attachment 1: Field Check Test of Air Meters Using a Calibration Canister
Attachment 2: Field Determination of Concrete Pavement Thickness by Magnetic Image Tomography (MIT Scan)
Attachment 3: Certification Method of Acceptance for Portland Cement
Attachment 4: Characterization of the Air-Void System of Freshly Mixed Concrete by the Sequential
Section 8-75  Materials Testing and Acceptance - Structures

8-75.1.....Plant Certification Program for Fabrication of Prestressed Concrete Members
8-75.2.....Approved Fabricators for Primary Steel Bridge Members
8-75.3.....Approved Fabricators for Steel Sign Bridges and Overhead Sign Supports
8-75.4.....Approved Fabricators for Fabricated Bridge Components
8-75.5.....Pile Driving Data, Form DT1924
8-75.6.....Piling Record, Form DT1315
8-75.7.....Bridge Inventory Report, DT 2006 and Bridge Inspection Report, DT 2007 and DT 2008

Attachment 1........Department Plant Certification Program Requirements
Attachment 2........Schedule of Tests
Attachment 3.........Plant Inspection Fabrication Forms