

# WAQTC QAC COMMITTEE MEETING MINUTES

**LEADER:** GARTH NEWMAN, ITD  
**RECORDER:** DESNA BERGOLD, D B CONSULTING

**DATE:** JULY 20 - 24, 2015  
**TIME:** 1:00 TO 5:00 PM MON, 8:00 AM TO 5:00 PM TUES. THRU THUR., 8:00 AM TO 12:00 NOON FRI  
**LOCATION:** VANCOUVER, WA

**ATTENDEES:**  
 GARTH NEWMAN, ITD  
 SEAN PARKER, ODOT  
 GILBERT ARREDONDO, UDOT  
 LINDA HUGHES, WSDOT  
 MEGAN CHATFIELD, FHWA  
 MISTY MINER, MDOT  
 CHRISTOPHER P. RUSSELL, CDOT  
 RICHARD GIESSEL, AKDOT & PF

**ABSENT:**  
 BRIAN LEGAN, NMDOT

**MEETING ITEMS:**

1. Report from Executive Committee meetings – Garth Newman  
 REVIEWS OF AASHTO REVISIONS AND QAC PROPOSED REVISIONS FOR EACH PROCEDURE
2. PowerPoint title slides – name not just number – Linda
3. Revision to Embankment/Base and In-Place Density Field Operating Procedures
  - a. Revisions in AASHTO Test Methods
  - b. T 255/T 265, Moisture Content of Aggregate and Soil
    - i. Fix equation example in student manual
    - ii. AASHTO revisions
      1. 6.1 and Note 2 as per WAQTC
  - c. T 99/T 180, Moisture/Density Relations
    - i. Change to Procedure Step 4 – Linda
    - ii. Add lbs/ft<sup>3</sup> to moisture density curve example in student – Garth - done
    - iii. AASHTO revisions
      1. Extensive as per WAQTC
      2. T 224 is an Annex – how to incorporate in FOP?
  - d. T 272, Family of Curves
    - i. AASHTO revisions
      1. Sample prep is now the same as T 99 and doesn't reference it
      2. Removed mold 'tolerance' language
      3. Added calculation section
  - e. T 85, G<sub>sb</sub>
  - f. T 224, Coarse Particle Correction
    - i. AASHTO revisions
      1. "Discontinued due to lack of use."
  - g. Humphres v Humphrys
  - h. T 310, In-place Density and Moisture Content of Soil-Aggregate
  - i. TM 8, In-place Density of HMA
    - i. Revise example format – Garth
    - ii. Update reporting section – report to 0.1 percent – Sean

- 1. AASHTO revisions
      - a. Now T 355 – minimal revisions to submitted T XX
    - j. TM 11, Obtaining Cores
      - i. Shouldn't this be the FOP for TM 11 to be consistent with TM 2 and TM 8? – Linda
        - 1. AASHTO revisions
          - a. Now R 67 – minimal revisions to submitted R XX
    - k. Exams
    - l. PowerPoint
4. Revision to Concrete Field Operating Procedures
  - a. Revisions in AASHTO Test Methods
  - b. TM 2, Sampling Concrete
  - c. T 309, Temperature
    - i. Reinstated with minimal revision to WAQTC proposal
  - d. T 119, Slump
  - e. T 121, Density
    - i. Secondary Cementitious Materials – Garth
    - ii. AASHTO revision
      - 1. 7.1 Dampen the measure as per WAQTC
  - f. T 152, Air Content
    - i. Note 2 – the vessel no longer needs to be brass – Gilbert
    - ii. Step #33 change the word sides to side – Garth
  - g. T 23, Test Specimens
  - h. Exams
  - i. PowerPoint
  - j. Other
    - i. How to address Self-Consolidating Concrete – Garth
5. Revision to Aggregate Field Operating Procedures
  - a. Revisions in AASHTO Test Methods
  - b. T 2, Sampling Aggregate
    - i. Process for using power equipment to sample stockpile - Linda
  - c. T 248, Reduction
  - d. T 255, Moisture Content of Aggregate
  - e. T 27/T 11, Sieve Analysis
  - f. T 335, Fractured Particles
  - g. T 176, Sand Equivalent
    - i. Method for thoroughly mixing working solution – Garth
  - h. Exams
  - i. PowerPoint
6. Revision to Asphalt I Field Operating Procedures
  - a. Revisions in AASHTO Test Methods
  - b. T 168, Sampling HMA
    - i. Procedure Step 2: bullet the 'containers' as in Slide #8 - Gilbert
  - c. R 47, Reducing
  - d. T 329, Moisture Content
    - i. AASHTO revisions
      - 1. HMA changed to Asphalt Mixtures
      - 2. Note 1 as proposed by WAQTC
      - 3. Corrected equation
  - e. T 308, Asphalt Content
    - i. AASHTO revisions
      - 1. Reconfirmed with editorial revisions

- 2. A2.8.2 aggregate correction revised to asphalt binder correction
- f. T 209,  $G_{mm}$ 
  - i. Identify Flask and Pycnometer as the AASHTO – Linda
  - ii. Use the term ‘container’ consistently throughout – Linda
- g. T 166,  $G_{mb}$ T 40, Sampling Bituminous Material
  - i. Add ‘Re-inspect the immersion tank . . .’ language from T 85 to FOP and Performance exam – Gilbert
- h. T 40 – Sampling Bituminous
  - i. New number – R 66 – Title change
- i. T 30, Sieve Analysis
  - i. AASHTO revisions
    - 1. Note 2
    - 2. Note 7 as per WAQTC
- j. Exams
- k. PowerPoint
- 7. Revision to Asphalt II Field Operating Procedures
  - a. Revisions in AASHTO Test Methods
  - b. T 312, Gyrotory
    - i. AASHTO revisions
      - 1. HMA to Asphalt Materials
      - 2. 4.1.3 loading system requirements
      - 3. 4.4 thermometer requirements
      - 4. 9.6 gyrations by R 35 alone
      - 5. Removed T 331 as an option
      - 6. Extensive revisions to Annex A
  - c. TM 13, Volumetric Properties
  - d. Exams
  - e. PowerPoint
- 8. Other AASHTO revisions
- 9. Revision review assignments
  - a. R 35, Superpave Volumetric Design
    - i. AASHTO revisions
      - 1. 6.5 explanation of washing and sieving
      - 2. 6.7 explanation of blending
- 10. FOP Library
  - a. Family of Curves SOP - Sean
- 11. Prioritized 2015 ‘Planned Work’ from the Strategic Plan – Executive Committee
- 12. Archiving WAQTC historical documents
- 13. Revision line on FOP final documents – Garth
- 14. Update from the on-line task force – EC assignment
- 15. AMRL certification details form – Casey Soneira
- 16. Next meeting

<b>PAGE 4</b>		
<b>TOPIC</b>	<b>DISCUSSION / <i>DECISION</i></b>	<b>ACTION REQUIRED BY:</b>

WELCOME	Garth Newman, Qualification Advisory Committee (QAC) Chair, IDT, welcomed the committee members to Vancouver and the Training Materials meeting.	
REPORT FROM EXECUTIVE COMMITTEE MEETINGS	<p>Garth reported on the Executive Committee (EC) meeting held in March.</p> <p>Garth discussed Mike San Angelo's concerns about the future of WAQTC and whether the term 'certification' was more appropriate than 'qualification.' See EC Spring meeting minutes.</p> <p>Garth asked about the on-line training task force. Has there been any progress? Gilbert Arredondo, UDOT, said he will discuss this with Jeff Saddler, UDOT. This topic is further discussed in conjunction with the Strategic Plan prioritized tasks.</p> <p>Garth reported that the AASHTO revisions were approved by the EC and sent to the AASHTO Technical Section (TS) Chairs for inclusion on the agenda of the upcoming meeting.</p> <p><i>Gilbert will follow up on the online training with Jeff Saddler.</i></p>	Gilbert Arredondo
VICE CHAIR	<p>Garth says he has not heard anyone express an interest in the Vice Chair position. He suggests that anyone who would like to contribute in this way send him a formal statement. The statement should include why the individual would like the position.</p> <p><i>Any committee member interested in the Vice Chair position should send a formal statement to Garth.</i></p>	Committee Members
POWERPOINT TITLE SLIDES – NAME NOT JUST NUMBER	<p>Linda Hughes, WSDOT, pointed out that in the recently revised PowerPoint presentations the title slide of the procedures contains the AASHTO alphanumeric designation and not the name of the procedure. She recommended that the slides include both. The group agreed that the title slides should include the name of the procedure. This may make the first slide a bit cramped so a shortened identification may be appropriate.</p> <p><i>Desna Bergold will add the names to the title slide and Linda will review for format and clarity.</i></p>	Desna Bergold
	<b>EMBANKMENT &amp; BASE AND IN-PLACE DENSITY DISCUSSIONS AND REVISIONS</b>	
T 255/T 265	<i>AASHTO T 265, Laboratory Determination of Moisture Content of Soils</i> was revised for the 2015 edition. The revisions were	

PAGE 5		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	<p>mostly those proposed by the WAQTC and a few editorials. The AASHTO revisions will have little impact on the Field Operating Procedures (FOP).</p> <p>There was some discussion concerning the calculation example. The example shows how to calculate the <b>Constant Mass</b> and the <b>Moisture Content</b>. The mass of the hot sample and the cool sample were the same although the temperature difference affects the measured masses. The example was revised to more accurately reflect laboratory expectations.</p> <p>Revisions to the FOP for T 255/T 265 include:</p> <ul style="list-style-type: none"> <li>New AASHTO date New revision date</li> <li>Changing Note 1 to a 'Caution' instead of a note.</li> <li>Changing the definition of 'overnight' in in 'Procedure' from '15 to 16 hours' to 15 hours minimum.</li> <li>Moisture content example calculation.</li> </ul> <p><i>These revisions will be included in the 2015 training materials.</i></p>	
T 99/T 180, MOISTURE/DENSITY RELATIONS	<p><i>AASHTO T 99; Moisture-Density Relations of Soils Using a 2.5-kg (5.5-lb) Rammer and a 305-mm (12-in.) Drop and T 180; Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop</i> were revised extensively. One of the most significant changes was the inclusion of the former <i>T 224; Correction for Coarse Particles in the Soil Compaction Test</i> as an annex; another is no longer allowing the use of molds out of tolerance. These revisions will be reflected in the FOP for these procedures.</p> <p>With T 224 now included in T 99 and T 180 it would no longer be represented in the In-place Density (IPD) qualification. The committee decided that the written exam for the FOP for T 99/T 180 will be included in the IPD qualification. A performance exam will not be required for IPD. This will be revised in the administration manual.</p> <p>Revisions to the FOP for T 99/T 180 include:</p> <ul style="list-style-type: none"> <li>New AASHTO date New revision date</li> <li>Apparatus requirements to match AASHTO</li> <li>Removal of steps and calculation related to the use of molds out of tolerance.</li> <li>Editorials</li> <li>Inclusion of Annex 1 without the alternate adjustment</li> </ul>	Desna Bergold

PAGE 6		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	<p>equation for density.</p> <p><i>The In-place Density Qualification requirements in the administration manual will be updated to include the written exam for the FOP for T 99/T 180.</i></p> <p><i>These revisions will be included in the 2015 training materials.</i></p>	Desna Bergold
T 272	<p><i>T 272; Family of Curves – One Point Method</i> was revised for the 2015 edition.</p> <p>The revisions include adding a sample preparation section to match AASHTO T 99; remove ‘mold tolerance’ language; and adding a ‘calculations’ section.</p> <p>Revisions to the FOP for T 272 to reflect those in AASHTO include:</p> <p style="padding-left: 40px;">New AASHTO date    New revision date    Calculations section with an example</p> <p><i>These revisions will be included in the 2015 training materials.</i></p>	Desna Bergold
T 85	<p><i>T 85; Specific Gravity and Absorption of Coarse Aggregate</i></p> <p>There were no AASHTO revisions to this test method and no proposed revisions for the committee.</p> <p>Desna pointed out that the term <math>G_{sb}</math> is not in the title of this procedure. The symbols have been added to most asphalt related methods. Perhaps it should be proposed for other specific gravity related procedures. The committee agreed and decided that it should be included on the agenda for the AASHTO revision meeting (January).</p> <p><i>Including the term <math>G_{sb}</math> in the titles of T 84 and T 85 will be included on the January agenda.</i></p>	Desna Bergold
T 224	<p><i>T 224; Correction for Coarse Particles in the Soil Compaction Test</i></p> <p>AASHTO discontinued this method, it is now included in AASHTO T 99 and T 180 as an annex.</p> <p><i>See T 99/T 180 discussion.</i></p>	None
HUMPHRES	<p>While compiling the Minutes of the January QAC meeting, Desna noticed that there seemed to be some discrepancy on the spelling of this procedure. After some research it was determined that the method was named for Herbert W Humphres. The committee decided the training materials need to be revised with the correct name.</p> <p><i>This revision will be included in the 2015 training materials.</i></p>	

PAGE 7		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	<i>Editorial.</i>	Desna Bergold
T 310	<p><i>T 310, In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)</i></p> <p>There were no listed AASHTO revisions.</p> <p>The references in the FOP for AASHTO T 310 were revised to remove T 224 and include a direct link to the annex of T 99/T 180.</p> <p>Revisions to the FOP for T 310 include:</p> <ul style="list-style-type: none"> <li>New revision date</li> <li>Cross-referencing</li> </ul> <p><i>These revisions will be included in the 2015 training materials.</i></p>	Desna Bergold
TM 8 Now AASHTO T 355	<p>WAQTC's <i>TM 8; In-place Density of HMA by Nuclear Methods</i> has been adopted by AASHTO as a full standard. It is now <i>AASHTO T 355; In-Place Density of Asphalt Mixtures by Nuclear Methods</i>.</p> <p>As the new AASHTO test method was introduced by WAQTC, it has little impact on the FOP other than the number and title change.</p> <p>Sean Parker, ODOT, asked if any member states still used the Direct Transmission method. Linda said that WSDOT still uses it but may not for much longer. Linda suggested that if the committee wanted to remove the alternate method it would be acceptable. The committee decided that it would remove it from the FOP. It will be removed in the 2015 training materials.</p> <p>Revisions to the FOP for TM 8 include:</p> <ul style="list-style-type: none"> <li>New alphanumeric designation</li> <li>New title</li> <li>New revision date</li> <li>Added reference to the AASHTO</li> <li>Removal of the direct transmission method and equipment</li> <li>Removed 'Overview'</li> <li>Format of example section</li> <li>Report section</li> </ul> <p><i>These revisions will be included in the 2015 training materials.</i></p>	Desna Bergold

PAGE 8		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
TM 11 Now AASHTO R 67	<p>WAQTC's <i>TM 11; Obtaining Cores</i> has been adopted by AASHTO as a full standard. It is now <i>AASHTO R 67; Sampling Asphalt Mixtures after Compaction (Obtaining Cores)</i>.</p> <p>The FOPs that reference TM 11 will now reference R 47.</p> <p><i>WAQTC TM 11 will be discontinued.</i></p>	Desna Bergold
EB AND IPD EXAMS	<i>Committee members: See exam errata for revisions</i>	
POWERPOINT	<p>Many of the PowerPoint presentations were addressed during the discussion for each FOP.</p> <p>Linda pointed out the videos in the PowerPoint presentations are not all that good and she would like committee members to try to get new video, especially for T 176.</p> <p><i>Try to get some new videos.</i></p>	Committee Members
	<b>CONCRETE</b>	
TM 2	<p><i>WAQTC TM 2; Sampling of Freshly Mixed Concrete</i></p> <p>No proposed revisions to the FOP.</p> <p><i>The FOP will not be revised.</i></p>	None
T 309	<p><i>T 309; Temperature of Freshly Mixed Portland Cement Concrete</i></p> <p>AASHTO reinstated T 309. It is now a wholly AASHTO procedure submitted by the WAQTC and developed from the original WAQTC TM 10.</p> <p>Revisions to the FOP for AASHTO T 309 include:</p> <p style="padding-left: 40px;">New AASHTO date</p> <p style="padding-left: 40px;">New revision date</p> <p><i>These revisions will be included in the 2015 training materials.</i></p>	Desna Bergold
T 119	<p><i>T 119; Slump of Hydraulic Concrete</i></p> <p>No proposed revisions to the FOP.</p> <p><i>The FOP will not be revised.</i></p>	None
T 152	<p><i>T 152; Air Content of Freshly Mixed Concrete by the Pressure Method</i></p> <p>Garth proposed changing the word 'sides' to 'side' because the statement is 'tap the sides of the bowl' but it should be singular. All agreed but in the ensuing discussion the committee decided that to make it clear that the tapping should be around the outside not just in one location. They determined that 'Tap</p>	

PAGE 9		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	<p>around the perimeter ...' is more instructive. The committee would like to propose this change to the AASHTO procedure. This will be included on the Jan. agenda.</p> <p>The committee also noticed that the terms 'measure' and 'bowl' are used interchangeably. After referencing the FOP for T 121, it was decided that the term 'measure' would be used throughout both test methods. This will also be included on the Jan. agenda.</p> <p>Gilbert pointed out that the standardization vessel in the AASHTO method is no longer required to be bronze and in fact air meters are now delivered with plastic vessels. The phrase 'should be brass, not plastic' will be removed from Note 2.</p> <p>The revisions to the FOP for T 152 include:</p> <ul style="list-style-type: none"> <li>New revision date</li> <li>Use of the term 'measure' for bowl</li> <li>Removal of the mention of a brass vessel from Note 2</li> <li>Replace 'tap the sides' with 'tap around the perimeter'</li> <li>Change the term 'sides' to 'side' in the Internal Vibration procedure</li> </ul> <p><i>These revisions will be included in the 2015 training materials. Proposed AASHTO revisions will be included on the January QAC meeting agenda.</i></p>	Desna Bergold
T 121	<p><i>AASHTO T 121; Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete</i> was revised for the 2015 edition.</p> <p>AASHTO revised T 121 to include dampening the measure in the procedure. This revision was proposed by WAQTC and is already in the FOP.</p> <p>The Committee decided this FOP should include the 'tap around the perimeter' language introduced in the FOP for T 152.</p> <p>It was noticed that the AASHTO still references ASTM C 1064 for temperature; this should be revised to T 309. The AASHTO should also change sides to side and use the term 'tap around the perimeter. These will be included on the Jan. agenda.</p> <p>The agenda item concerning secondary cementitious material was intended for the Jan. agenda.</p> <p>Revisions to the FOP for T 121 include:</p> <ul style="list-style-type: none"> <li>New AASHTO date</li> </ul>	

PAGE 10		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	<p>New revision date</p> <p>Replace ‘tap the sides’ with ‘tap around the perimeter’</p> <p>Change the term ‘sides’ to ‘side’ in the Internal Vibration procedure</p> <p><i>These revisions will be included in the 2015 training materials. Secondary cementitious materials, referencing T 309, and ‘tapping around the perimeter’ will be included on the Jan. QAC meeting agenda.</i></p>	Desna Bergold
T 23	<p><i>AASHTO T 23; Making and Curing Concrete Test Specimens in the Field</i></p> <p>The committee discussed the instruction for striking off the molds. The information in Note 1 is really a part of the procedure and should not be in the note. The applicable steps will be revised to read: ‘Strike off the surface of the molds with tamping rod, straightedge, float, or trowel.’ ‘Begin initial curing’ will also be a separate step throughout.</p> <p>Revisions to the FOP for T 23 include:</p> <ul style="list-style-type: none"> <li>Clarifying the tools to be used during strike off</li> <li>Identifying ‘begin initial curing’ as a separate step.</li> </ul> <p><i>These revisions will be included in the 2015 training materials.</i></p>	Desna Bergold
CONCRETE EXAMS	<i>Committee members: See exam errata for revisions</i>	
POWERPOINT	PowerPoint revisions were discussed during the FOP discussions.	
	<b>AGGREGATE</b>	
T 2	<p><i>AASHTO T 2; Sampling of Aggregates</i></p> <p>Linda proposed a new section for sampling from the stockpile based on the AASHTO T 2 (ASTM D 75). Unfortunately the proposed language was not forwarded to the committee. Sean expressed his desire to consult with other members of ODOT before this was adopted. Given that concern, Linda tabled her proposal until 2016. Linda and Misty Miner, MDT, will work together to present revisions to the short form, student manual, both performance exams, and PowerPoint presentation for approval at the next summer QAC meeting.</p> <p>T 2 was reconfirmed for the 2015 edition but as this is a ‘C’ method (references ASTM for the bulk of the procedure), WAQTC has been wondering what AASHTO will do. Garth will ask the TS chair during the upcoming AASHTO</p>	

PAGE 11		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	<p>Subcommittee on Materials (SOM) meeting what they intend to do with this method. If AASHTO needs someone to create a standalone method, Garth will ask the Executive Committee if they would like the QAC to create one.</p> <p>Concerning revisions to the FOP, Sean asked if the minimum mass samples sizes in Table 1, <i>Sample Sizes</i> is intended to be dry or wet weight. The committee determined that as the Table represents ‘recommended’ sample sizes and that the moisture content at the time of sampling will impact the sample size they would prefer not to define it as wet or dry. In reviewing the FOP it as decided to rename the Table “Recommended Sample Sizes” and rewrite the preceding paragraph and Note 1 for clarity.</p> <p>Revisions to the FOP for T 2 include:</p> <ul style="list-style-type: none"> <li>New revision date</li> <li>Paragraph under Procedure – General for Clarity</li> <li>Rename Table 1</li> <li>Rewrite Note 1</li> </ul> <p><i>These revisions will be included in the 2015 training materials.</i></p> <p><i>T 2 “A” method will be included on the agenda for the upcoming EC meeting.</i></p> <p><i>If approved, creating a T 2 “A” method will be included on the Jan. QAC meeting agenda.</i></p>	Linda Hughes and Misty Miner Garth Newman Desna Bergold
T 248	<p><i>AASHTO T 248; Reducing Samples of Aggregate to Testing Size</i></p> <p>No proposed revisions to the FOP.</p> <p><i>The FOP will not be revised.</i></p>	None
T 255	<p><i>AASHTO T 255; Total Evaporable Moisture Content of Aggregate by Drying</i></p> <p>It was determined that the revisions in the FOP for T 255/T 265 did not impact the FOP for T 255.</p> <p>No proposed revisions to the FOP.</p> <p><i>The FOP will not be revised.</i></p>	None
T 27/T 11	<p><i>AASHTO T 27 /T 11; Sieve Analysis of Fine and Coarse Aggregates and Materials Finer Than 75-<math>\mu</math>m (No. 200) Sieve in Mineral Aggregates by Washing</i></p>	None

PAGE 12		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	No proposed revisions to the FOP. <i>The FOP will not be revised.</i>	
T 335	<i>AASHTO T 335; Determining the Percentage of Fracture in Coarse Aggregate</i> No proposed revisions to the FOP. <i>The FOP will not be revised.</i>	None
T 176	<i>AASHTO T 176; Plastic Fines in Graded Aggregates and Soils by Use of the Sand Equivalent Test</i> Garth pointed out that the mixing of the working solution is not adequately covered in the FOP. IDT has noticed significant disparities attributed to inadequately mixed working solution. Garth proposed some language to cover this issue to be included in the Materials section. After discussion and revisions to the proposal the committee approved the revision. The committee also felt that the AASHTO method should be similarly revised. Revisions to the FOP for T 176 include: New revision date Including the working solution bottle in Apparatus Mixing instructions in Materials Note 1 rewrite and including Note 3 in the working solution instructions <i>These revisions will be included in the 2015 training materials.</i> <i>Revision concerning the working solution will be included on the Jan. QAC meeting agenda.</i>	Desna Bergold
AGGREGATE EXAMS	Rich Giessel, AKDOT, expressed his concern that the worksheet for calculating T 27/T 11 is confusing. It is the same worksheet that is in the FOP. Rich presented a revised worksheet that he feels is easier to follow, unfortunately it did not cover all the permutations in the FOP. The committee agreed that the worksheet could be revised for ease and clarity. Rich agreed to develop a work sheet and examples for Methods A, B, and C, with individual and cumulative for all three. <i>Richard Giessel will prepare new worksheets for 2016.</i> <i>Committee members: See exam errata for revisions</i>	Richard Giessel
POWERPOINT	PowerPoints were discussed and revised during the FOP discussions.	

PAGE 13		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	<b>ASPHALT I AND II</b>	
T 168	<p><i>AASHTO T 168; Sampling Bituminous Paving Mixtures</i></p> <p>The committee discussed some issues with the General section. Gilbert pointed out that the containers and their use is stated clearer in the PowerPoint presentation. Minor editorial revisions were approved.</p> <p><i>These revisions will be included in the 2015 training materials.</i></p>	Desna Bergold
R 47	<p><i>AASHTO R47; Reducing Samples of Hot Mix Asphalt (HMA) to Testing Size</i></p> <p>It was noticed that this FOP includes ‘Sample Identification’ and ‘Report’ sections. This is inconsistent with T 248. The committee decided that these sections shouldn’t be in this FOP and should be removed.</p> <p>Editorial revisions to the FOP for R 47 include:</p> <p style="padding-left: 40px;">Remove Sample Identification section</p> <p style="padding-left: 40px;">Remove Report section</p> <p><i>These revisions will be included in the 2015 training materials.</i></p>	Desna Bergold
OTHER RELATED DISCUSSION	<p>During the discussion concerning the FOP for R 47, the committee looked at many other FOPs and determined that in order to adequately follow a sample through the tests that may be performed on it the sample should be labeled with a unique sample identifier. It was decided ‘Sample ID’ should be included in the reporting section of all the FOPs.</p> <p><i>All FOPs will include ‘Sample ID’ in the reporting section.</i></p>	Desna Bergold
T 329	<p><i>AASHTO T 329; Moisture Content of Asphalt Mixtures by Oven Method</i> was revised for the 2015 edition.</p> <p>AASHTO revisions include: changing HMA to Asphalt Mixtures, revisions in Note 1 as proposed by WAQTC and the equation for constant mass was corrected.</p> <p>In reviewing the AASHTO revisions, the committee noticed that the formula for calculating constant mass is incorrect. The divisor should be the ‘previous mass’ not the ‘new mass.’ Garth offered to discuss this with the TS Section chair at the upcoming SOM meeting. If necessary this will be included on the Jan. QAC meeting.</p> <p>Revisions to the FOP for T 329 include:</p> <p style="padding-left: 40px;">AASHTO revision date</p>	

PAGE 14		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	<p>New revision date</p> <p>Use Asphalt Mixtures instead of HMA</p> <p><i>These revisions will be included in the 2015 training materials.</i></p> <p><i>Garth will discuss the constant mass formula with the Tech Section Chair, this will be included on the Jan. QAC meeting agenda if necessary.</i></p>	Desna Bergold Garth Newman
T 308	<p><i>AASHTO T 308; Determining the Asphalt Binder Content of Hot Mix Asphalt (HMA) by the Ignition Method</i> was reconfirmed with editorial revision for the 2015 edition.</p> <p>No proposed revisions to the FOP.</p> <p><i>The FOP will not be revised.</i></p>	None
T 209	<p><i>AASHTO T 209; Theoretical Maximum Specific Gravity (<math>G_{mm}</math>) and Density of Hot Mix Asphalt (HMA)</i></p> <p>Linda submitted revisions to the FOP concerning the use of the terms flask and pycnometer. A Volumetric flask and a Pycnometer are two distinct pieces of equipment and should be identified as such. Also, the use of the terms flask and container are inconsistent. The committee agreed and approved identifying volumetric flasks as distinct from pycnometers. They also agreed that the term ‘container’ should be used when referencing something that could be a bowl, volumetric flask, or pycnometer.</p> <p>During the T 166 discussion Garth noticed that the ‘bowl method’ in T 209 did not address the level of the water bath at all. The committee approved steps that correct this deficiency.</p> <p>Revisions to the FOP for T 209 include:</p> <p style="padding-left: 40px;">New revision date</p> <p style="padding-left: 40px;">Identifying volumetric flasks and pycnometers as such throughout</p> <p style="padding-left: 40px;">Consistent use of the term container</p> <p style="padding-left: 40px;">Steps in bowl method to:</p> <p style="padding-left: 80px;">Fill and Stabilize the water bath</p> <p style="padding-left: 80px;">Tare the balance</p> <p style="padding-left: 80px;">Refill the water bath</p> <p><i>These revisions will be included in the 2015 training materials.</i></p>	Desna Bergold

PAGE 15		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
T 166	<p><i>AASHTO Bulk Specific Gravity (<math>G_{mb}</math>) of Compacted Hot Mix Asphalt (HMA) Using Saturated Surface-Dry Specimens</i></p> <p>Gilbert proposed looking at the language from the FOP for T 85 concerning re-inspecting the level of the water bath after introducing the sample. The committee reviewed the steps and Gilbert withdrew his recommendation because he felt it was adequately covered.</p> <p>Rich noted the absorption is required to be reported to 0.01 percent but in the Scope it states the method is for use on specimens with less than 2.0 percent absorption. The committee agreed it should be consistent.</p> <p>Editorial revisions to the FOP for T 166 include:</p> <p style="padding-left: 40px;">Scope 2.0 to 2.00</p> <p><i>These revisions will be included in the 2015 training materials.</i></p>	Desna Bergold
T 40	<p><i>AASHTO R 66; Sampling Asphalt Materials</i> was revised for the 2015 edition.</p> <p>AASHTO developed a new ‘A’ method for sampling asphalt materials. The new method was reviewed and the committee determined that the FOP still adequately covers the sampling of liquid asphalt materials.</p> <p>Revisions to the FOP for R 66 include:</p> <p style="padding-left: 40px;">AASHTO revision date</p> <p style="padding-left: 40px;">New revision date</p> <p style="padding-left: 40px;">New alphanumeric designation</p> <p style="padding-left: 40px;">New title</p> <p><i>These revisions will be included in the 2015 training materials.</i></p>	Desna Bergold
T 30	<p><i>AASHTO T 30; Mechanical Analysis of Extracted Aggregate</i> was revised for the 2015 edition.</p> <p>AASHTO revisions include instructions in Note 2 concerning evaluating the percent passing for each sieve when using a mechanical washing apparatus and including the 12 inch sieve example in Note 7 (recommended by WAQTC). These revisions do not impact the FOP.</p> <p>The committee discussed their concerns with Note 2 in the AASHTO. Although the evaluation is in a note (non-mandatory) it is assumed that AMRL will require evidence of the evaluation. Revisions to the AASHTO method will be</p>	

PAGE 16		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	<p>included on the Jan. QAC agenda.</p> <p>Rich had some editorial revisions to propose. These were reviewed and approved.</p> <p>Revisions to the FOP for T 30 include:</p> <ul style="list-style-type: none"> <li>AASHTO revision date</li> <li>New revision date</li> <li>Editorial revisions</li> </ul> <p><i>These revisions will be included in the 2015 training materials.</i></p> <p><i>Revisions to the AASHTO Note 2 will be on the Jan. QAC meeting agenda.</i></p>	Desna Bergold
T 312	<p><i>AASHTO T 312; Preparing and Determining the Density of Asphalt Mixture Specimens by Means of the Superpave Gyrotory Compactor</i> was revised for the 2015 edition.</p> <p>The AASHTO revisions include: HMA to Asphalt Mixtures, apparatus requirements, number of gyrations determined by R 35, removed T 331 as an option, and extensive revisions to Annex A.</p> <p>It was determined that the AASHTO revisions did not impact the FOP.</p> <p>Gilbert noticed that the angle on the “Device Movement” illustration is no longer correct. Sean had the original illustration and submitted a corrected one.</p> <p>Revisions to the FOP for T 312 include:</p> <ul style="list-style-type: none"> <li>AASHTO revision date</li> <li>New revision date</li> <li>‘Device Movement’ Illustration</li> </ul> <p><i>These revisions will be included in the 2015 training materials.</i></p>	Desna Bergold
TM 13	<p><i>WAQTC TM 13; Volumetric Properties of Hot Mix Asphalt (HMA)</i></p> <p>No proposed revisions to the FOP.</p> <p><i>The FOP will not be revised.</i></p>	None
ASPHALT EXAMS	<i>Committee members: See exam errata for revisions</i>	
OTHER AASHTO	<p><i>AASHTO R 35; Superpave Volumetric Design</i></p> <p>The committee reviewed the AASHTO revisions for the 2015 edition.</p>	

PAGE 17		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	<p>Garth also pointed out that <i>AASHTO M 201; Mixing Rooms, Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the Testing of Hydraulic Cements and Concretes</i> was revised for the 2015 edition.</p> <p><i>No action required.</i></p>	None
ADMINISTRATION MANUAL	<p>The administration manual will require significant revisions based on the AASHTO name and number changes and the discontinuation of T 224.</p> <p><i>The administration manual will be updated with the correct name and alphanumeric designations.</i></p>	Desna Bergold
REVISION REVIEW ASSIGNMENTS	<p>In an earlier meeting Linda suggested that the committee be assigned modules to review when the draft revision package is sent out. Misty suggested that the assignment be for two years before reassignments are made. The committee agreed.</p> <p>The following members volunteered for:</p> <p style="padding-left: 40px;">EB/DTT: Chris Russell and Linda Hughes</p> <p style="padding-left: 40px;">Concrete: Misty Miner and Richard Giessel</p> <p style="padding-left: 40px;">Aggregate: Gilbert Arredondo and Sean Parker</p> <p style="padding-left: 40px;">Asphalt: Garth Newman and Megan Chatfield, WFL</p> <p style="padding-left: 40px;">Administration Manual: Garth Newman</p> <p>The committee members will review all the training materials: student and short form FOPs, Review Questions, Performance Exams, Written Exams, and PowerPoint presentations for the module they are assigned.</p> <p>Garth suggests ‘taking’ the exams to be certain that they are correctly updated.</p> <p>Any corrections will be sent to Desna.</p> <p>There was some discussion about the jump drives that are sent out with the draft revision and the final training package. Garth determined that it was more expensive to send the drives back and forth than to purchase new drives. He told the committee that it is no longer necessary to return them. If anyone wants to give them to the consultant for re-use at a meeting that is encouraged.</p> <p>Later in the meeting Garth suggested that committee members create new inputs for the calculations in the exams for the module they will be reviewing. All agreed. Garth will follow up in Jan.</p>	

PAGE 18		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	<p><i>Committee members will review the draft revisions of the modules assigned. Corrections will be sent to Desna.</i></p> <p><i>Committee members will create new inputs for the exams.</i></p> <p><i>No need to return jump drives.</i></p>	<p>Committee Members Desna Bergold</p>
FOP LIBRARY	<p>Garth pointed out that <i>AASHTO T 90; Determining the Plastic Limit and Plasticity Index of Soils</i> was revised for the 2015 edition. Rich is the Champion of the FOP and updated it for the library before the end of the meeting and sent it to Desna.</p> <p>Rich asked why AASHTO requires an ‘unglazed’ porcelain dish in <i>T 89; Determining the Liquid Limit of Soils</i>. The committee had no answer and agreed that perhaps a revision should be proposed. This will be on the Jan. QAC agenda.</p> <p>Sean decided to table the <i>Family of Curves</i> Standard Operating Procedure because WAQTC is proposing an ‘R’ method to AASHTO in the upcoming meeting. He will wait to see what happens with it.</p> <p><i>The FOP for AASHTO T 90 will be updated in the FOP library.</i></p> <p><i>The ‘unglazed’ porcelain requirement in T 90; Determining the Plastic Limit and Plasticity Index of Soils will be included on the Jan. QAC meeting agenda.</i></p>	<p>Desna Bergold</p>
PRIORITIZED 2015 ‘PLANNED WORK’ FROM THE STRATEGIC PLAN	<p>The committee reviewed the ‘Prioritized Planned Work’ in the 2015 Strategic Plan revised by the Executive Committee. Each item was discussed.</p> <p>Strategic Plan Excerpt:</p> <p><b>2015 Planned Work</b></p> <p>The following work was prioritized by the Executive Committee for 2015:</p> <ol style="list-style-type: none"> <li>1. Continue work on ‘on-going’ activities</li> <li>2. Evaluate existing training materials for needed improvements / updates</li> <li>3. Develop Roles and Responsibilities guide for QAC and EC members</li> <li>4. Identify exam proctor and trainer qualification requirements</li> <li>5. Develop a work plan for training of exam proctors</li> </ol>	

PAGE 19		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	<p>6. Support task force work on online training</p> <p>7. Develop a work plan for Reciprocity Audits of Member Agencies</p>	
NUMBERS 1 AND 2	<p>QAC addresses these items during its scheduled meetings.</p> <p><i>No further action required.</i></p>	None
NUMBER 3	<p>A Roles and Responsibilities table was created by the QAC and approved by the EC during an earlier meeting. What is the next step in the development of the Roles and Responsibilities section of the operations manual? Rich volunteered to write an introductory paragraph for the operations manual.</p> <p><i>An introductory paragraph will be created to introduce the Roles and Responsibilities table for the operations manual.</i></p>	Richard Giessel
NUMBERS 4 AND 5	<p>The EC felt that identifying the exam proctor and trainer qualification requirements is the first step to developing training for examiners.</p> <p>Misty has developed a trainer and exam proctor qualification and training manual. Garth also has an examiner training manual. These will be distributed to the committee members for review anticipating what it would take to adopt for WAQTC. Provide responses to Desna by September 15.</p> <p><i>The committee will review MDT's and IDT's manuals and have responses to Desna by Sept. 15<sup>th</sup>.</i></p>	Committee Members
NUMBER 6	<p>Jeff Saddler, UDOT, contacted the task force members and requested copies of their existing on-line training. Jeff had said he was going to compile this training and then the task force would determine the next step. Gilbert has volunteered to ask Jeff where this stands.</p> <p><i>Gilbert will follow up with Jeff Saddler</i></p>	Gilbert Arredondo
NUMBER 7	<p>Garth tried to explain the EC's goal for Reciprocity Audits.</p> <p>True reciprocity requires all the agencies agree that the qualification requirements in one state meet the needs and requirements of the other member states. The EC feels that an auditing program will help assure that the states are comfortable accepting other states' qualifications.</p> <p>The audit will review the agencies' use of materials, adherence to the administration manual and Appendix B.</p> <p>Linda pointed out that to develop a work plan one must know the purpose and use of the audit. Linda asked what the objective</p>	

PAGE 20		
TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
	<p>of the audit is and how results will be used.</p> <p>The QAC would like the EC to clarify the goal, specifically the objective of the audits and the reports. This will be on the agenda for the next EC meeting.</p> <p><i>The QAC would like further guidance from the EC; this will be on the agenda of the upcoming EC meeting.</i></p>	Desna Bergold Executive Committee
ARCHIVING WAQTC HISTORICAL DOCUMENTS	<p>At the last meeting Garth was assigned to develop a list of the documents in his possession and identify their format (hard or electronic). Garth was unable to complete this assignment. Using the guidelines developed by the QAC in 7/14 Garth will develop the list by Jan.1 for discussion at the Jan. QAC meeting (the guidelines are attached to the 7/14 meeting minutes).</p> <p><i>Garth will distribute the list by Jan. 1, 2016; this will be included on the Jan. QAC meeting agenda.</i></p>	Garth Newman Desna Bergold
RELATED DISCUSSION	<p>Linda recommends that a file be compiled for ‘original’ illustrations. It was fortuitous that Sean had the original for the T 312 “Device Movement” so that it could be corrected. There may not be that many illustrations but archiving the ‘originals’ would make revising them in the future easier.</p> <p>Everyone agreed. Desna will compile a list of the illustrations from the manuals and the committee members will look through their files.</p> <p><i>Compile a file of any original illustrations that can be found.</i></p>	Desna Bergold Committee Members
REVISION LINE ON FOP FINAL DOCUMENTS	<p>Garth asked if a ‘Revision Mark,’ the vertical line on the document that indicates where a revision has been made, would be helpful. Many thought it would be nice to have a document with the revision indicator. Desna explained that creating the line is a ‘setting’ in the Word program and not on the document itself. She can create a PDF with the revision line but not a Word file. Since the documents on the WAQTC website are PDFs Desna was instructed to create a revision line in the short form FOPs for posting.</p> <p><i>PDFs of the short form FOPS will be posted on the WAQTC website.</i></p>	Desna Bergold
UPDATE FROM THE ON-LINE TASK FORCE	Covered above.	
AMRL CERTIFICATION DETAILS FORM	Casey Soneira, AMRL, sent an email requesting that Garth remind the QAC committee members to fill out the certification survey details form AMRL sent out. Desna shared Casey’s	

TOPIC	DISCUSSION / <i>DECISION</i>	ACTION REQUIRED BY:
-------	------------------------------	------------------------

	<p>email with the committee.</p> <p><i>Committee members that have not done so should complete and submit the AMRL survey.</i></p>	Committee Members
UPCOMING QAC MEETINGS	<p>The committee discussed locations for the upcoming meetings. They felt it would be advantageous to have the January meeting in Albuquerque, NM. Perhaps going to New Mexico for the AASHTO revision meeting would allow them to be more involved and promote further involvement. Garth agreed to present the location and reasoning to the EC for approval.</p> <p>Since the Portland / Vancouver area seems to be one of the more convenient locations the committee agreed it would be good for the next July meeting. Desna will research University Place where the July meeting was held in 2012 to see if there have been any improvements to the facilities.</p> <p><i>The locations of the next meetings will be on the Executive Committee agenda.</i></p>	Desna Bergold