

MEETING MINUTES FROM THE
MARICOPA ASSOCIATION OF GOVERNMENTS
STANDARD SPECIFICATIONS AND DETAILS COMMITTEE

July 13, 2011

Held at the Arizona Rock Products Association (ARPA) Office
916 W. Adams St. Phoenix, AZ 85007

AGENCY MEMBERS

Jim Badowich, Avondale	* Mike Samer, Mesa
Scott Zipprich, Buckeye	* Javier Setovich, Peoria
Warren White, Chandler	Syd Anderson, Phoenix (St. Trans.)
* Dave Emon, El Mirage	Jami Erickson, Phoenix (Water)
Greg Crossman, Gilbert	* Marc Palichuk, Queen Creek
Tom Kaczmarowski, Glendale	Rodney Ramos, Scottsdale
Troy Tobiasson, Goodyear, Chair	* Jason Mahkovtz, Surprise
Bob Herz, MCDOT	Tom Wilhite, Tempe, Vice Chair

ADVISORY MEMBERS

Jeff Benedict, AGC	Jeff Hearne, ARPA
Tony Braun, NUCA	Peter Kandaris, SRP (via video)
* Kwigs Bowen, NUCA	Paul R. Nebeker, Independent
Brian Gallimore, AGC	* Mike Smith, ARPA

MAG ADMINISTRATIVE STAFF

Gordon Tyus

* Members not attending or represented by proxy.

GUESTS/VISITORS

Arturo Chavarria, Hanson Pipe and Precast
Michael Neill, Infra-tect, LLC (NUCA)
Mo Rahman, ATC Associates (ARPA)
Jeff Raleigh, Blucor Contracting
Niranjan Vescio, Stronggo

1. Call to Order

Chairman Troy Tobiasson called the meeting to order at 1:46 p.m.

2. Call to the Audience

No members of the audience requested to address the committee.

3. Approval of Minutes

The members reviewed the June 1, 2011 meeting minutes. Warren White introduced a motion to accept the minutes as written. Scott Zipprich seconded the motion. A voice vote of all ayes and no nays was recorded.

Review of 2010 and 2011 Cases

4. Case 10-05 – Revise FOREWORD

Clarify use of the MAG Specifications and Details for Public Works document. Peter Kandarlis said the final version was included in the packet, which basically added three paragraphs to the current Foreword. Mr. Tyus said there has not been a legal review. Mr. Kandarlis noted in the second paragraph that ‘climes’ is an appropriate word for multiple climates. There were several comments on removing the references to private contractors, to avoid confusion since the document is being for public works projects. Mr. Kandarlis said he could make the revisions and proposed to vote on the case at the August 3rd meeting.

5. Case 10-08 – Revise Section 717 Asphalt Rubber

Revise Section 717 ASPHALT-RUBBER to obtain a uniform specification. Bob Herz said since the Asphalt Working Group was introducing more extensive changes to Section 717 in a new case, he proposed to withdraw this case, and make sure Maricopa County’s concerns were addressed in the new draft case. (Later introduced as Case 11-22.)

6. Case 11-01: Miscellaneous Corrections

- a. **Case 11-01A – Correct the formula in Table 711-1.** No new comments provided.
- b. **Case 11-01B – Correct percentage in Table 705-1.** No new comments provided.
- c. **Case 11-01C – Correct reference in Detail 12.** No new comments provided.
- d. No new corrections were submitted.

Mr. Tobiasson noted that new cases addressed these same sections, but that it would be a good idea to make the corrections here, in case the other revisions are not approved this year. Mr. Herz suggested waiting until September to vote on this case, so additional corrections could be added if necessary.

7. Case 11-02 – Safety Edge Detail

Add an Asphalt Pavement Safety Edge option to Detail 201. Bob Herz said this case is still under review at the county, but additional changes are expected later.

8. Case 11-03 – Replace Cadmium Plated Bolts.

Replace cadmium plated bolts referenced in Section 610.13 with zinc plated bolts as described in ASTM-B633. Javier Setovich was not in attendance but did provide a progress report memo addressing issues of health effects, quality of materials, and effects on the environment of cadmium bolts. The interim conclusion was the results did not currently warrant changing the specification. Since this conclusion was in opposition to the initial case, members discussed that even if replacing cadmium bolts was not necessary, it still may be a good idea to provide additional options for zinc, nickel or stainless steel bolts as long as they meet performance and corrosion requirements. Jami Erickson said Phoenix prefers stainless steel. Paul Nebeker noted that when making repairs, you typically do not remove the bolts anyway. Members agreed to continue research on developing a performance-based standard, and to get input from the Water/Sewer Working Group.

9. Case 11-04 – Deletion of Detail 190, Rock Correction Procedure

Replace reference to MAG Detail 190 in MAG Section 301. Delete MAG Detail 190. Peter Kandarlis asked for comments on the case, and suggested to schedule it for a vote at the next committee meeting.

10. Case 11-05 – Deletion of MAG Section 225, Watering

Move MAG Section 225, Water Requirements into MAG Section 104.1.3. Peter Kandarlis said no changes we made and called for a vote. Bob Herz moved and Scott Zipprich seconded a motion to approve Case 11-05 as presented. The case passed: 10 yes, 0 no, 0 abstain and 5 not present.

11. Case 11-06 – Deletion of Out of Date MAG Standards

Remove sections and details that are no longer used or refer to outdated technologies. Scott Zipprich said he had been requested by the Outside ROW Working Group to add *Section 341 Terrazzo Sidewalks* and *Detail 204 Equipment Crossing* to the list of deletions. Terrazzo sidewalks are typically used outside the right-of-way, and could be added to that book in the future. He asked if anyone was still using detail 204 since canal crossing done by the utilities have their own details. Jeff Benedict asked if Section 323 Heater Remix was added, and Mr. Zipprich confirmed that it was included. Mr. Zipprich concluded that he would update the case to include the additional recommendations as well as the sample forms discussed at the previous meeting.

12. Case 11-07 – Revise Section 327: Hot In-Place Recycling

Update section 327 to current industry standards. Jeff Benedict said there were no changes or comments since the last meeting and asked to vote on the case at the next meeting.

13. Case 11-08 – Revise Section 711: Paving Asphalt

Update performance tables, references to ASTM standards, and revise Section 711 to meet current practices. Jeff Benedict said the revised specification adds two new binders to the table – a softer grade and a harder grade. Table 711-2 was removed and replaced with temperature limits. The section title also was changed to Asphalt Concrete. He suggested voting on the case at the next meeting.

14. Case 11-09 – Update Preservative Seal for Asphalt Concrete

Revise Sections 334 and add new 718 to meet current industry materials and practice. Revisions to these sections included adding “plastic seal,” “TRMSS” and conventional emulsified asphalts. Petroleum hydrocarbon resins and petroleum resin emulsions were removed because they are difficult to apply to pavements successfully – leading to bleeding and surface texture loss. Mr. Benedict proposed voting on this case at the next meeting.

15. Case 11-10 – Curb Ramp Modification for Radial Installations

Add new detail 234 and modify existing ramp details to show curb modification. Bob Herz said there had been no changes and planned to include updates for the next meeting.

16. Case 11-11 – ASTM Revisions

- a. **Case 11-11A – Nuclear Density Testing of Soil.**
- b. **Case 11-11B – Chain Link Fence.** Mr. Kandarlis introduced an update to an ASTM standard called out in section 772. ASTM A-569 has been replaced with ASTM A1011-10. All other ASTM references were correct. It was suggested to keep this case open until September in case additional ASTM corrections were found.

17. Case 11-12 – Modifications to Regulatory Requirements, MAG 107

Add references to Arizona native plant requirements and update references to state statutes. Mr. Kandarlis said the case needs time for additional progress and possibly a legal review. He suggested the case be carried over to 2012.

18. Case 11-13 – Replace Current Manhole Frame and Cover Details

Replace Details 423, 424, 523-1 and 523-2 with new details of products that are currently being manufactured. Scott Zipprich said there were no new revisions or comments. Members discussed improvements to the detail drawings. Changes included making the dimension note size consistent and adding the utility type text shown on the bottom half of each cover. Bob

Herz wanted to make sure that the covers are not smooth in the logo area, and this could be clarified with a note. Typically rings are shown on 24" covers and "stipples" on the 30" versions. Mr. Zipprich said he would work with Rita Chihanik of Deeter/Neenah, who provided the draft details to make updates. He also proposed to schedule a vote on the case at the next committee meeting.

2011 New Cases

19. Case 11-14: Update Fire Hydrant Details

Update Detail 360-1, and add Wet Barrel Option (360-2) and Details (360-3). Scott Zipprich said the details were still in a rough draft stage, but he hoped to reduce the number of supplements by adding in most of the requirements and options used by different agencies. The water/sewer group will continue to provide feedback as well. The concrete collar was noted, and Jami Erickson said Phoenix uses concrete bases to keep the hydrants in place if driven into and for erosion resistance. Restrained joints could be used instead of thrust blocks as shown in note 7. Other comments included labeling the height to the pad, and allowing a round pad option. Mr. Zipprich said he also expects to create a plan view that shows required clearances, such as a three to seven foot working area. When asked about adding a hydrant lock detail, he said no, it was not planned to be included, although agencies could add their own detail if they wished.

20. Case 11-15: Modify Residential Speed Hump: Detail 210

Updated speed hump detail to be compliant with MUTCD marking requirements. Warren White said the current MAG detail is not compliant, and provided a new case with the proper markings on the speed hump. He also added a section view for 14' wide road in addition to the 12' section. Scott Zipprich asked about cuts in speed humps. Tom Kaczmarowski of Glendale said they include them at the request of their fire department. A table included in the case outlined the differences between agency details. The speed of traffic based on the size of the humps was also discussed. Bob Herz questioned whether the dimensions could be read to the hundredths of an inch as shown in the section view, and suggested the dimensions be checked for accuracy.

21. Case 11-16: Modify Section 415: Steel Flexible Metal Guardrail

Update Section 415 based on the Maricopa County Supplement. Delete Details 135-1 through 135-4. Peter Kandaris introduced this case based on recommendations of the Outside ROW Working Group. He said the MAG guardrail standards are out-of-date and not followed by MAG agencies. Some details may not be safe to use. The case modifies section 415 largely based on the county supplement, although he suggested it reference ADOT guardrail details when available and delete the details currently in MAG.

22. Case 11-17: Revise Section 520: Steel and Aluminum Handrails

Provide material requirements for aluminum handrails in subsection 520.2, change the title of Detail 145 to “Steel Safety Rail” and update the welding references. Peter Kandarlis explained that the current title of Section 520 included aluminum handrails, but no specifications were provided. The case adds them, and also clarifies that Detail 145 is for use with steel safety rails only. He also said that the reference to the welding standard was out of date, and would be revised to reference AASHTO/AWS Standard D1.5, Bridge Welding Code.

23. Case 11-18: Update Section 350: Removal of Existing Improvements

Add language in Section 350.2 for utility removal, and payment requirements. Peter Kandarlis explained Section 350 needed to include more detailed information on removing utilities. There is no guidance dealing with the backfill of voids left from removal. He also thought that abandonment of utilities should not be permitted unless specified by the agency. Additionally payment for removals should identify specific items to ensure the scope is understood during the bid process. Mr. Kandarlis asked for comments and proposed a possible vote in September.

24. Case 11-19: Modify Section 340: Detectable Warnings

Modify Section 340 to provide performance-based detectable warning specifications. Peter Kandarlis introduced Niranjan Vescio, who participated in the Outside ROW meeting, to present updated information on detectable warning specifications. He referred to the case handouts and described the overall rationale, and major sections of the proposed detectable warning specifications. Mr. Vescio said the new spec addresses the areas of color/contrast, materials, strength & performance, and attachment methods. He described the case file that included supporting arguments and a revised section 340.2.1. He noted that although the current spec may meet legal requirements, it did not provide any detailed performance specifications. Mr. Vescio said having high compression strength was necessary to avoid damage and erosion – regular concrete strength is not sufficient. Tom Wilhite commented on problems with the strength of brick pavers. Mr. Vescio said Nevada wrote a position paper recommending 10,000 psi compression strength. He said the recommended strength in the revised spec doesn’t exclude most of the detectable warning systems used by the agencies. Jim Badowich also discussed problems with bricks being difficult to install, prone to settlement and gaps. The Metro light rail system had problems with these blocks. Mr. Badowich also asked whether other materials were allowed such as fiberglass. Mr. Vescio noted that language stating, “All detectable warnings shall be approved by the local jurisdictional agency prior to installation.” was included. Rod Ramos said cities often have a qualified provider list of approved products. Tom Wilhite asked about the applicability on retrofits such as bridges or crossings for multi-use paths. Members thought that for retrofit and special applications, special plans would be needed. Mr. Herz said retrofits could be done with metal pin replacements for the domes. Mr. Ramos said it typically was easier to remove and replace rather than retrofit an existing ramp. Mr. Badowich agreed.

25. Case 11-20: Update MAG Specifications for Low-lead Brass Water Line Materials

Update MAG specifications (610, 630, 631, 754, 755) referencing brass and bronze water line construction materials to meet new federal low lead standards. Warren White introduced this case based on recommendations from Michael Hinrick of A.Y. McDonald. He noted that the national standards were scheduled to take effect next year. Mr. Tyus said an overview of the NSF/ANSI standards were provided in the addendum packet. Bob Herz asked where the material being made in the USA or Canada is a requirement. Mr. White said he would review and revise the case into a more standard format to clarify the suggested changes.

26. Case 11-21: Add new Section 623: Special Bedding for Mainline Storm Drain Pipe

Incorporate City of Phoenix supplement 623 into the MAG standards. Syd Anderson introduced this case to incorporate the Phoenix supplement into MAG. Mr. Herz asked if it used cement slurry. Jeff Hearne suggested that the specification reference Section 728 for ½ sack slurry. Jim Badowich asked if they had problems with floating pipe. Mr. Anderson said they use an anchoring system using #4 rebar as pins. Mr. Tobiasson, concerned about cost, asked why it should be used. Mr. Anderson said to help avoid problems with settlement issues and difficulty in testing. Paul Nebeker said the thought this initially was done because the original HDPE pipe had problems with low joint strength, but that newer HDPE pipe does not have the degree of problems at the joints. Syd Anderson said they also had problems with ABC breaking the pipe. Mr. Badowich agreed that it was a problem to get in and do testing. Mr. Anderson welcomed additional comments.

Note: All of the following cases were introduced by the Asphalt and Materials Working Groups during the July 13, 2011 meeting. There was limited discussion on each case other than a brief introduction as they were passed out. A summary of each new case is provided below. General discussion following the introduction of the cases included asking agencies to review the cases, and prioritizing those which need to be completed this year, as well as those with minor updates that could also likely be completed and voted on in 2011.

27. Case 11-22: Revise Sections 325 and 717: Asphalt Rubber Specifications

Separate material and construction methods and give guidance to rubber specification. Jeff Benedict handed out the first in a series of new cases developed by the Asphalt and Materials Working Groups. This case incorporates binder issues brought forward by MCDOT, and updates the specifications to current standards. Revisions include: updated required equipment and density procedures; compaction procedures clarified; updated rubber materials along with physical properties.

28. Case 11-23: Revise Section 321: Asphalt Concrete Pavement

Address compaction issues and update Section 321. Jeff Benedict said revisions address differences between mix design limits and production design limits, as well as language corrections.

29. Case 11-24: Add new Section 337: Crack Sealing and Crack Filling

The purpose was to add an updated section with clear limits of its use and scope of crack sealing. A summary received from Jeff Benedict stated: MAG did not have any specifications for crack sealing. Crafc0, a major vendor was consulted and helped write the specification. The Asphalt Working Group and agency members reviewed the draft case. This reflects a major change to the MAG specifications.

30. Case 11-25: Update Section 713: Emulsified Asphalt Materials

Update Section 713: Emulsified Asphalt Materials to include current products and standards. Jeff Benedict said minor changes were made to reference the correct ASTM requirements and revisions to tables. No major field changes were made, but this will allow labs to complete their work according to MAG specifications.

31. Case 11-26: Revise Section 332 and 715: Slurry Seal Material and Application

Revise Section 332 and 715: Slurry Seal Material and Application to include current practice and technologies. Mr. Benedict provided a summary of revisions: Moved job mix formula to 715 from 332 (in whole) cleaned up language and updated 715 to allow the use of the polymer modified emulsion binders. This will be a major change to both sections, though only the addition of the PMQSH is an addition. Tables are clearer and updated.

32. Case 11-27: Update Section 335: Hot Asphalt Rubber Seal

Update Section 335: Hot Asphalt Rubber Seal (Chip) to include current practice and technologies including blending of rubber binder. Mr. Benedict provided a summary of revisions including: revisions to binders, elimination of extender oils, and insertion of some current practices of blending the rubber binder.

33. Case 11-28: Revise Section 716: Cover Material

Revise Section 716: Cover Material to include a better description of “pre-coat” and method. Update references as needed. Jeff Benedict said this case had minor revisions. A better description of “pre-coat” and method was added. MAG sections were updated or eliminated as the references needed.

34. Case 11-29: Revise Section 701. Rock, Gravel and Sand (renamed Aggregates)

Revise Section 701. Change title from Rock, Gravel and Sand to Aggregates. Move materials to appropriate sections, and clarify types of aggregates. Update all references to Section 701. Brian Gallimore, chair of the Materials Working Group also introduced several new cases based on recommendations of the group. The first was a major revision to Section 701. The materials group thought it best to moved material to their respective corresponding

sections. Other revisions included: clarify course aggregate, boulders and cobbles, and remove quarry stone. In addition, a list of MAG specifications that reference Section 701 were handed out showing what references would need to be updated to the new version.

35. Case 11-30: Update Section 702: Base Material.

Update Section 702: Base Material. Revise for current standards. Brian Gallimore sponsored this case from the Materials Working Group. The main revisions were to move all ABC material to Section 310. It also removed AB order of preference. Other references to Section 702 would also need to be updated.

36. Case 11-31: Revise Section 703: Rip Rap.

Revise Section 703: Rip Rap. Indicate proper aggregate size and testing methods. The case defined properties of the material and consolidated section references to rip rap.

37. Case 11-32: Modify Section 309: Lime Slurry Stabilization

Modify Section 309: Lime Slurry Stabilization to include the use of hydrated lime, add mix criteria, testing procedures and payment. Brian Gallimore

38. Case 11-33: Revise Section 311: Soil Cement Base Course

Revise Section 311: Soil Cement Base Course. Clarify and update the construction methods of cement treated subgrade. Brian Gallimore said the case allows for hydrated lime, and changes the specifications to be more up to date. It will allow methods currently in use by the county.

39. Case 11-34: Revise Section 312: Cement Treated Base

Revise Section 312: Cement Treated Base to add provisions for measuring moisture content and update density testing procedures. Brian Gallimore discussed the moisture content and method of mechanical distribution.

40. Case 11-35: Revise Section 310: Untreated Base Course

Revise Section 310: Untreated Base Course. Change title to clarify meaning, address conflicting construction and evaluation process. Brian Gallimore said the Materials Working Group had one more additional case that was undergoing final revisions, but that he wished to introduce it as a case now so that it could be reviewed this year. *Note: Later that week Mr. Gallimore provided the draft case which included revisions to classify compaction guidelines and update deficiency, corrective action and construction methods.*

41. Potential Cases

Any additional cases could be added to a queue for work in 2012.

42. Working Group Reports

(Note: detailed written meeting notes were provided in the agenda and addendum packets.)

a. **Specifications and Details Outside the Right-of-Way Working Group**

Peter Kandaris said the next meeting is scheduled for Wednesday July 27, at 1:30 p.m. at the ARPA office. It would focus on summarizing the progress and beginning prioritization.

b. **Asphalt Working Group**

Jeff Benedict said they had completed most of the revisions (that were provided as new cases) except for RAP which they plan to work on next year.

c. **Materials Working Group**

Brian Gallimore said he would finish up revisions to Section 310, and then the group would be done for the year. Next year they would like to look at RAP for ABC and crushed concrete.

d. **Water/Sewer Issues Working Group**

Jim Badowich he would like to get more contractors to the meetings. In addition to the fire hydrant details the group discussed valve box frames and covers. Thicker covers and other types were discussed including plastic varieties Phoenix is considering. The next meeting of the water/sewer working group is scheduled for July 19 at 1:30 in the MAG Agave Room. (1st floor of the MAG building.)

e. **Concrete Working Group (5/18/11)**

Jeff Hearne said the new cases have superseded some of the sections the working group was reviewing, so the group can provide comments to current cases. The next concrete working group meeting is scheduled for July 20th at 1:30 p.m. at the ARPA office.

43. Staff Reports

Mr. Tyus brought up the question of the next meeting location. Due to remodeling of the MAG offices, members agreed to meet at ARPA again for the August 3, 2011 committee meeting.

44. Open General Discussion

Warren White said information on ADA requirements was due to be released July 26th. He said there was a seminar scheduled, and that Chandler would set up for it. Bob Herz said MCDOT was also setting up a conference room to participate on August 9th. Additional information would be provided.

45. Adjournment:

Chairman Tobiasson adjourned the meeting at 4:09 p.m.