

March 26, 2007

TO: Members of the MAG Specifications and Details Committee  
FROM: Robert Herz, Maricopa County DOT, Chairman  
SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF AGENDA

Wednesday, April 11, 2007 at 1:30 p.m.  
MAG Office, Second Floor, Cholla Room  
302 North First Avenue, Phoenix

The meeting of the MAG Specifications and Details Committee will be held at the place and time indicated above. The agenda for the meeting is provided below. **Please park in the garage under the building. Bring your ticket to the meeting, parking will be validated. For those using transit, the Regional Public Transportation Authority will provide transit tickets for your trip. For those using bicycles, please lock your bicycle in the bike rack in the garage.** Please call me at (602) 506-4760 if you have questions about the upcoming meeting.

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AGENDA

<u>ITEM</u>	<u>COMMITTEE ACTION REQUESTED</u>
1. <u>Call to Order</u>	1. No action required.
2. <u>Approval of March 7, 2007 Meeting Minutes</u>	2. Corrections and approval of March 7, 2007 minutes.
3. <u>2006 &amp; 2007 Cases</u>	3. Review of pending cases and submission of new cases for consideration.
4. <u>General Discussion</u>	4. For information and discussion.
5. <u>Adjournment</u>	5. No action required.

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

March 7, 2007

Maricopa Association of Governments Office, Cholla Room  
302 North First Avenue  
Phoenix, Arizona

AGENCY MEMBERS

- |   |                                      |
|---|--------------------------------------|
| Jim Badowich, Avondale                          | * Kelly Jensen, Mesa                 |
| * Steven Borst, Buckeye                         | Jesse Gonzalez, Peoria               |
| David Fern, Chandler                            | Jeff Van Skike, Phoenix (St. Trans.) |
| Mark Weiner, Gilbert                            | Jami Erickson, Phoenix (Water)       |
| Tom Kaczmarowski for Greg Rodzenko,<br>Glendale | Gerald Wright, Queen Creek           |
| * David Ramirez, Goodyear                       | Rodney Ramos, Scottsdale             |
| Bob Herz, MCDOT, Chairman                       | * Don Moseley, Surprise              |
|   | James Bond, Tempe                    |

ADVISORY MEMBERS

- |   |                              |
|---|------------------------------|
| John Ashley, ACA                            | Don Cornelison, ARPA         |
| Jeff Benedict, AGC                          | Don Green, ARPA              |
| Amanda McGennis for Brian Gallimore,<br>AGC | Paul R. Nebeker, Independent |
| Peter Kandaris, SRP, Vice Chairman          | William Ast, NUCA            |
|   | Dale Phelan, NUCA            |

MAG ADMINISTRATIVE STAFF

Gordon Tyus

- \* Members not attending or represented by proxy.

GUESTS/VISITORS

Pat Glenn, ADS-Nyloplast  
Derek Von Cannon, ADS-Nyloplast

1. Call to Order

Chairman, Bob Herz, called the meeting to order at 1:31 p.m.

## 2. Approval of Minutes

The members reviewed the February 7, 2007 meeting minutes. Jim Bond noted that his name should appear as the sponsor for Case 07-01A instead of Kelly Jensen. John Ashley introduced a motion to accept the minutes as amended. Jesse Gonzalez seconded the motion. A voice vote of all ayes and no nays was recorded.

## 3. 2006 Cases (old cases)

- a. **Case 06-04 – Reduced cement content for Reinforced Concrete Pipe (RCP) mixes, Section 735.** Revisions to Section 735 to eliminate the minimum fly ash and cement requirement. The committee had no discussion on this item.

## 4. 2007 Cases (new cases)

- a. **Case 07-01A – Miscellaneous Corrections:** Dimension correction to Detail 535 catch basin type “F”. Jim Bond will prepare revisions for the next meeting based on the discussion from the January meeting.
- b. **Case 07-01B – Miscellaneous Corrections:** Drafting correction to Detail 222 single curb. The committee had no discussion on this item.
- c. **Case 07-01C – Miscellaneous Corrections:** Typographic correction to Section 105.5 titled “Cooperation of Contractor”. The committee had no discussion on this item.
- d. **Case 07-02 – Revisions to Asphalt Concrete, Section 710:** Major re-writes of Asphalt Concrete materials Section 710 as proposed by the Asphalt Paving Technical Committee.

Bob Herz requested that base mix as shown in the new proposed Table 710-2 for Marshal Mix designs use a size designation similar to the other mixes; it should also be included with Table 710-3 for gyratory mix designs. The term “nominal maximum aggregate size” needs to be defined or described in the section.

Peter Kandaris questioned the proposed elimination of the restricted zone. Don Green and Don Cornelison explained that these provisions have not worked and have been found to be unnecessary from research done by the National Center for Asphalt Technology. The basis for the restricted zone is from empirical work using a unique aggregate source and has not been found universally applicable. Crushing requirements have been more effective in producing stable mixes with more fractured and angular sands. It was also noted that the proposed revisions now require minimum cement content as mineral filler.

Tom Kaczmarowski requested that changes in gradation tables from the present section be highlighted so that revisions will be easier to identify.

The revision notes indicate acceptance criteria presently in sections 710.4-710.6 is to be moved to 321.10. It was requested to have those modifications shown as part of this case.

The sponsors stated that they will attempt to provide proposed Section 321 revisions at the next meeting and will make changes to Section 710 per comments provided today. Members were also requested to review the proposed changes in more detail and return with comments for the next meeting.

e. **Case 07-03 – PVC Catch Basins, Proposed New Details 535-2, 535-3, 537-2, 539-2, 542-1 through 4, and 543-1 through 5:** A presentation on PVC catch basins was made by Derek Von Cannon of ADS-Nyloplast. Jesse Gonzalez questioned the application of PVC catch basins in the right of way. The sponsors were also requested to more fully dimension and annotate proposed details, including dimension tolerances, material requirements, grate angle tolerances and details of the sump. Since the type of pipe entering catch basins can vary, the details should show generic pipe in lieu of corrugated HDPE. Allowable construction methods to field-modify the sump should be provided in the details to prevent confusion. The sponsors will make changes to the new details for next month's meeting.

f. **Case 07-04 – Revision to Water Service Taps, Section 631.3.5:** Removing requirements for insulation of copper service pipe at corporation stops with dielectric insulators. Jami Erickson noted that this requirement is needed for installations around the new light rail construction. Since some committee members had not seen this done in the field, Jami said that she would do further investigation into this issue.

g. **Case 07-05 – Revision to Fire Hydrant Installation, Detail 360:** Add a new note to allow the use of joint restraint systems or thrust blocks. Members provided a number of suggestions including elimination of thrust block entirely in lieu of joint restraint systems, use of ductile iron pipe instead of CIP between the valve and the hydrant, providing tolerances for the pipe runout between the valve and shoe, and use of fitting to maintain right angles. It was also suggested that the sponsor review Scottsdale's supplemental hydrant details. The sponsor was requested to review the suggestions and provide comments for the next meeting.

h. **Case 07-06 – Revision to Section 104, Scope of Work:** Bob Herz proposes adding order of precedence for contract documents and elimination of gender-specific wording (see attached). Bob provided suggested modifications with the proposed changes. Members were requested to review and return with comments for the next meeting.

i. **Case 07-07 – Revision to Section 109, Measurements and Payments:** Bob Herz proposes clarification of language when duplicate Weighmaster's Certificates are to be provide to the Engineer, clarification on payment rate calculations, and add references to state statutes that govern retention requirements for alternative procurement delivery methods. During discussions members remarked that including a specific payment rate factor will require MAG standard updates anytime ADOT makes changes and suggested

that the wording be modified so that the section references the current rate factor without specifying a number. Members were requested to review and return with comments for the next meeting.

5. General Discussion:

- a. David Fern handed out information from the League of Arizona Cities and Towns that opposes HB 2066 (a bill proposing to mandate political subdivisions to locate and mark privately owned sewer laterals on request). This responsibility is presently with entities that plan to perform underground work on private property.
- b. Amanda McGinnis provided information on a one-day workshop to be held at ASU's downtown campus on April 23, 2007 discussing optimizing hot mix asphalt volumetrics and field compactability (Bailey Method).
- c. Bob Herz received an inquiry concerning problems associated with sanitary sewer lateral pipe connections separating within the right-of-way when being extended for use by the adjacent property. Paul Nebeker stated that he has performed repairs where this has happened. Paul noted that problems generally happen when contractors are connecting private systems to lateral stub-outs, the damage occurs when the pipe is snagged by the contractor results in pulled pipe sections. Other members noted that damage also seems to happen at 45 degree bends within the R/W. The committee generally agreed that the problem is with on-site trade construction practices. Options discussed to help limit the problem include requiring longer stub-out extensions into private property, installing joint restraints at connections and bends within the R/W, and requiring a push-on joint at the property line. A sponsor will be required and a detail will need to be created or modified to address this issue.
- d. Gordon Tyus noted that printed copies of the Specifications and Details Inventory are available to members that had requested hard copies.
- e. Dale Phelan stated that ADS was hosting half-day seminars on March 12 and 13, 2007 regarding recent changes in EPA storm water rules and guidelines. Contact Dale by telephone or email to reserve a space.

6. Adjournment:

The meeting was adjourned at 3:05 p.m.



**MARICOPA COUNTY**  
*Department of Transportation*

MEMORANDUM

**Date:** March 7, 2007

**To:** MAG Specifications and Details Committee

**From:** Robert Herz, MCDOT Representative

**Subject:** Revisions to Section 104 SCOPE OF WORK

**Case 07- 06**

**PURPOSE:** Section 104.1.1 General – Define the order of precedence for Contract Documents.

**REVISIONS:**

**SECTION 104**

**SCOPE OF WORK**

**104.1 WORK TO BE DONE:**

**104.1.1 General:** The Contractor shall perform all work as may be necessary to complete the contract in a satisfactory and acceptable manner in full compliance with the plans, specifications and terms of the contract.

In the event a conflict exists between Contract Documents the order of precedence shall be as follows:

Change Orders

Addenda

Special Provisions

Project Plans

Contracting Agency's supplements to these Uniform Standard Specifications

MAG Uniform Standard Specifications

Standard Drawings or Standard Details

Unless otherwise specified in the special provisions, the Contractor shall furnish all labor, materials, equipment, transportation, utilities, services and facilities required to perform all work for the construction of the project within the time specified. All existing concrete or bituminous surfaced sidewalks, driveways and alleys which were disturbed by the Contractor at the direction of the Engineer, shall be replaced. Private concrete or bituminous surfaced sidewalks and driveways, which were disturbed by the new improvements must be replaced. The slope of the replaced sidewalk or driveway must comply with the agency's minimum standards. If the standard cannot be constructed within the disturbed area, the Contractor shall remove and replace to a distance required to obtain the slope. Payment for such work will be made under the respective pay items provided for in the contract, or by agreed prices in advance, if no pay items are provided for in the contract.

**104.1.2 Maintenance of Traffic:** The Contractor's operations shall be in accordance with the traffic manual and/or policies of the appropriate public agency having jurisdiction over the project and Section 401. These operations shall cause no unnecessary inconvenience to the public and public access rights shall be considered at all times. Unless otherwise authorized in the specifications or on a temporary basis by the Engineer, traffic shall be permitted to pass through the work area. The Contractor shall coordinate with the various agencies both commercial and public, involved in the collection and removal of trash and garbage, so that adequate services are maintained.



**MARICOPA COUNTY**  
*Department of Transportation*

**MEMORANDUM**

**Date:** March 7, 2007  
**To:** MAG Specifications and Details Committee  
**From:** Robert Herz, MCDOT Representative  
**Subject:** Revisions to Section 109 MEASUREMENTS AND PAYMENTS **Case 07- 07**

**PURPOSE:** Section 109.2 SCOPE OF PAYMENT – Add clarification of when duplicate Weighmaster’s Certificates are to be provided to the Engineer.

Section 109.5.1 Equipment – Information added to clarify how to calculate payment rates.

Section 109.7 PAYMENT FOR BOND ISSUE AND BUDGET PROJECTS – Added references to the Arizona Revised Statutes that govern retention for Construction Manager at Risk and Design Build projects.

## SECTION 109

### MEASUREMENTS AND PAYMENTS

#### 109.1 MEASUREMENT OF QUANTITIES:

All work completed under the contract will be measured by the Engineer according to United States standard measures. The methods of measurement and computation to be used in determination of quantities of materials furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

A station, when used as a definition or term of measurement, will be 100 linear feet.

Unless otherwise specified, longitudinal measurements will be made along the grade line.

Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the Engineer.

The term ton will mean the short ton consisting of 2,000 pounds avoirdupois.

Unless otherwise specified, structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.

In computing volumes of excavations or fill, the average end area method or other acceptable methods as determined by the Engineer will be used.

Volumes will be computed at 60°F, using ASTM D-1250 for Asphalt or ASTM D-633 for Tars.

Lumber will be measured by the thousand board foot measure actually used in the work. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

The term lump sum, when used as a pay item, will mean complete payment for the work described.

Sundry items which have a basis for measurement and payment herein and which are incidental to or required in the construction of the work but are not included as items in the bid schedule shall be considered an integral part of the contract, and all labor, materials, etc. required for such items shall be furnished by the Contractor and the cost of same included in the unit price bid.

#### 109.2 SCOPE OF PAYMENT:

Measurement and payment for pay items in the proposal will be as indicated in the applicable standard specification or in the special provisions.

When payment is specified to be made on the basis of weight, the weighing shall be done on certified platform scales sealed by the State Inspector or the City Sealer of Weights and Measures as defined by Arizona Revised Statutes Sections 44-2112 and 44-2116. The Contractor shall furnish the Engineer with duplicate Weighmaster's Certificates showing the actual net weights together with the information required by Arizona Revised Statutes Section 44-2142. The Contractor shall furnish the Engineer with duplicate Weighmaster's Certificates at the time of delivery unless the Engineer designates a different submittal time. The Contracting Agency will accept the certificates as evidence of the weight delivered.

Payment for the various items in the proposal will be made at the unit price bid in the proposal, and shall be compensation in full for furnishing all labor, materials, equipment and appurtenances necessary to complete the work in a satisfactory manner as shown on the plans and as required in the specifications, with all connections, testing, and related work completed. Each item, fixture, piece of equipment, etc., shall be complete with all necessary connections and appurtenances, for the satisfactory use and operation of said item. No additional payment will be made for work related to any item unless specifically called for in the proposal. This compensation shall also cover all risk, loss, damage or expense of whatever character arising out of the nature of the work or the prosecution thereof, subject to the provisions of Section 107.

## SECTION 109

The Contracting Agency will deduct the cost of accomplishing the work from monies due or to become due to the Contractor. Computation of the cost will be in accordance with Subsection 109.5.4.2.

### 109.4.6 Allowable Mark-Ups:

Only the allowable mark-ups as defined in Subsection 109.5 shall be allowed. Additional compensation for other items shall not be considered or allowed.

### \*109.5 ACTUAL COST WORK:

The compensation for actual cost work performed by the Contractor (Subcontractor) shall be determined by the Engineer in the following manner.

**109.5.1 Equipment:** For all equipment, the use of which has been authorized by the Engineer, except for small tools and manual equipment, the Contractor will be paid in accordance with the latest Schedule of Equipment Rates used by the Arizona Department of Transportation. Payment for equipment will be made following the calculations in Section 109 of the Arizona Department of Transportation Standard Specifications for Road and Bridge Construction. The value of 0.933 shall be used for the adjustment factor F used in the rental rate formulas ( $F = 0.933$ ).

**109.5.2 Material:** For all material, accepted by the Engineer and used in the work, the Contractor will be paid the actual cost of such material including transportation cost, to which total cost will be added a sum equal to 15 percent thereof.

**109.5.3 Labor:** For all labor and for the foreman, when he is in direct charge of the operation, the Contractor will be paid:

(A) The actual wages paid plus the current percentage thereof as determined by the Arizona Department of Transportation which is deemed to cover the Contractor's cost incurred as a result of payment imposed by State or Federal Law and payments that are made to, or on behalf of, the workman other than the actual wage. Actual wage is defined as the required current hourly rate paid to the labor classification concerned and does not include any fringe benefits or dislocation allowances. If the Contractor is not required to pay fringe benefits equivalent to the Current rates published in the Federal Register, an equitable deduction will be made from the current percentage established by the Arizona Department of Transportation.

(B) For the first \$50,000 of labor cost computed under paragraph (A) above, the Contractor will be paid an amount equal to (15) fifteen percent for overhead and profit.

(C) For all labor cost computed under paragraph (A) above, in excess of \$50,000 but not exceeding \$100,000, the Contractor will be paid an amount equal to (12) twelve percent for overhead and profit.

(D) For any labor cost computed under paragraph (A) above in excess of \$100,000 the Contractor will be paid an amount equal to (10) ten percent for overhead and profit.

### 109.5.4 Work Performed by Subcontractors or Other Sources:

**109.5.4.1 Work Performed by Subcontractors:** If it is determined by the Engineer that portions of the Actual Cost Work to be performed requires specialized labor or equipment not normally used by the Contractor and such work is then authorized to be performed by a subcontractor(s), the subcontractor(s) will be paid by the Contractor in accordance with the actual cost work procedures outlined herein. The Contractor will be paid by the Contracting Agency the full amount of the subcontract plus the following percentages for administration and supervision.

(A) For the first \$10,000 accumulated total of all change order work performed by subcontractors (less mark-up for overhead and profit), the Contractor will be paid an amount equal to 10 percent of the accumulated total for administration and supervision. If the accumulated total is \$3,000 or less, the Contractor will be paid \$300 for administration and supervision.

(B) For all change order work in excess of \$10,000 accumulated total performed by subcontractors (less mark-up for overhead and profit), the Contractor will be paid an amount equal to five percent of the accumulated total for administration and supervision.

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\*Not applicable to Improvement District Projects.

## SECTION 109

### **\*109.7 PAYMENT FOR BOND ISSUE AND BUDGET PROJECTS:**

(A) Partial Payments: The Contracting Agency will make a partial payment to the Contractor on the basis of an estimate prepared by the Contractor or Engineer for work completed through the last day of the preceding calendar month. Payment will be within 14 calendar days after the estimate has been certified and approved by the Engineer and received by the owner.

The Contracting Agency will retain 10 percent of all estimates as a guarantee for complete performance of the contract in accordance with Arizona Revised Statutes Section 34-221 or 34-607, unless the Contractor elects to deposit securities in accordance with Arizona Revised Statutes Section 34-221, Paragraph C.5. or 34-607, Paragraph B.5.

When the Contractor is fifty percent completed, one-half of the amount retained shall be paid to the Contractor provided he is making satisfactory progress on the contract and there is no specific cause or claim requiring a greater amount to be retained. After the contract is fifty percent completed, no more than five percent of the amount of any subsequent progress payments made under the contract will be retained providing the Contractor is making satisfactory progress on the project. Except that, if at any time the owner determines satisfactory progress is not being made, ten percent retention shall be reinstated for all progress payments made under the contract subsequent to the determination.

Any material or equipment which will become an integral part of the completed project will be considered for partial payment in the Contractor's monthly progress payments. The intent of making partial payments is to provide the Contractor payment for direct material or equipment purchased. The purpose is to minimize the effect of escalating costs by procuring key materials. It is not the intent to pay for all materials but only those meeting the following conditions.

(1) A total value of all items requested for payment must be greater than \$20,000. No payment will be processed until the material or equipment has been observed, reviewed or verified by the Contracting Agent representative. Only the material or equipment meeting the requirements of the plans and specifications will be paid. Payment for material or equipment does not constitute final acceptance.

(2) Materials or equipment must be stored or stockpiled either on site, in a warehouse, or secured storage area. The Contractor assumes all responsibility for protection of these materials or equipment and shall insure them to cover loss or damage to same without additional liability or added costs to the Agency for providing this security, insurance, and storage.

(3) The Contractor will provide access to the storage area or warehouse upon request of the Contracting Agent's representative for the purpose of verifying the inventory of items paid for under this section. None of the materials or equipment paid for under this section will be removed from the storage site until incorporated into the work of the project. The storage site shall be within the general geographical area of the project.

(4) The Contractor shall provide a paid invoice and/or lien waiver for items paid for under this section. The Agency will not pay more than the invoice price for the item or items, less retention.

(5) The Engineer may exclude individual payment requests which in the Engineer's judgement do not warrant storage and prepayment under the intent of this section.

(B) Final Payment: When the project has been accepted as provided in Section 105, and within 30 calendar days after final inspection of the work completed under the contract, the Engineer will render to the Contracting Agency and the Contractor, a final estimate which will show the amount of work performed and accepted under the contract. All prior estimates and partial payments will be subject to correction in the final estimate for payment.

Within sixty (60) calendar days after final acceptance, the Contracting Agency will pay the Contractor all amounts due him under the contract, except that before final payment will be made, the Contractor shall satisfy the Contracting Agency by affidavit that all bills for labor and materials incorporated in the work have been paid. The Contractor's Affidavit may be obtained from the Engineering Office of the Contracting Agency.

\*Not applicable to Improvement District Projects.