MARICOPA COUNTY
Department of Transportation

MEMORANDUM

Date: December 27, 2012

To: MAG Specifications and Details Committee

From: Robert Herz, MCDOT Representative

Subject: Revise title of Section 324 **Case 13-01 A**

PURPOSE: Rigid pavement is commonly referred to as portland cement concrete pavement or PCCP. Although PCCP is a commonly used acronym, MAG specifications do not clearly identify a specification for PCCP. Revising the title of section 324 will clearly identify the specification as being for portland cement concrete pavement (PCCP).

REVISION:
Change section title from *PORTLAND CEMENT CONCRETE STREET PAVEMENT* to *PORTLAND CEMENT CONCRETE PAVEMENT (PCCP)*.

2901 West Durango Street Phoenix, Arizona 85009 Phone: 602-506-4760 Fax: 602-506-5969

MARICOPA COUNTY
Department of Transportation

MEMORANDUM

Date: December 27, 2012

To: MAG Specifications and Details Committee

From: Robert Herz, MCDOT Representative

Subject: Miscellaneous Corrections **Case 13-01 B and C**

PURPOSE: Correct minor errors.

REVISION:

B. Section 505.6.3.3 (4) Typing error correction

Change "Armor: All steel **forcast**-in-place deck joint …" to "Armor: All steel **for cast**-in-place deck joint …"

C. Section 735.4 (D) Delete obsolete reference as noted:

(D) Rubber gaskets shall be in accordance with ASTM C443 ~~or AASHTO M-315~~.

2901 West Durango Street Phoenix, Arizona 85009 Phone: 602-506-4760 Fax: 602-506-5969

MARICOPA COUNTY
Department of Transportation

MEMORANDUM

Date: January 15, 2013

To: MAG Specifications and Details Committee

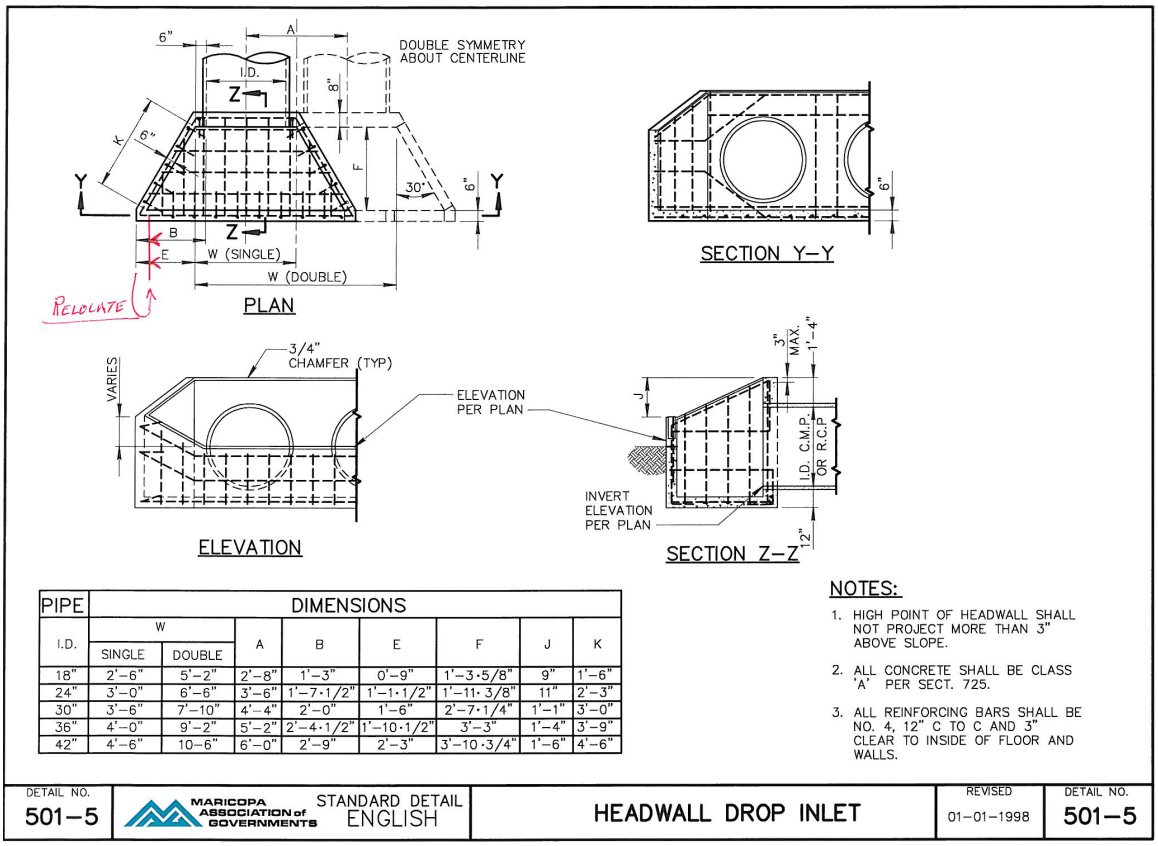
From: Robert Herz, MCDOT Representative

Subject: Correction to Detail 501-5 **Case 13-01 D**

PURPOSE: Correct depicted distance B and E shown on PLAN view of Detail 501-5.

REVISION:

Variable distance B and E shown on the PLAN view are presently shown to the outside edge of the inlet basin wall, they should be shown to the inside edge of the inlet basin wall. (Distances E and F are the legs of a right triangle with hypotenuse K.)



PIPE I.D.	DIMENSIONS W SINGLE	W DOUBLE	A	B	E	F	J	K
18"	2'–6"	5'–2"	2'–8"	1'–3"	0'–9"	1'–3·5/8"	9"	1'–6"
24"	3'–0"	6'–6"	3'–6"	1'–7·1/2"	1'–1·1/2"	1'–11·3/8"	11"	2'–3"
30"	3'–6"	7'–10"	4'–4"	2'–0"	1'–6"	2'–7·1/4"	1'–1"	3'–0"
36"	4'–0"	9'–2"	5'–2"	2'–4·1/2"	1'–10·1/2"	3'–3"	1'–4"	3'–9"
42"	4'–6"	10–6"	6'–0"	2'–9"	2'–3"	3'–10·3/4"	1'–6"	4'–6"

2901 West Durango Street Phoenix, Arizona 85009 Phone: 602-506-4760 Fax: 602-506-5969

Case 13-01E

SECTION 311

PLACEMENT AND CONSTRUCTON OF CEMENT TREATED SUBGRADE

I

311.1 DESCRIPTION:

This item shall consist of a cement treated subgrade composed of a mixture of local soil, Portland cement, and water compacted at optimum moisture content.

311.2 MATERIALS:

Portland cement and water shall comply with Sections 725. The soil for the mixture shall consist of the material in the area to be paved. The material shall not contain more than 5 percent gravel or stone retained on a 3 inches sieve. It shall be demonstrated by laboratory tests that the plasticity and strength characteristics as defined in Section 311.4.5 of the soil will be adequately modified by the specified cement content.

311.3 EQUIPMENT:

An ample number of machines, combination of machines and equipment shall be provided and used to produce the complete soil cement treated layer meeting the requirements for soil pulverization, cement distribution, water application, incorporation of materials, compaction, finishing, and for application of the curing material as provided in these specifications.

Mixing shall be accomplished by means of multiple-pass soil-cement mixer, single-pass soil-cement mixer or central plant mixer.

Water may be applied through the mixer or with the water trucks equipped with pressure sprays. Water trucks providing fine fog-type sprays shall be furnished for finishing and curing. Properly adjusted garden type nozzles on a pressure bar may be used to produce fog spray if approved by the Engineer.

Cement spreader shall be a specially constructed device to distribute bulk cement at the specified rate. The spreader shall have the ability to maintain a consistent spread rate over variable travel speeds.

311.4 CONSTRUCTION METHODS:

Prior to construction, the contractor shall remove all deleterious material, organic material, and particles retained on the 3 inch sieve from the area to be treated. The soil shall be brought to a compacted condition, true to line and grade as directed by the Engineer or as shown on the plans. The compacted soil and surface shall be approved by the Engineer prior to proceeding with mixing.

The material shall be scarified, pulverized, mixed with water and cement, compacted, finished and cured in lengths permitting the full roadway width to be complete in not more than 4 hours from the time that cement is exposed to water. Such lengths will generally be not less than 600 feet or the length of one City block and preferably more. Where a gutter section exists the material shall be pulled back from the gutter face for the full depth of the course before processing.

311.4.1 Pulverizing: Prior to application of cement, soil to be processed shall be scarified to depth of base. The material shall be damp at time of scarifying to reduce the dust generation and to aid in pulverization. Soil shall be pulverized until not less than 80 percent, exclusive of gravel or stone, will pass a No. 4 sieve.

311.4.2 Application of Cement: The quantity of cement shall be by weight as a percentage of the dry weight of the soil as determined by the laboratory and/or as directed by the Engineer and shall be applied uniformly on the soil in a manner satisfactory to the Engineer. The allowable deviation in uniformity shall not exceed 10 percent. The entire operation of spreading and mixing shall be conducted in such a manner as will result in a uniform soil cement and water mixture for the full design width and depth.

The percentage of moisture in the soil, at the time of cement application, shall not exceed the quantity that will permit a uniform and intimate mixture of the soil and cement during mixing operations, and it shall not exceed the specified optimum moisture content for the soil cement mixture.

MARICOPA COUNTY
Department of Transportation

MEMORANDUM

Date: February 20, 2013

To: MAG Specifications and Details Committee

From: Robert Herz, MCDOT Representative

Subject: Correction to Section 795.8.4 **Case 13-01 F**

PURPOSE: Delete non-existent reference located within Section 795 LANDSCAPE MATERIAL. The testing that was required in the 2012 specification section 702.4 is not needed when decomposed granite is used for general landscaping purposes.

REVISION:

795.8.4 Decomposed Granite: ~~Decomposed granite shall be as per Subsection~~ **~~702.4~~** ~~with the following exceptions.~~ All material used for a specific project or location shall be from a single source and shall present a uniform appearance. The gradation shall be as shown below. If a specific color or type is required, it will be so indicated in the Contracting Agency's specifications.

Sieve Size	Percent Passing
3/4 inch	100%
1/2 inch	60-70
No. 40	5-20

2901 West Durango Street Phoenix, Arizona 85009 Phone: 602-506-4760 Fax: 602-506-5969

MARICOPA COUNTY
Department of Transportation

MEMORANDUM

Date: March 6, 2013

To: MAG Specifications and Details Committee

From: Robert Herz, MCDOT Representative

Subject: Revision to Section 107.4 **Case 13-01 G**

PURPOSE: Change the Arizona Revised Statue reference 41-846 to 41-865.

REVISION:

107.4 ARCHAEOLOGICAL REPORTS:

Attention is directed to Sections 41-844 and 41-~~846~~ 865 Arizona Revised Statues. In view of the above, it shall be a provision of every contract that when archaeological features are encountered or unearthed in the excavation of material pits or of the roadway prism, or other excavation, the Contractor shall report promptly to the Director of the Arizona State Museum and the Contracting Agency. The Contractor will be allowed extra time as appropriate in accordance with the provisions of Section 108.

2901 West Durango Street Phoenix, Arizona 85009 Phone: 602-506-4760 Fax: 602-506-5969

Case 13-01H

SECTION 725

PORTLAND ~~AND~~ CEMENT CONCRETE

725.1 GENERAL:

Portland cement concrete shall be composed of cementitious materials, fine and coarse aggregates, water, and, if specified or allowed, certain chemical admixtures and additives.

TABLE 725-1		
CONCRETE CLASSES - MINIMUM REQUIREMENTS		
Class of Concrete	Minimum Cementitious Materials Content (lbs. per cubic yard)	Minimum Compressive Strength (1) at 28 Days (psi)
AA	600	4000
A	520	3000
B	470	2500
C	420	2000

(1) In accordance with section 725.8.

725.2 CEMENTITIOUS MATERIALS:

Cementitious materials to be used or furnished under this specification shall be:

Portland cement, meeting the requirements of ASTM C150
Type II, low alkali, when no other specific type is specified
Type III, low alkali, for high early strength, when applicable or specified
Type V, low alkali, when specified in the special provisions for applications requiring high sulfate resistance

Portland Pozzolan Cement ASTM C595
Type IP (MS), when no other specific type is specified

Supplementary Cementitious Materials (SCM) shall not be used as an additional cementitious materials replacement in concrete in combination with Portland Pozzolan Cement.

Cementitious materials shall be sampled and tested as prescribed in the applicable ASTM specifications. The Contractor shall obtain and deliver to the Engineer a certification of compliance signed by the material manufacturer, identifying the cementitious material and stating that the cementitious material delivered to the batching site complies with the appropriate specifications. When requested by the Engineer, the Contractor shall furnish three copies of the cementitious materials certification. The cost of furnishing tested cementitious materials shall be considered as included in the contract bid price and no additional allowance will be made therefore.

When suitable facilities, as recommended by the Concrete Plant Manufacturer's Bureau, and approved by the Engineer, are available for handling and weighing bulk cementitious materials, such facilities shall be used. Otherwise the cementitious material shall be delivered in original unopened sacks that bear the name or brand of the manufacturer. The type of cementitious material, and the weight contained in each sack shall be plainly marked thereon.

Cementitious materials shall be stored in such manner as to permit ready access for the purpose of inspection and identification, and so as to be suitably protected against damage by contamination or moisture. Should any lot of bulk cementitious material be delivered to the site show evidence of contamination, the Engineer may require that such lot be removed from the site.

725.2.1 Supplementary Cementitious Materials (Pozzolans): Supplementary Cementitious Materials to be used in concrete or furnished under this specification shall conform to the appropriate ASTM requirements as follows:

Fly ash or natural pozzolan	ASTM C618 and C311
Silica Fume	ASTM C1240

MARICOPA COUNTY
Department of Transportation

MEMORANDUM

Date: March 18, 2013

To: MAG Specifications and Details Committee

From: Robert Herz, MCDOT Representative

Subject: Section 108.8 Correction **Case 13-01 I**

PURPOSE: Change "or" to "and".

REVISION:

108.8 GUARANTEE AND WARRANTY PROVISIONS:

The Contractor shall guarantee the work against defective workmanship ~~or~~ and materials for a period of one year from the date of its final acceptance under the contract, ordinary wear and tear and unusual abuse or neglect excepted.

2901 West Durango Street Phoenix, Arizona 85009 Phone: 602-506-4760 Fax: 602-506-5969