Iowa Department of Transportation

MINUTES
OF
IOWA DOT SPECIFICATION COMMITTEE MEETING

November 8, 2007

Members Present:	John Adam	Statewide Operations Bureau
	Tom Reis, Chair	Specifications Section
	Daniel Harness, Secretary	Specifications Section
	Keith Norris	District 2-District Materials
	Bruce Kuehl	District 6-District Construction
	Larry Jesse	Office of Local Systems
	Jim Berger	Office of Materials
	Doug McDonald	District 1-Marshalltown RCE
	Gary Novey	Office of Bridges & Structures
	John Smythe	Office of Construction
Members Not Present:	Roger Bierbaum	Office of Contracts
	Mike Kennerly	Office of Design
	Troy Jerman	Office of Traffic & Safety
Advisory Members Present:	Lisa Rold	FHWA
Others Present:	Deanna Maifield	Office of Design
	Wayne Sunday	Office of Construction
	Ed Kasper	Office of Contracts
	Brian Jorgenson	FHWA

Tom Reis, Specifications Engineer, opened the meeting. The following items were discussed in accordance with the agenda sent November 2, 2007:

1. **Article 2121.02, Materials.**

The Office of Materials requested a change to the amount of recycled material that may be used for shoulder aggregate.

2. **Article 2301.34, B, Reserved.**
   Article 2301.35, Basis of Payment.
   Article 2301.35, B, Reserved.
   Article 2303.05, G, Adjustment of Fixtures.
   Article 2303.06, E, Adjustment of Fixtures.

The Specifications Section requested changes to the measurement and payment for adjusting fixtures:
- To align the specifications with actual design practice.
- To align measurement and payment for adjustment of fixtures in PCC paving and HMA paving.

3. **Article 2527.03, Construction.**
   Article 4183.03, B, 1, b, Resin Solids.

The Office of Materials requested changes that will allow the season for applying waterborne paints to be extended.

4. Article 2547.02, Materials.

The Specifications Section requested changes to remove language that will appear on Standard Road Plan RL-16.

5. Article 2611.05, A, After Installation is Complete.
Article 2611.05, B, End of the First Growing Season.
Article 2611.05, C, After First Year Replacement Installation.
Article 2611.05, D, End of the Second Growing Season.

The Office of Construction requested changes to align the specifications with actual practice.

6. Article 4120.01, Description.

The Office of Materials requested a change to limit recycled materials to 30% for construction of new granular shoulders.

7. Article 4184.02, A, Gradation.

The Office of Materials requested a change to reflect a change to AASHTO specifications.

8. SS-01050, Primary and Interstate Smoothness.

The Office of Materials requested a change to eliminate confusion as to whether the contractor is required to make corrections or is required to accept a price adjustment.

9. Section 2413, Bridge Floor Surfacing, Repair, and Overlay.

The Specifications Section requested a discussion concerning potential revisions to the depth of removal for bridge floor surfacing scarification.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger	**Office: Materials**	**Item 1**
Submittal Date: 10.12.2007	**Proposed Effective Date:** April 2008	
Article No.: 2121.02 **Title: Granular** Materials**.**	**Other:**	

Specification Committee Action: Approved with changes as noted.

Deferred:	**Not Approved:**	**Approved Date:** 11/08/07	**Effective Date:** 04/15/08

Specification Committee Approved Text: See Specification Section Recommended Text. Change "bended" to "blended" in the first sentence of the new fourth paragraph.

Comments: District 6 noted that "bended" in the first sentence of the new fourth paragraph should be "blended".

Specification Section Recommended Text:

2121.02, Materials.

Replace the first sentence of the first paragraph:

Shoulder material for Type A and Type B shoulders shall meet ~~one of~~ the following:

Delete the fourth and fifth sentences of the third paragraph:

~~Not more than 50% of the granular shoulder shall be RAP. RAP shall be uniformly blended with other granular shoulder material.~~

Add as the fourth paragraph:

Recycled crushed PCC, RAP, or crushed composite HMA and PCC may be uniformly bended with crushed stone. Recycled materials shall not total more than 30% of the shoulder aggregate for new construction and not more than 50% of the total for existing granular shoulders.

Comments:

Member's Requested Change (Redline/Strikeout):

CHANGE: 2121.02 MATERIALS

Section 2121. Granular Shoulders.

2121.02 MATERIALS.
Shoulder material for Type A and Type B shoulders shall meet ~~one of~~ the following:

1. Crushed stone - Meeting the requirements of Article 4120.02.

2. Gravel/Limestone[1] - Meeting the requirements of Article 4120.02.

3. Crushed Portland cement concrete[2,3] - Meeting gradation 11 of Section 4109.

4. Crushed composite HMA and PCC[2,3] - Meeting gradation 11 of Section 4109.

Note [1] - When the option is allowed in the contract documents.

Note [2] - Either salvaged or unclassified sources of material may be allowed.

Note [3] - Other quality requirements of Section 4120 will not apply.

The Engineer may disallow short sections of material substitutions and may restrict the substitution to both sides of the pavement.

Aggregate for paved shoulder fillets shall meet requirements of Article 4120.07.

RAP inspected in accordance with Article 2303.02, C, may be used for Type A and B Granular Shoulders. When this material is used for granular shoulders, it shall be processed so that 100% of the material passes the 1-1/2 inch (37.5 mm) sieve. When so processed, other gradation and quality requirements of Section 4120 will not apply. ~~Not more than 50% of the granular shoulder shall be RAP. RAP shall be uniformly blended with other granular shoulder material.~~

Recycled crushed PCC, RAP, or crushed composite HMA and PCC may be uniformly bended with crushed stone. Recycled materials may total no more than 30% of the shoulder aggregate for new construction and no more than 50% of the total for existing granular shoulders.

Reason for Revision:

Limiting recycled material to 30% for granular shoulders

County or City Input Needed (X one)			**Yes**	**No** X	
Comments:					
Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes**	**No** X	**Industry Concurrence:**	**Yes**	**No**
Comments: Lack of stability when recycled materials are used. This includes both RAP and PCC.					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Tom Reis / Daniel Harness	**Office:** Specifications	**Item 2**
Submittal Date: 9/14/07	**Proposed Effective Date:** April 2008 GS	
Article No.: 2301.34, B **Title:** Reserved **Article No.:** 2301.35 **Title:** Basis of Payment **Article No.:** 2301.35, B **Title:** Reserved **Article No.:** 2303.05, G **Title:** Adjustment of Fixtures **Article No.:** 2301.06, E **Title:** Adjustment of Fixtures	**Other:**	

Specification Committee Action: No change at this time.

Deferred:	**Not Approved:** X	**Approved Date:**	**Effective Date:**

Specification Committee Approved Text:

Comments: The Committee decided not to take action at this time. This issue will be addressed when the SUDAS specifications are incorporated into the Standard Specifications.

District 6 noted there is inconsistency with how payments for adjustments are being handled for private utilities. They explained that in some cases the owner pays for adjustments, and in other cases the Department is. The Statewide Operations Bureau suggested this issue be brought up for discussion at the next Assistant District Engineer's meeting.

Specification Section Recommended Text:

Comments: This item was first discussed in the October 11, 2007 Specification Committee meeting. The Committee decided to defer this to the November 2007 meeting to allow the Specifications Section time to make appropriate changes to bring measurement and payment for adjustment of fixtures in PCC and HMA paving in line with each other.

Rather than using 1 foot as the distinguishing point between whether or not an adjustment of a manhole or intake is paid for, SUDAS currently bases payment on whether the adjustment can be made with adjusting rings (minor adjustment), or the manhole or intake needs to be rebuilt (major adjustment). This language appears in the SUDAS Division 6, Structures for Sanitary and Storm. Starting with the SUDAS October 2008 revision, all adjustments to manholes and intakes will be paid for. Since the Department is planning to adopt SUDAS's language for structures for sanitary and storm sewers in the 2008 book, this language will appear in the Standard Specifications. The Design Manual will need to be revised and new bid items for major and minor adjustments will need to be created.

Member's Requested Change: (Do not use **'Track Changes'**, or **'Mark-Up'**. Use **~~Strikeout~~** and **Highlight**.

2301.34. B, Reserved.

Replace the title and entire article:

2301.34, B, ~~Reserved~~ Adjustment of Fixtures.

When the adjustment of a fixture to the finished grade line involves a change in elevation of 1.0 foot (0.30 m) or less, this adjustment shall be made without extra compensation. When this adjustment involves a change in elevation more than 1.0 foot (0.30 m), each fixture adjustment will be counted.

Each fixture for which the height of adjustment is not stated in the contract documents will be counted.

2301.35, Basis of Payment.

Delete the second and third sentences of the first paragraph:

~~When the adjustment of a fixture to the finished grade line involves a change in elevation of 1 foot (0.3 m) or less, this adjustment shall be made without extra compensation. When this adjustment involves a change in elevation more than 1 foot (0.3 m), this work shall be paid for as extra work, as provided in Article 1109.03, B.~~

2301.35. B, Reserved.

Replace the title and entire article:

2301.35, B, ~~Reserved~~ Adjustment of Fixtures.

When the adjustment of a fixture involves a change in elevation more than 1.0 foot (0.30 m), adjustment will be paid for as follows:

1. Adjustment of Fixtures.

This shall include fixtures other than utility accesses and intakes. The Contractor will be paid the contract unit price for each fixture adjusted.

2. Utility Access, Rebuilding.

The Contractor will be paid the contract unit price for each utility access rebuilt.

3. Intake, Rebuilding.

The Contractor will be paid the contract unit price for each intake rebuilt.

If the height of adjustment for a fixture is not stated in the contract documents, the adjustment shall be paid for as provided in Article 1109.03, B.

2303.05, G, Adjustment of Fixtures.

Replace the entire article:

~~The Engineer will count the number of fixtures adjusted to the finished grade.~~ Article 2301.34, B, shall apply.

2303.06, E, Adjustment of Fixtures.

Replace the entire article:

~~For the number of fixtures adjusted to the finished grade line, the Contractor will be paid the contract unit price for each. If the contract contains no price for adjustment of fixtures, this work will be paid for as provided in Article 1109.03, B.~~ Article 2301.35, B shall apply.

Reason for Revision: The Design Manual states that adjustments greater than 1 foot for utility accesses and intakes are to be tabbed on Tab 104-11, Rebuilding of Intakes and Utility Accesses, and bid as Utility Access, Rebuilding and Intake, Rebuilding. The Standard Specifications currently state these are to be bid as extra work, which is contrary to what is actually being done.

County or City Input Needed (X one)			**Yes**	**No**	
Comments:					
Industry Input Needed (X one)			**Yes**	**No**	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger	**Office:** Materials	**Item 3**
Submittal Date: 10-26-07	**Proposed Effective Date:** April 2008	
Article No.: 2527.03 **Title:** Construction. **Article No.:** 4183.03, B, 1, b **Title:** Resin Solids.	**Other:**	

Specification Committee Action: Approved with changes as noted.

Deferred:	**Not Approved:**	**Approved Date:** 11/08/07	**Effective Date:** 04/15/08

Specification Committee Approved Text: See the Specification Section Recommended Text, except replace the table after the second paragraph in Article 2527.03 with:

Type of Marking	Oct. 23 to Apr. 7	Apr. 8 to Apr. 22	Apr. 23 to Oct. 7	Oct. 8 to Oct. 22
Waterborne Paint	not allowed	~~40~~ 45°F (~~4°C~~ 7°C)	~~40~~ 45°F~~*~~ (~~4°C~~ 7°C)	~~40~~ 45°F (~~4°C~~ 7°C)
Low Temperature Waterborne Paint with Rohm & Haas XSR Resin	35°F (2°C)	35°F (2°C)	35°F (2°C)	35°F (2°C)
Solvent Based Paint	no restrictions	no restrictions	~~not allowed~~ *	no restrictions
*Solvent-based paint may be used if temperature requirements can not be met.				

Comments: The Specification Section explained that although Rohm & Hass XSR Resin is being specified, several manufacturers make traffic paint using this resin; therefore, the Contractor will have a variety of paints to choose from that use this resin. A Public Interest Finding will not be necessary.

The Office of Design noted that from Apr. 23 to Oct. 7, solvent based paints are not allowed, yet for waterborne paints the reader is referred to a note that states solvent based paint may be used if temperature requirement can not be met. The Committee agreed to remove the references to the note from the waterborne paints and replace “not allowed” with a reference to the note.

Specification Section Recommended Text:

2527.03, Construction.

Add as the second sentence to the second paragraph:

Other details of application shall be according to the paint manufacturer’s written recommendations.

Replace the table after the second paragraph:

Type of Marking	Oct. 23 to Apr. 7	Apr. 8 to Apr. 22	Apr. 23 to Oct. 7	Oct. 8 to Oct. 22
Waterborne Paint	not allowed	~~40~~ 45°F (4 7°C)	~~40~~ 45°F* (4 7°C)	~~40~~ 45°F (4 7°C)
Low Temperature	35°F (2°C)	35°F (2°C)	35°F* (2°C)	35°F (2°C)

Waterborne Paint with Rohm & Haas XSR Resin				
Solvent Based Paint	no restrictions	no restrictions	not allowed	no restrictions
*Solvent-based paint may be used if temperature requirements can not be met.				

4183.03, B, 1, b, Resin Solids.

Add as the third sentence:

For Low Temperature Paint, Rohm & Haas XSR Resin shall be used.

Comments:

Member's Requested Change: (Do not use **'Track Changes'**, or **'Mark-Up'**. Use **~~Strikeout~~** and **Highlight**.

2527.03 CONSTRUCTION.
The contract documents will specify the quantity, locations, and type of pavement marking required.

The following chart shows the minimum allowed atmospheric and surface temperatures for application of pavement markings. The other details of application shall be as per the paint manufacturer's written recommendation

~~Type of Marking~~	~~Oct. 23 to Apr. 7~~	~~Apr. 8 to Apr. 22~~	~~Apr. 23 to Oct. 7~~	~~Oct. 8 to Oct. 22~~
~~Waterborne Paint~~	~~not allowed~~	~~40°F (4°C)~~	~~40°F* (4°C)~~	~~40°F (4°C)~~
~~Solvent Based Paint~~	~~no restrictions~~	~~no restrictions~~	~~not allowed~~	~~no restrictions~~
~~*Solvent-based paint may be used if temperature requirements can not be met.~~				

This table replaces the table above.

Type of Marking	Oct. 23 to Apr. 7	Apr. 8 to Apr. 22	Apr. 23 to Oct. 7	Oct. 8 to Oct. 22
Waterborne Paint	not allowed	45°F (4°C)	45°F* 4°C)	45°F (4°C)
Low Temp. Waterborne Paint with Rohm & Haas XSR Resin	35°F (2°C)	35°F (2°C)	35°F* (2°C)	35°F (2°C)
Solvent Based Paint	no restrictions	no restrictions	not allowed	no restrictions
*Solvent-based paint may be used if temperature requirements can not be met.				

4183.03 FAST DRY WATERBORNE TRAFFIC PAINTS.

B,1,b. Resin Solids. Resin solids shall be composed of 100% acrylic emulsion polymer. Acrylic emulsion polymer shall be Rohm & Haas E 3427, Dow Chemical DT 250, or an approved equal. For Low Temperature Paint Rohm & Haas XSR Resin shall be used.					
Reason for Revision: Available new technology allows us to extend our waterborne paint application season					
County or City Input Needed (X one)			**Yes**	**No** X	
Comments:					
Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes** X	**No**	**Industry Concurrence:**	**Yes** X	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Tom Reis	**Office: Specifications**	**Item 4**
Submittal Date: 10/30/07	**Proposed Effective Date:** April 2008 GS	
Article No.: 2547.02 **Title:** Materials	**Other:**	

Specification Committee Action: Approved with changes as noted.

Deferred:	**Not Approved:**	**Approved Date:** 11/08/07	**Effective Date:** 04/15/08

Specification Committee Approved Text: See the Member's Requested Change. The following additional changes will be included:

2547.05, Basis of Payment.

Add as the second paragraph:

Temporary stream accesses installed by the Contractor, but not included as a bid item on the contract documents shall be considered incidental to Mobilization.

Comments: The Office of Design explained that unless silt curtains are used, the Corps of Engineers will only allow up to 5% fines passing the #200 sieve. If silt curtains are used, up to 10% fines are allowed. The Office of Design and the Specifications Section determined the best place to explain these requirements is Standard Road Plan RL-16.

The Office of Construction asked if the notes in Standard Road Plan RL-16 could be revised to make the intent more clear that the Contractor has a choice of options:

1. Use material containing less than 5% fines, or
2. Use material with up to 10% fines and protect with silt fences.

The Office of Design will work on the language. They noted in a discussion with the Office of Contracts the suggestion was made to change the bid item to Temporary Stream Crossing for Bridges and Culverts, with the idea that this bid item would be shown on bridge and culvert plans, but not on other types of plans. This creates some problems since stream crossings may be utilized on some grading plans, so it's not always evident if a stream crossing is required. Clarification is needed such that this item would be a pay item on bridge and culvert projects, but would be incidental to Mobilization on other projects.

The Office of Local Systems pointed out that the problem is with major stream crossings not being included as pay items. Contractors aren't as concerned with small stream crossings. The Office of Construction suggested rather than differentiating between bridge and culvert plans and all other plans, crossings be paid for if they are included as bid items; otherwise, they are incidental to Mobilization. The Office of Design agreed with this suggestion.

The Committee agreed to add language stating that if a steam crossing is included as a bid item, it will be paid for; otherwise it will be incidental to Mobilization. This language will be added to Section 2547.

Specification Section Recommended Text:

Comments: In the October 11, 2008 Specification Committee meeting, the Committee approved adding a third sentence to the first paragraph of Article 2547.02. The Specifications Section has determined that sentence is not necessary since the information is stated in Article 4130.01, C. It will not be included in the April 2008 GS.

Member's Requested Change (Redline/Strikeout):

2547.02, Materials.

Delete the second sentence of the first paragraph:

~~All fill material shall be clean with less than 10% fines passing the #200 sieve, broken concrete (with no exposed rebar), revetment, or granular materials.~~

Delete the second paragraph:

~~Material used for armoring shall be Class D or Class E revetment, or broken concrete with no exposed steel.~~

Reason for Revision: This language will appear in Standard Road Plan RL-16.

County or City Input Needed (X one)			**Yes**	**No** X	
Comments:					
Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: John Smythe	**Office:** Construction	**Item 5**
Submittal Date: October 3, 2007	**Proposed Effective Date:** April, 2008	
Article No.: 2611.05, A **Title:** After Initial Installation is Complete **Article No.:** 2611.05, B **Title:** End of the First Growing Season **Article No.:** 2611.05, C **Title:** After First Year Replacement Installation **Article No.:** 2611.05, D **Title:** End of the Second Growing Season	**Other:**	

Specification Committee Action: Approved with changes as noted.

Deferred:	**Not Approved:**	**Approved Date:** 11/08/07	**Effective Date:** 04/15/08

Specification Committee Approved Text: See Specification Section Recommended Text, except for Article 2611.05, D.

2611.05, D, End of Second Growing Season.

Replace the second paragraph:

A percent of the ~~contract unit price~~ placed quantity shall be paid for each tree and shrub correctly installed according to the following schedule. Plants requiring replacement shall receive this payment after replacement is complete. Payment shall be in accord with the following schedule:

Total Project Survival Rate	% of ~~Contract Unit Price Paid~~ Placed Quantity
85 - 100%	20%
60 - 84%	10%
Below 60%	0%

Comments: The Office of Construction noted that in Article 2611.05, D, the values for '% of Placed Quantity' are incorrect. They should be 20%, 10%, and 0% instead of 10%, 5%, and 0%.

Specification Section Recommended Text:

2611.05, A, After Initial Installation is Complete.

Replace the first sentence:

Sixty-five percent of the ~~contract unit price~~ placed quantity will be paid for all live plants of each size and variety installed with the specified mulch, and meeting the staking and guying requirements.

2611.05, B, End of the First Growing Season.

Replace the second paragraph:

A percent of the ~~contract unit price~~ placed quantity shall be paid for each tree and shrub correctly installed according to the following schedule:

Total Project Survival Rate	% of ~~Contract Unit Price Paid~~ Placed Quantity
85 - 100%	10%
60 - 84%	5%
Below 60%	0%

2611.05, C, After First Year Replacement Installation.

Replace the entire article:

After replacement plants have been installed, 5% of the ~~contract unit price~~ placed quantity will be paid for all plants considered alive at the end of the previous growing season including all plants replaced.

2611.05, D, End of Second Growing Season.

Replace the second paragraph:

A percent of the ~~contract unit price~~ placed quantity shall be paid for each tree and shrub correctly installed according to the following schedule:

Total Project Survival Rate	% of ~~Contract Unit Price Paid~~ Placed Quantity
85 - 100%	10%
60 - 84%	5%
Below 60%	0%

Comments:

Member's Requested Change: **(Do not use 'Track Changes', or 'Mark-Up'. Use ~~Strikeout~~ and Highlight.**

Replace the existing 2611.05 with the following:

2611.05 BASIS OF PAYMENT.

The Contractor will be paid the contract unit price for each Tree, Furnished and Installed in accordance with the contract documents.

The Contractor will be paid the contract unit price for each Shrub, Furnished and Installed in accordance with the contract documents.

Payments will be made in increments according to the following schedule:

A. After Initial Installation is Complete.

Sixty-five percent of the ~~contract unit price~~ placed quantity will be paid for all live plants of each size and variety installed with the specified mulch, and meeting the staking and guying requirements. This payment will be made after the initial inspection by the Engineer.

B. End of the First Growing Season.

Payment will be based on the total project's first year survival rate. Plants not in compliance with the contract documents will be considered dead.

A percent of the ~~contract unit price~~ placed quantity shall be paid for each tree and shrub correctly installed according to the following schedule:

Total Project Survival Rate	% of ~~Contract Unit Price Paid~~ Placed Quantity
85 - 100%	10%
60 - 84%	5%
Below 60%	0%

C. After First Year Replacement Installation.
After replacement plants have been installed, 5% of the ~~contract unit price~~ placed quantity will be paid for all plants considered alive at the end of the previous growing season including all plants replaced.

D. End of the Second Growing Season.
Payment will be based on the total project's second year survival rate. Plants not in compliance with the contract documents will be considered dead.

A percent of the ~~contract unit price~~ placed quantity shall be paid for each tree and shrub correctly installed according to the following schedule. Plants requiring replacement shall receive this payment after replacement is complete. Payment shall be in accord with the following schedule:

Total Project Survival Rate	% of ~~Contract Unit Price Paid~~ Placed Quantity
85 - 100%	20%
60 - 84%	10%
Below 60%	0%

These payments shall be full compensation for furnishing all materials, equipment, and labor; and for performing all work necessary in accordance with the contract documents including excavating, backfilling, mulching, pruning of trees and shrubs, replacements, and for methods used to ensure the survivability of the planted trees and shrubs.

When excavation is made in impervious soils or the excavation of a new planting well is directed by the Engineer, the Contractor will be paid for this extra work in accordance with Article 1109.03, B.

Reason for Revision: Align Specifications with actual practice. FHWA requested change in 2007 Improper Payment Review report.

County or City Input Needed (X one)			**Yes**	**No** X	
Comments:					
Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes**	**No** X	**Industry Concurrence:**	**Yes**	**No**

Comments: This change does not alter the amount paid for work. It reflects how payments are made in FieldManager and Contractor Pay System.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger	**Office: Materials**	**Item 6**
Submittal Date: 10.03.2007	**Proposed Effective Date:** April 2008	
Article No.: 4120.01 **Title:** Description	**Other:**	

Specification Committee Action: Approved.

Deferred:	**Not Approved:**	**Approved Date:** 11/08/07	**Effective Date:** 04/15/08

Specification Committee Approved Text: See Specification Section Recommended Text. Change "may" to "shall".

Comments: After the meeting, the Specifications Section determined "may" should be changed to "shall".

Specification Section Recommended Text:

4120.01, Description.

Replace the second sentence:

Crushed recycled materials ~~concrete~~ may total no more than 30% of the shoulder aggregate for new construction and no more than 50% of the total for existing granular shoulders ~~be used as aggregate for Granular Shoulders~~.

Comments:

Member's Requested Change (Redline/Strikeout):

Section 4120. Granular Surfacing and Granular Shoulder Aggregate.

4120.02 GRANULAR MATERIAL.

Change: 4120.01 Description

Section 4120. Granular Surfacing and Granular Shoulder Aggregate.

4120.01 DESCRIPTION.

Uniform mixture of fine and coarse particles of crushed stone, gravel, or a combination of these materials with sand. Crushed recycled materials ~~concrete~~ may total no more than 30% of the shoulder aggregate for new construction and no more than 50% of the total for existing granular shoulders. ~~used as aggregate for Granular Shoulders.~~

Reason for Revision: Limiting recycled material to 30% for granular shoulders

County or City Input Needed (X one)	**Yes**	**No** X
Comments:		

Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes**	**No** X	**Industry Concurrence:**	**Yes**	**No**

Comments: Lack of stability when recycled materials are used. This includes both RAP and PCC.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger	**Office:** Materials	**Item 7**
Submittal Date: 10-26-07	**Proposed Effective Date:** April 2008	
Article No.: 4184.02, A **Title:** Gradation	**Other:**	

Specification Committee Action: Approved as is.

Deferred:	**Not Approved:**	**Approved Date:** 11/08/07	**Effective Date:** 04/15/08

Specification Committee Approved Text:

Comments: None.

Specification Section Recommended Text:

4184.02, A, Gradation.

Add a new first row to the table and replace the second row.

Sieve Size	Percent Passing
16 (1.180 mm)	100
20 (850 µm)	~~100~~ 95-100
30 (600 µm)	75-95
50 (300 µm)	15-35
100 (150 µm)	0-5

Comments:

Member's Requested Change: (Do not use **'Track Changes'**, or **'Mark-Up'**. Use **~~Strikeout~~** and **Highlight**.

4184.02 SPECIFIC REQUIREMENTS.

A. Gradation.
The glass spheres shall meet the gradation requirements for type as given below:

Sieve Size	Percent Passing
16(1180 um)	100
20 (850 µm)	~~100~~ 95-100
30 (600 µm)	75-95
50 (300 µm)	15-35
100 (150 µm)	0-5

Reason for Revision: AASHTO SPEC has been revised for better initial reflectivity.

County or City Input Needed (X one)	**Yes**	**No** X

Comments:

Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes** X	**No**	**Industry Concurrence:**	**Yes** X	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger	**Office:** Materials	**Item 8**
Submittal Date: 9/10/07	**Proposed Effective Date:** April 2008	
Supplemental Specification: SS-01050 **Title:** Primary and Interstate Smoothness	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 11/08/07	**Effective Date:** 01/16/08

Specification Committee Approved Text: See attached Draft SS-010XX.

Comments: The Office of Materials explained that Table 010XX.03 provides limits for correction, whereas Tables 010XX.05A and B provide limits for both price adjustments and correction. Changing the reference in Article 010XX.04 from Article 010XX.03 to Article 010XX.05 should clear up the confusion as to whether a contractor is required to make corrections or to accept a price adjustment.

The Committee agreed to make the effective date January 16, 2008 instead of April 15, 2008. This will be issued as SS-01057.

District 6 questioned if all Interstate and Primary projects will require 0-blanking band. Smaller projects may not require it. They asked who would make the determination and how it would be indicated that 0-blanking band shouldn't be applied. The Statewide Operations Bureau noted the decision would probably come from the District.

District 2 Materials noted that contractors have become adjusted to 0-blanking band, and as a result, it may be acceptable to apply the 0-blanking band to all projects on the Primary and Interstate roads including MP projects. They explained that if a contractor anticipates they will not be able to meet 0-blanking band smoothness requirements to receive an incentive, they will account for it in their bids.

Specification Section Recommended Text: See attached Draft SS-010XX

Comments:

Member's Requested Change: **(Do not use 'Track Changes', or 'Mark-Up'. Use ~~Strikeout~~ and Highlight.**

See attached Draft SS-010XX.

Reason for Revision: The reference to Article 01050.03, A, was causing some confusion as to whether the Contractor is required to make corrections or is required to accept a price adjustment.

County or City Input Needed (X one)			**Yes**	**No**	
Comments:					
Industry Input Needed (X one)			**Yes**	**No**	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

DRAFT SS-010XX

(Replaces SS-01050)

Iowa Department of Transportation

SUPPLEMENTAL SPECIFICATIONS
FOR
PRIMARY AND INTERSTATE PAVEMENT SMOOTHNESS

Effective Date
April 15, 2008

THE STANDARD SPECIFICATIONS, SERIES 2001, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SUPPLEMENTAL SPECIFICATIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

Replace all of Section 2316 with the following, except as noted:

010XX.01 GENERAL.
Pavement smoothness shall be evaluated for all Interstate and Primary main line pavement surfaces, and all other road surfaces included on Primary projects, except when specifically excluded or modified by the contract documents. Main line pavement is defined as all permanent pavement for through lanes. Exclusions from profilograph testing are detour pavement, shoulders, crossovers, and individual sections of pavement less than 50 feet (15 m) in length.

The Engineer may determine the pavement smoothness according to Materials I.M. 341 using a 10 foot (3 m) straightedge or rolling straightedge on surfaces excluded from profilograph testing. The variation of the surface from the testing edge of the straightedge shall not exceed 1/8 inch (3 mm) between any two contacts, longitudinal or transverse. The Contractor shall correct all irregularities exceeding the specified tolerance using equipment and methods approved by the Engineer. After the Contractor has corrected an irregularity, the Engineer may perform monitor testing of the area to verify compliance with the specified tolerance.

010XX.02 EQUIPMENT.
The Contractor shall provide and operate an Ames type or California type profilograph to produce a profilogram (profile trace) of the surface tested in accordance with Materials I.M. 341. Other types of profilographs or profilers that produce compatible results and meet the requirements of Materials I.M. 341 may be used. The Contractor's operator shall be trained and certified to operate the profilograph as required by the Contracting Authority.

If the Contractor's profilograph has a mechanical recorder, the Contractor shall provide automated trace reduction equipment in accordance with Materials I.M. 341. If the Contractor's profilograph has a computerized recorder, the trace produced will be evaluated without further reduction.

010XX.03 SURFACE TOLERANCES, TESTING, AND EVALUATION.
A pavement segment is defined as a continuous area of finished pavement 0.1 mile (161 m) in length and one lane (10 to 12 foot (3.0 to 3.7 m) nominal) in width. A partial segment resulting from an interruption of the continuous pavement surface (i.e. bridge approaches, side road tie-ins, the cessation of the daily paving operations, etc.) is subject to the same evaluation as a whole segment.

A. Tolerances.
The Contractor shall produce pavement with an average profile index per 0.1 mile (161 m) segment as shown in Table 010XX.03 below.

TABLE 010XX.03: TOLERANCE FOR AVERAGE PROFILE INDEX PER 0.1 MILE (161m)
(0 inch blanking band)

Surface Type	Profile Index For greater than 45 mph Inches per mile (mm/km)	Profile Index For 45 mph or less and ramps Inches per mile (mm/km)
PCC Pavement	40.0 or less (630 or less)	65.0 or less (1025 or less)
HMA Pavement	35.0 or less (550 or less)	45.0 or less (710 or less)

B. Testing.
The Contractor shall determine the pavement profiles for each lane according to the procedures for one lane, as shown in Materials I.M. 341 except for main line traffic lanes which will be tested in the wheel paths. Round the trace scallops to the nearest 0.01 inch (0.1 mm). The wheel paths are defined as the 3 feet (0.9 m) and 9 feet (2.7 m) from the center line or lane line. Average the two wheel path profile indexes for each segment. Additional profiles may be taken only to define the limits of an out-of-tolerance surface variation. The Engineer may use a 10 foot (3 m) straightedge (or other means) to detect irregularities outside the required trace paths. The Engineer may also use the straightedge to delineate the areas that require corrective action.

Bridge approaches shall be tested according to Section 2317 of the Standard Specifications.

C. Evaluation.
The Contractor shall determine a profile index based on the 0 inch (0 mm) blanking band following the same procedures shown in Materials I.M. 341 for each segment of finished pavement surface except for:

1. Primary side road connections less than 600 feet (180 m) in length.
2. Non-primary side road connections, which shall be evaluated according to Section 2316 of the Standard Specifications.
3. Bridge approaches, which shall be evaluated according to Section 2317.
4. Storage lanes, turn lanes, and other auxiliary lanes less than 600 feet (180 m).
5. Pavement less than 8.5 feet (2.6 m) in width.
6. The 16 feet (5 m) before and the 16 feet (5 m) beyond the ends of the section when the Contractor is not responsible for the adjoining surface.
7. Single lift pavement overlays 2 inches (50 mm) or less in thickness, unless the existing surface has been corrected by milling or scarification.
8. Runout tapers on HMA overlays at existing pavement, bridges, or bridge approach sections where the thickness is less than the design thickness.

For the following situations, the profile index will be evaluated. If the average profile index exceeds the tolerances listed in Article 010XX.03, A, the Contractor may elect to eliminate that area from the profile index for the day's paving operation and evaluate the area using a 10 foot (3 m) straightedge as outlined in Article 010XX.01.

1. Horizontal curves with a centerline radius of less than 1000 feet (300 m) and the pavement within the superelevation transition of such curves.
2. Crest and sag vertical curves with an L/A < 100 where L is the length of curve in feet and A is the grade change in percent (L/A < 30.5 where L is the length in meters and A is the grade change in percent).

The Contractor shall determine a daily average profile index for each day's paving operation. A day's paving operation is defined as a minimum of 0.1 mile (161 m) segment of pavement placed in a day.

If less than 0.1 mile (161 m) segment is paved, the day's production will be grouped with the next day's production. If the production of the last day of project paving is less than 0.1 mile (161 m) segment, it will be grouped with the previous day's production.

During the first 3 days of the paving operation, and after long shut-down periods, the pavement shall be tested and the test report furnished to the Engineer and District Materials Engineer by the end of the next day worked following the placement. On HMA pavement, the testing shall be performed as soon as the pavement has cooled sufficiently to permit testing. The Engineer and the Contractor will use the results of the initial testing to evaluate the paving methods and equipment. If the initial paving operation produces acceptable results, the Contractor may continue paving.

If the day's average profile index exceeds the values in Table 010XX.03, the paving operation will be suspended until corrective action is taken by the Contractor. When the paving is resumed, the paving operations will be evaluated with the start-up testing procedures in the preceding paragraph.

The Contractor shall make the profilogram and evaluation available to the Engineer and District Materials Engineer during the project and furnish both at the end of the project. The evaluation of the trace shall be performed according to Materials I.M. 341. The test report shall be furnished to the Engineer within 2 working days after placement of the pavement and again within 2 working days after any corrections are made.

010XX.04 CORRECTIVE ACTIONS.

The pavement will be evaluated in 0.1 mile (161 m) segments using the profilograph, to determine pavement segments where corrective work or pay adjustments will be necessary. Each individual profilograph trace will be evaluated (not the average of multiple traces) to determine the areas where corrective action on 0.5 inches (12.7 mm) bumps and dips is needed.

Within each 0.1 mile (161 m) segment, all areas representing high points (bumps) or low points (dips) with deviations in excess of 0.5 inches (12.7 mm) in a length of 25 feet (7.6 m) or less shall be corrected by the Contractor regardless of the profile index value. Pavement segments excluded from profile index evaluation in Article 010XX.03 shall be evaluated for high points and low points with deviations in excess of 0.5 inches (12.7 mm) in a length of 25 feet (7.6 m) or less and shall be corrected by the Contractor.

Bumps and dips equal to or exceeding 0.5 inches (12.7 mm) in a length of 25 feet (7.6 m) or less shall be identified separately.

A. Roadways with a posted speed greater than 45 mph.

Any 0.1 mile (161 m) segment, including bumps, having an initial average profile index of greater than those tolerances shown in Article ~~010XX.03, A,~~ 010XX.05 shall be corrected to reduce the average profile index to those shown in Table 010XX.04 below, or replaced at the Contractor's option. On segments where corrections are made, the Contractor shall test the pavement to verify that corrections have met the average profile index as shown in Table 010XX.04 below.

B. Roadways with a posted speed of 45 mph, or less, and ramps.

Any 0.1 mile (161 m) segment, including bumps, having an initial average profile index of greater than those tolerances shown in Article ~~010XX.03, A,~~ 010XX.05 shall be corrected to reduce the average profile index to those shown in Table 010XX.04 below, or replaced at the Contractor's option. On segments where corrections are made, the Contractor shall test the pavement to verify that corrections have met the average profile index as shown in Table 010XX.04 below.

TABLE 010XX.04: AVERAGE PROFILE INDEX PER 0.1 MILE (161 m) AFTER CORRECTIONS (0 inch blanking band)

Surface Type	Profile Index For greater than 45 mph Inches per mile (mm/km)	Profile Index For 45 mph or less and ramps Inches per mile (mm/km)
PCC Pavement	40.0 or less (630 or less)	65.0 or less (1025 or less)

HMA Pavement	40.0 or less (630 or less)	50.0 or less (790 or less)

C. Bridge approach sections shall be corrected according to Section 2317 of the Standard Specifications.

D. Corrective work shall be at the Contractor's expense except for the 16 feet (5 m) before and the 16 feet (5 m) beyond the end of the section when the Contractor is not responsible for the adjoining surface. Corrective work shall be completed prior to determining pavement thickness.

Bush hammers or other impact devices will not be permitted.

1. PCC Pavement.
On PCC pavement, corrections shall be made using an approved profiling device or by removing and replacing the pavement. The corrective methods used by the Contractor shall be applied to the full lane width. When completed, the corrected area (full lane width) shall have uniform texture and appearance, with the beginning and ending of the corrected area squared normal to centerline of the paved surface. Where surface corrections are made, transverse grooving will not be required.

2. HMA Pavement.
On HMA pavement, corrections shall be made by diamond grinding, by overlaying the area, by replacing the area, or by inlaying the area. If the surface is corrected by diamond grinding, the work and equipment shall be the same as specified for PCC pavement except that the ground surface shall be covered with a seal coat in accordance with Section 2307 of the Standard Specifications with the following modifications:

The binder bitumen may be the emulsion or cutback asphalt used for tack coat, applied at a rate of 0.10 gallon per square yard (0.7 L/m^2). Hand methods may be used for spraying.

The cover aggregate shall be sand, applied at a rate of 10 pounds per square yard (5 kg/m^2). Hand methods may be used may be used for spreading. The sand shall be slightly damp, but with no free moisture, as determined by visual inspection. Embedment shall be by at least one complete pneumatic roller coverage.

This seal coat is intended to be placed immediately after the diamond grinding is completed in the travel lane. The Engineer may approve this construction when road surface temperatures are below 60ºF (16ºC).

Labor, equipment, and materials used for this seal coat will not be paid for, but shall be considered incidental to other items.

If the surface is corrected by overlay, replacement, or inlay, the surface correction shall begin and end with a transverse saw cut normal to the pavement lane lines or edge lines within any one area. The profile of the surface must be smooth with no bumps or dips at the beginning or end of correction.

Overlay correction must be for the entire pavement width. Pavement cross slope must be maintained through the corrected areas.

E. The Engineer will perform verification testing to validate the Contractor's certified quality control testing. If the Engineer's verification test results validate the Contractor's test results, the Contractor's results will be used for acceptance. Disputes between the Contractor's and Engineer's test results will be resolved in accordance with Materials I.M. 341. The Engineer may test the entire project length if it is determined that the Contractor certified test results are inaccurate, and the Contractor will be charged for this work at a rate of $400.00 per mile ($250.00 per kilometer), per profile track, with a minimum charge of $800.00. Furnishing inaccurate tests may result in decertification of the

Contractor's certified operator.

On lanes over 8.5 feet (2.6 m) in width, for through traffic which requires matching the surface of the new pavement to the surface of an existing pavement, an Average Base Index (ABI) will be determined according to Section 2316 of the Standard Specifications.

010XX.05 PAY ADJUSTMENTS.
Pay adjustments will be based on the initial average profile index determined for the segments prior to performing any corrective work. Areas excluded from the profilograph testing and bridges approaches will not be subject to price adjustments.

If the Contractor elects to remove and replace the segments, the Contractor will be paid the price adjustment that corresponds to the initial average profile index obtained on the pavement segments after replacement.

When the plans dictate that an area of pavement is to be hand finished, the area will not be subject to reduced payment. However, the area is to be profiled and corrected as necessary to meet these specifications.

A. PCC Pavement.
The payment will be adjusted as shown in Table 010XX.05A below according to the posted or proposed speed.

TABLE 010XX.05A: SCHEDULE FOR ADJUSTMENT PAYMENT FOR PCC PAVEMENTS (0 inch blanking band)

Profile Index For greater than 45 mph Inches per mile (mm/km)	Profile Index For 45 mph or less and ramps Inches per mile (mm/km)	Dollars per 0.1 mi. segment per lane	
		Interstate & Multi-Lane Divided Segments	Other Primary Segments
22.0 or less (345 or less)	25.0 or less (395 or less)	+950.00	+850.00
22.1 to 23.5 (346 to 370)		+800.00	+650.00
23.6 to 26.0 (371 to 410)	25.1 to 30.0 (396 to 475)	+600.00	+450.00
26.1 to 40.0 (411 to 630)	30.1 to 65.0 (476 to 1025)	0.00	0.00
40.1 to 45.0 (631 to 710)	65.1 to 70.0 (1025 to 1105)	-600.00	-450.00
45.1 or more (711 or more)	70.1 or more (1105 or more)	0.00*	0.00*

* These segments must be corrected to the levels shown in Table 010XX.04.

B. HMA Pavement.
The payment will be adjusted as shown in Table 010XX.05B below according to the posted or proposed speed.

TABLE 010XX.05B: SCHEDULE FOR ADJUSTMENT PAYMENT FOR HMA PAVEMENTS (0 inch blanking band)

Profile Index For greater than 45 mph Inches per mile (mm/km)	Profile Index For 45 mph or less and ramps Inches per mile (mm/km)	Dollars per 0.1 mi. segment per lane	
		Interstate & Multi-Lane Divided Segments	Other Primary Segments
10.0 or less (160 or less)		+850.00	+750.00
10.1 to 11.5 (161 to 180)	15.0 or less (235 or less)	+650.00	+500.00
11.6 to 13.5 (181 to 215)		+500.00	+350.00
13.6 to 15.5 (216 to 245)	15.1 to 20.0 (236 to 315)	+350.00	+200.00
15.6 to 35.0 (246 to 550)	20.1 to 45.0 (316 to 710)	0.00	0.00
35.1 to 40.0 (551 to 630)	45.1 to 50.0 (711 to 790)	-350.00	-200.00
40.1 or more (631 or more)	50.1 or more (791 or more)	0.00*	0.00*

* These segments must be corrected to the levels shown in Table 010XX.04.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Tom Reis			**Office:** Specifications		**Item 9**
Submittal Date:			**Proposed Effective Date:** January 16, 2008		
DS-01111 **Title: Bridge Floor Over-Depth Repair and Overlay**			**Other:**		
Specification Committee Action:					
Deferred:	**Not Approved:**	**Approved Date:** 11-08-2007	**Effective Date:** 12-18-2007		
Specification Committee Approved Text: See attached Developmental Specification					
Comments: Changes were discussed at the meeting. The Specifications Section will incorporate the changes into the specification and circulate it for another review by the following offices: Contracts, Local Systems, Construction, and Bridges & Structures. The specification will be issued for the January 16, 2008 letting as a Developmental Specification. No Controller will be assigned for the DS. The Office of Local Systems will send out a copy of the DS to all counties and consultants along with instructions for use as a way to ensure proper use.					
Specification Section Recommended Text:					
Comments:					
Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'. Use ~~Strikeout~~ and Highlight.					
Reason for Revision:					
County or City Input Needed (X one)			**Yes**	**No**	
Comments:					
Industry Input Needed (X one)			**Yes**	**No**	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

DS-01111
(New)

Iowa Department of Transportation

DEVELOPMENTAL SPECIFICATIONS
FOR
BRIDGE FLOOR OVER-DEPTH REPAIR AND OVERLAY

Effective Date
January 16, 2008

THE STANDARD SPECIFICATIONS, SERIES 2001, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE DEVELOPMENTAL SPECIFICATIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

This specification is intended for bridge floor repair and overlay contracts on non-primary and non-interstate route bridges where the Contractor is required to remove existing floor concrete to within a 1/4 inch (5 mm) of the top of the top mat of reinforcing steel rather than removing only the top 1/4 inch (5 mm) of the existing floor concrete. The following changes are made to the Section 2413 of the Standard Specifications:

2413.01, Description.

Add new articles:

D. Class A Bridge Floor Repair, Special.
Class A Bridge Floor Repair, Special, consists of: 1) removing existing floor concrete from 1/4 inch (5 mm) above the top of the top mat of reinforcing steel, but less than full depth of the existing bridge deck; 2) transporting the existing concrete removed from the project; and 3) replacing the excavated volume with concrete to a level bounding the Bridge Floor Over-Depth Overlay classification. Lower limit for Class A Bridge Floor Repair, Special shall be to suitable existing concrete, as determined by the Engineer. Removal of floor concrete above the top of the top mat of reinforcing steel is included in Bridge Floor Over-Depth Overlay.

E. Bridge Floor Over-Depth Overlay.
Bridge Floor Over-Depth Overlay consists of: 1) removing existing floor concrete to within 1/4 inch (5 mm) of the top of the top mat of reinforcing steel; 2) transporting the existing concrete removed from the project; and 3) overlaying with a concrete course of a depth designated. Removal may be accomplished using equipment listed in Article 2413.03 or with scarification equipment. The process shall be accomplished in a manner that does not damage or loosen the concrete bond around the reinforcing steel. The overlay may include a raise of the existing roadway surface elevation as shown in the project plans.

2413.04, Preparation of Surface for Bridge Floor Surfacing and Bridge Floor Overlays.

Replace the third sentence of the first paragraph:

On bridge floor overlays, Class A bridge floor repair and Class A bridge floor repair, special, removal areas may be used as test wells provided they meet the nominal dimensions and are located in the testing frequency areas.

Replace the first sentence of the second paragraph:

For bridge floor overlays, the entire existing concrete floor area shall be uniformly scarified or prepared to a depth of 1/4 inch (5 mm), or to a uniform depth to within 1/4 inch of the top of the top mat of reinforcing steel for bridge floor over-depth overlay except over areas of Class A, Class A Special, and Class B repair where the ~~1/4 inch (5 mm)~~ overlay removal may be coincidental with operations for repair removal.

2413.05, A, Class A Bridge Floor Repair.

Replace the second sentence of the first paragraph:

Class A repair removal shall be considered to start 1/4 inch (5 mm) below the existing surface for Class A and at the top of the top mat of reinforcing steel for Class A, Special, but this shall not preclude removal coincidental with preparation for overlay.

2413.05, A, Class A Bridge Floor Repair.

Replace the first sentence of the third paragraph:

For Class A and Class A, Special repair and in preparation for bridge deck overlay, the surface may also be prepared or partially prepared using a high pressure water system, at the Contractor's option.

2413.05, B, Class B Bridge Floor Repair.

Replace the first paragraph:

Within all areas designated for Class B repair, and any designated areas of Class A or Class A, Special, repair in which the depth of the remaining sound concrete is less than 50% of the original depth of the bridge floor, all concrete shall be removed. Designated Class A and Class A, Special, repair areas shall be measured as Class B Bridge Floor Repair when full depth removal is required. At the direction of the Engineer, limited areas of removal greater than 50% of the floor thickness, such as beneath reinforcing, may be allowed; these limited areas of excess depth will be measured as Class A Bridge Floor Repair or Class A Bridge Floor Repair, Special. Concrete shall be removed by jack hammer, chipping hammer, or by a combination of scarifying and chipping hammer, except that the final removal at the periphery of Class B repair areas shall be accomplished by 15 pound (7 kg) jack hammer, chipping hammer, or hand tools. Class B repair removal shall be considered to start 1/4 inch (5 mm) below the existing surface for Bridge Floor Overlay, Class A, and the top of the top mat of reinforcing steel for Bridge Floor Over-Depth Overlay, Class A, Special, but this shall not preclude removal coincidental with preparation for overlay.

2413.07, A, Repairs.

Replace the first sentence of the second paragraph:

Although repair classes are considered to begin 1/4 inch (5 mm) below the original concrete surface for Class A and the top of the top mat of reinforcing steel for Class A, Special, repair concrete shall be placed monolithically with the overlay course, except as described for larger areas of Class B repair.

2413.11 METHOD OF MEASUREMENT.

Replace the second paragraph:

Class A Bridge Floor Repair, Class A Bridge Floor Repair, Special; Class B Bridge Floor Repair, Bridge Floor Overlay (Class O PCC), ~~and~~ Bridge Floor Overlay (Class HPC-O),

Bridge Floor Over-Depth Overlay (Class O PCC), and Bridge Floor Over-Depth Overlay (Class HPC-O) will be computed by the Engineer in square yards (square meters) from measurements of the areas repaired or overlaid.

Add as the third paragraph:

Concrete removal for Class O PCC test wells may be required by the Engineer. This removal will not be measured for payment.

2413.12 BASIS OF PAYMENT.

Replace the first sentence of the first indented paragraph:

For the number of square yards (square meters) of Class A Bridge Floor Repair, Class A Bridge Floor Repair, Special; Class B Bridge Floor Repair, Bridge Floor Overlay (Class O PCC), and Bridge Floor Overlay (Class HPC-O), Bridge Floor Over-Depth Overlay (Class O PCC), and Bridge Floor Over-Depth Overlay (Class HPC-O) constructed, the Contractor will be paid the respective contract unit price per square yard (square meters).

Replace the first sentence of the fourth indented paragraph:

When there is no item for Class B Bridge Floor Repair, but such work is required, payment for each square yard for 5 square yards (square meter for 4 m^2) or less will be at three times the contract unit price per square yard (square meter) for Class A Bridge Floor Repair or Class A Bridge Floor Repair, Special.

Replace the fifth indented paragraph:

The cost of sealing as required in Article 2413.09 shall be included in the contract unit price for Bridge Floor Overlay (Class O PCC), ~~or~~ Bridge Floor Overlay (Class HPC-O), Bridge Floor Over-Depth Overlay (Class O PCC), or Bridge Floor Over-Depth Overlay (Class HPC-O).