Iowa Department of Transportation

MINUTES
OF
IOWA DOT SPECIFICATION COMMITTEE MEETING

November 13, 2003

Members Present:	John Adam, Director	Statewide Operations Bureau
	Tom Reis, Chair	Specifications Section
	Jim Berger	Office of Materials
	Roger Bierbaum	Office of Contracts
	Troy Jerman	Office of Traffic and Safety
	Larry Jesse	Office of Local Systems
	Bruce Kuehl	District 6-Construction Office
	Doug McDonald	RCE - Marshalltown
	Keith Norris	District 2-Materials Office
	Gary Novey	Office of Bridges and Structures
Members Not Present:	Mike Kennerly	Office of Design
	John Smythe	Office of Construction
From FHWA:	Andy Wilson	
Others Present:	Donna Buchwald, Secretary	Specifications Section
	Dale Harrington	SUDAS, CTRE
	Kevin Jones	Office of Materials
	Kevin Merryman	Office of Construction
	Will Stein	Office of Design
	Wayne Sunday	Office of Construction
	Vince Ehlert	Iowa County Engineer

Tom Reis, Specifications Engineer, opened the meeting. The following items were discussed in accordance with the November 7, 2003, agenda:

1. **Article 1102.11, PROPOSAL GUARANTY.**

The Office of Contracts requested a change to Article 1102.11 that is intended to make bid bond forms more fool proof and lessen the chances of rejected bids.

2. **Article 2301.08, BRIDGE APPROACH SECTIONS,**
2301.34, F, Method of Measurement,
2301.35, F, Basis of Payment.

The Office of Design requested several changes to Articles 2301.08, 2301.34, and 2301.35 that will remove repetitive specification language from the Standard Road Plans and placing it in the specification manual where it seems more appropriate.

3. **Article 2301.22, SAWING JOINTS.**

The Office of Construction requested a change to Article 2301.22 that will reinforce the Departments position that the Contractor is responsible for repairing flaws in new pavement.

4. Article 2301.23, EXPANSION JOINTS.

The Office of Design requested a change to Article 2301.23 that will remove repetitive specification language from the Standard Road Plans and placing it in the specification manual where it seems more appropriate.

5. Article 2303.01, DESCRIPTION (HMA MIXTURES).

The Office of Materials requested a change to Article 2303.01 that will reinforce that the Contractor will be performing the mix design for projects requiring the Marshall Mix Design.

6. Article 2404.06, PLACING AND FASTENING.

The Office of Construction requested a change to Article 2404.06 that will clarify the intent of the specifications for the Contractor to provide a positive spacing device between reinforcing bars and formed surfaces to ensure specified bar clearance is achieved.

7. Article 2513.01, CONCRETE BARRIER.

The Office of Design requested a change to Article 2513.01 that will clarify that earlier F-shape TBR designs may be used during the non-winter period.

8. Article 4136.03, PREFORMED EXPANSION JOINT FILLER AND SEALER.

The Office of Materials requested changes to Article 4136.03 that will incorporate tire buffings to be used as expansion joint material in accordance with the changes to the Standard Road Plans.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Roger Bierbaum	**Office:** Contracts	**Item 1**
Submittal Date: October 24, 2003	**Proposed Effective Date:** October 19, 2004	
Article No.: 1102.11 **Title:** Proposal Guaranty	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 11-13-03	**Effective Date:** 10-19-04*

***** This item will require Administrative Rules Committee approval.

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: No comments.

Specification Section Recommended Text:

Replace the last sentence and list of the third paragraph.

Bid bonds will be declared invalid and bid proposals will not be considered if any of the following items are omitted or incorrect:

~~Proposal ID Number~~
~~County Name~~
~~Type of Work~~
Date of Letting
Bid Order Number
~~Date of Signature~~
Name of the Contractor
Original Signature of Contractor: In case of joint venture bid, all contractors must sign.
Name of the Surety Company
Original Signature of Surety (if Surety's limitation is less than the amount of the bid bond, a certificate of reinsurance must be attached).

Replace the last paragraph.

A Contractor's Annual Bid Bond (Form 650041) may also be used for the proposal guaranty in lieu of that specified above. The Annual Bid Bond shall contain the following items:

Name of Contractor
Original signature of the Contractor~~,~~
Date of signature~~,~~
Name of the Surety Company
~~and~~ Original signature of the Surety~~.~~

Comments:

Member's Requested Change (Redline/Strikeout):

1102.11 PROPOSAL GUARANTY.

Each proposal shall be supported by a proposal guaranty in the form and amount prescribed in the notice to bidders. Bids not so supported will not be read.

The proposal guaranty shall be in the form of a certified check or credit union certified share draft,

cashier's check, money order, or bank draft drawn on a solvent bank or credit union. Certified checks or credit union certified share drafts shall bear an endorsement signed by a responsible official of such bank or credit union as to the amount certified. Cashier's checks, money order, or bank drafts shall be made payable either to the Contracting Authority or to the bidder and, where made payable to the bidder, shall contain an unqualified endorsement to the Contracting Authority signed by the bidder or the bidder's authorized agent. Certified checks and credit union share drafts shall be certified, or the cashier's check shall be drawn and endorsed, in an amount not less than prescribed in the notice to bidders.

A "Contractor's Bid Bond" (Form 650001) may be used for the proposal guaranty in lieu of that specified above. Bid bonds will be declared invalid and bid proposals will not be considered if any of the following items are omitted or incorrect:

~~Proposal ID Number~~
~~County Name~~
~~Type of Work~~
Date of Letting
Bid Order Number
~~Date of Signature~~
Name of the Contractor
Original Signature of Contractor: In case of joint venture bid, all contractors must sign.
Name of the Surety Company
Original Signature of Surety (if Surety's limitation is less than the amount of the bid bond, a certificate of reinsurance must be attached).

A Contractor's Annual Bid Bond (Form 650041) may also be used for the proposal guaranty in lieu of that specified above. The Annual Bid Bond shall contain the following items:

Name of Contractor
Original signature of the Contractor,
Date of signature,
Name of the Surety Company
~~and~~Original signature of the Surety.

Reason for Revision: Bidders are making typos that force the DOT to reject bids. The intent of this revision is to make the bid bond forms as fool proof as possible.

County or City Input Needed (X one)	**Yes**	**No** X
Comments: Does not affect local agencies		

Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes**	**No** X	**Industry Concurrence:**	**Yes**	**No**
Comments: Industry not notified because proposed change would make it more difficult for a contractor to mess up their bid					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Mike Kennerly/Will Stein	**Office:** Design	**Item 2**
Submittal Date: October 30, 2003	**Proposed Effective Date:** April 20, 2004	
Article No.: 2301.08; 2301.34, F; 2301.35, F **Title:** Bridge Approach Sections	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 11-13-03	**Effective Date:** 4-20-04

Specification Committee Approved Text:

2301.08, Bridge Approach Sections

Replace entire article.

Bridge approach sections shall be constructed as shown in the contract documents. All approach pavement reinforcing steel shall be epoxy coated. Clear distance from face of concrete to near reinforcing steel shall be 2 inches (50 mm), unless otherwise noted in the contract documents. The Bridge Approach Section shall be Class C Concrete, with coarse aggregate durability in accordance with Article 4115.04.

2301.34, F, Bridge Approach Sections

Replace entire article.

~~For bridge approach pavement constructed in accordance with the contract documents, the quantities shown in the contract documents will be considered the quantity placed.~~ The quantity of Bridge Approach Section, in square yards (square meters), will be the quantity shown in the contract documents.

2301.35, F, Bridge Approach Sections

Replace entire article.

~~For bridge approach pavement built in accordance with the contract documents, the quantities shown in the contract documents, in square yards (square meters), will be paid for at the contract unit price per square yard (square meter).~~ The Contractor will be paid the contract unit price for bridge approach pavement per square yard (square meter). This payment shall be full compensation for excavation for modified subbase and subdrain; furnishing and installing subdrain; furnishing and installing subdrain outlet; furnishing and installing polymer grid; furnishing and placing porous backfill; furnishing and backfilling modified subbase; saw cutting; furnishing and installing reinforcing steel, tie bars, and dowel assemblies; placing, finishing, texturing, grooving, curing, all joint construction; and all other materials and labor to construct the Bridge Approach Section as shown in the contract documents.

4115.04, C, Requirements for Use

Replace the second row in the "Use" column in Table 4115.04.

PCC Pavement, Widening, Bonded Overlay, ~~&~~ Finish Patches, and Bridge Approaches

Comments: The Offices of Construction, and Bridges and Structures requested that the requirement for epoxy coating the reinforcing steel also be added to the Standard Road Plans for a short transition period. The Specifications Section and the Methods Section of the Office of Design as working towards not repeating requirements in multiple places. The Materials I.M.s repeats requirements that are stated in either the Specification Book and/or on a Standard Road Plan. A change in one place and not in the other(s) has caused the Department problems and raised numerous questions in the past. It was instead

agreed that a letter will be sent to the industry notifying them that starting with the April 20, 2004, letting, all reinforcing steel in all approach slabs will be epoxy coated. The reason the Department is now going to require epoxy coated reinforcing steel is because the Department has just redesigned the approach slabs and are going to start requiring a top layer of reinforcing in addition to the bottom layer.

It was agreed that the approach slab will be grooved in the same direction as the deck surface.

Specification Section Recommended Text:

2301.08, Bridge Approach Sections

Replace entire article.

Bridge approach sections shall be constructed as shown in the contract documents. All approach pavement slab bars shall be epoxy coated. Clear distance from face of concrete to near reinforcing bar shall be 2 inches (50 mm), unless otherwise noted in the contract documents. The Bridge Approach Section shall be Class C Concrete, with coarse aggregate durability class 3 or 3i as described in Article 4115.04.

2301.34, F, Bridge Approach Sections

Replace entire article.

~~For bridge approach pavement constructed in accordance with the contract documents, the quantities shown in the contract documents will be considered the quantity placed.~~ The quantity of Bridge Approach Section, in square yards (square meters), will be the quantity shown in the contract documents.

2301.35, F, Bridge Approach Sections

Replace entire article.

~~For bridge approach pavement built in accordance with the contract documents, the quantities shown in the contract documents, in square yards (square meters), will be paid for at the contract unit price per square yard (square meter).~~ The Contractor will be paid the contract unit price for bridge approach pavement per square yard (square meter). This payment shall be full compensation for excavation for modified subbase and subdrain; furnishing and installing subdrain; furnishing and installing subdrain outlet; furnishing and installing polymer grid; furnishing and placing porous backfill; furnishing and backfilling modified subbase; saw cutting; furnishing and installing reinforcing steel, tie bars, and dowel assemblies; placing, finishing, texturing, transverse grooving, curing, all joint construction; and all other materials and labor to construct the Bridge Approach Section as shown in the contract documents.

Comments:

Member's Requested Change (Redline/Strikeout):

Add to article

2301.08 BRIDGE APPROACH SECTIONS

Bridge approach sections shall be constructed as shown in the contract documents. All approach pavement slab bars are to be epoxy coated. Clear distance from face of concrete to near reinforcing bar shall be 2 inches (50 mm), unless otherwise noted in the contract documents. The concrete used for the Bridge Approach Section pay limits shall be Class C Concrete.

Replace entire aticle

2301.34F. Bridge Approach Sections.

~~For bridge approach pavement constructed in accordance with the contract documents, the quantities shown in the contract documents will be considered the quantity placed.~~ The quantity of Bridge Approach Section, in square yards (square meters), will be the quantity shown in the contract documents.

Add to article

2301.35F. Bridge Approach Sections.

For bridge approach pavement built in accordance with the contract documents, the quantities shown in the contract documents, in square yards (square meters), will be paid for at the contract unit price per

square yard (square meter). This payment shall be full compensation for excavation for modified subbase and subdrain; furnishing and installing subdrain; furnishing and installing subdrain outlet; furnishing and installing polymer grid; furnishing and placing porous backfill; furnishing and backfilling modified subbase; saw cutting; furnishing and installing reinforcing steel, tie bars, and dowel assemblies; placing, finishing, texturing, transverse grooving, curing, all joint construction; and all other materials and labor to construct the Bridge Approach Section as shown in the contract documents.					
Reason for Revision: By modifying the Bridge Approach Standard Road Plans, we would like to delete the previous General Note information from the Standards and place it in the Specifications where it seems more appropriate.					
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/Kevin Merryman	**Office:** Construction	**Item 3**
Submittal Date: 9-23-03	**Proposed Effective Date:** April 20, 2004	
Article No.: 2301.22 **Title:** Sawing Joints	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 11-13-03	**Effective Date:** 4-20-04

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: It was stated at the Specification Committee meeting that the industry had been notified and were not happy with the change but will accept it.

Specification Section Recommended Text:

Replace the fifth paragraph.

~~Should uncontrolled cracking occur, a joint shall be formed with a crack saw along the line of the crack, and the joint shall be cleaned and sealed, as provided in Article 2301.25.~~ Should uncontrolled cracking or random transverse cracking occur, the pavement shall be repaired at no additional cost to the Contracting Authority. Repair methods shall be as approved by the Engineer.

Delete the seventh paragraph.

~~When random transverse cracks occur away from a CD joint, the Engineer may require the pavement to be patched and an additional CD joint installed.~~

Comments:

Member's Requested Change (Redline/Strikeout):

2301.22 SAWING JOINTS. Delete Paragraphs 5 & 8 and Add New Paragraph 7

~~Should uncontrolled cracking occur, a joint shall be formed with a crack saw along the line of the crack, and the joint shall be cleaned and sealed, as provided in Article 2301.25.~~

When the normal section of pavement is reduced by box-outs such as for intakes, a contraction joint shall be constructed, beginning at one end of the box-out and extending to the pavement edge. This joint shall be constructed by sawing. Alternate types of transverse joints will be considered for approval.

If the length of box-out exceeds 15 feet (4.5 m), a contraction joint shall be constructed at both ends.

~~When random transverse cracks occur away from a CD joint, the Engineer may require the pavement to be patched and an additional CD joint installed.~~

Should uncontrolled cracking or random transverse cracking occur, the pavement shall be repaired at no additional cost to the Contracting Authority. Repair methods shall be as approved by the Engineer.

Reason for Revision: Each year situations seem to arise where an area of new pavement needs to be repaired. The current specification only addresses routing and sealing uncontrolled cracks. Contractors often take a position that routing and sealing is their only obligation. The Department needs to have a clear specification that places responsibility for repair of these areas on the contractor. The Department should not have to shoulder or share the cost of repairing flaws in new pavement. The proposed language places responsibility on the contractor to repair these areas, but also allows them to propose a method of repair to be approved by the Engineer. This allows the contractor to propose new technologies and innovations as products and processes change over time. Suggested methods of repair for different types of random cracking will be included in future revisions of the Construction Manual to assist with evaluating appropriate types of repair.					
County or City Input Needed (X one)			**Yes**	**No**	
Comments:					
Industry Input Needed (X one)			**Yes** X	**No**	
Industry Notified:	**Yes** X	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Mike Kennerly/Will Stein	**Office:** Design	**Item 4**
Submittal Date: October 27, 2003	**Proposed Effective Date:** April 20, 2004	
Article No.: 2301.23 **Title:** Expansion Joints	**Other:**	

Specification Committee Action:			
Deferred:	**Not Approved:**	**Approved Date:** 11-13-03	**Effective Date:** 4-20-04
Specification Committee Approved Text: See Specification Section Recommended Text.			
Comments: No comments.			

Specification Section Recommended Text:

Replace the first three sentences.

~~Expansion joints shall be constructed as shown in the contract documents. Care shall be taken when depositing concrete to prevent movement of or damage to the joint assembly. Care shall also be taken in operating mechanical placing and finishing equipment over expansion joints to avoid tipping or in any way moving the joint.~~ Preformed joint material shall be installed perpendicular to the pavement surface. The Contractor shall exercise care throughout the construction of the pavement to ensure that the joint material remains in proper position.

Comments:

Member's Requested Change (Redline/Strikeout):

Add to Paragraph

All preformed joint material shall be installed perpendicular to the pavement surface and care shall be exercised throughout the construction of the pavement to ensure that such joint material remains in proper position upon completion of the paving operation.

Reason for Revision: Since we are modifying the Standard Road Plan for expansion joints (RH-52), we would like to place some of the General Notes into the Specification Book, where they seem more appropriate.

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:					

Submitted by: Jim Berger/Mike Heitzman	**Office:** Materials	**Item 5**
Submittal Date: September 19, 2003	**Proposed Effective Date:** April 20, 2004	
Article No.: 2303.01 **Title:** Description	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 11-13-03	**Effective Date:** 4-20-04

Specification Committee Approved Text:

Replace the fourth paragraph.

For contracts with less than 5000 tons (5000 Mg) the ~~mix design and quality control shall meet the requirements of the Supplemental Specification for HMA. This directs the responsibility for mix design and~~ quality control ~~to~~ will be the responsibility of the Engineer~~, but~~ . The Contractor shall be responsible for the mix design. This does not change the mix requirements from gyratory to Marshall, unless specified in the contract documents.

Comments: Removing the requirement to use the Supplemental Specification for Marshall Mix Design will allow the Engineer to determine what would be the best way for them to sample and test the materials for quality control. The Contractor will know that they are responsible for the mix design and CPI work, but they are not going to be involved in the quality control. Therefore, leaving the quality control to the Engineer should not impact the Contractor.

Specification Section Recommended Text:

Replace the fourth paragraph.

For contracts with less than 5000 tons (5000 Mg) the ~~mix design and~~ quality control shall meet the requirements of the Supplemental Specification ~~for HMA~~. This directs the responsibility for ~~mix design and~~ quality control to the Engineer~~, but~~ . The Contractor shall be responsible for the mix design. This does not change the mix requirements from gyratory to Marshall, unless specified in the contract documents.

Comments: This item was deferred from the October 9, 2003, Specification Meeting. The Specification Committee requested further review of the use of SS-01001 and the DS for small quantities.

The request from the Office of Materials to include the SS number and title is supported by the Specification Section. This SS will not be changed as it is Sections 1201 and 2303 from the 1995/1997 Specification Books. These sections covered Marshall Mix Design, which is becoming obsolete. Currently, SS-01001 must be used on all contracts <5000 ton (5000Mg) and may be used on any size Local Systems contract.

The Office of Materials is working with the industry to agree on quality control requirements for quantities <5000 ton (5000 Mg), but an agreement has not been reached. When an agreement is reached, SS-01001 will be obsoleted. For the 2004 construction season, the Department will not support Marshall Mix Design, but the quality control requirements are still required on small quantities.

In the future, a Local Systems' contract could still use the requirements set forth in SS-01001 as a Special Provision and independently of the Department.

Member's Requested Change (Redline/Strikeout): Revise the third paragraph as follows. For contracts with less than 5000 tons (5000 Mg) the ~~mix design and~~ quality control shall meet the requirements of the Supplemental Specification 01001 for HMA. This directs the responsibility for ~~mix design and~~ quality control to the Engineer. The contractor shall be responsible for the mix design. This~~, but~~ does not change the mix requirements from gyratory to Marshall, unless specified in the contract documents.					
Reason for Revision: We have been working with the DMEs and the QMA Steering Committee to develop QC/QA provisions for projects with less than 5000 tons. Under a new DS-01002 HMA Quality Control Program for Small Quantities all parties agree that the mix design should be performed by the Contractor. In light of the reduction of District laboratory staff and general agreement with this provision, the revision for mix design responsibility is being moved forward as a GS provision.					
County or City Input Needed (X one)			**Yes** X		**No**
Comments: The Standard Urban Spec has already incorporated the entire DS 01002 language.					
Industry Input Needed (X one)			**Yes** X		**No**
Industry Notified:	**Yes** X	**No**	**Industry Concurrence:**	**Yes** X	**No**
Comments: This provision was discussed as part of DS 01002 approval by the QMA committee.					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: John Smythe/Wayne Sunday	**Office:** Construction	**Item 6**
Submittal Date: September 18, 2003	**Proposed Effective Date:** April 20, 2004	
Article No.: ~~2404.06~~ 2404.07 **Title:** ~~Placing and Fastening~~ Reinforcing Supports	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 11-13-03	**Effective Date:** 4-20-04

Specification Committee Approved Text:

Replace the title and entire article**.**

2404.07 Reinforcing Supports and Spacers.

~~Except for vertical bars and bars that can be supported properly by being wired to vertical bars, aAll~~ reinforcement for concrete slabs, girders, arches, floors, the barrels of arch and box culverts, footings above piles, and all other parts of concrete structures, where practicable, shall be supported on chairs ~~approved by the Engineer.~~ All horizontal reinforcement shall be supported using support devices or tied to vertical reinforcing steel. All vertical reinforcement shall be positioned using side-form spacers. Support devices and side-form spacers, either plastic or steel, shall meet the requirements of Materials I.M. 451.01. Epoxy coated reinforcing steel shall be held in place with epoxy or plastic coated bar supports, and epoxy or plastic coated tie wires. Concrete block inserts, bricks, stones, wood blocks, wood stakes, and similar materials shall not be used for supporting reinforcement if the manner of their use is such that these materials are likely to become embedded in the concrete.

~~Concrete block inserts, bricks, stones, wood blocks, wood stakes, and similar materials shall not be used for supporting reinforcement if the manner of their use is such that these materials are likely to become embedded in the concrete. For situations where two or more separate mats of reinforcing steel are required, each mat shall be independently supported by an approved support system. Spacing of the supporting system~~ Support devices shall be spaced in accordance with the manufacturer's recommendations or as recommended by the current Concrete Reinforcing Steel Institute's Manual of Standard Practice. The support system spacing shall not exceed 4 feet (1.2 m) in each direction for bolsters or continuous high chairs and 3 feet (0.9 m) in each direction for individual bar chairs. The base of all chairs and support bolsters shall rest on the supporting false work. Supporting chairs shall have either upturned legs or a horizontal bar spot welded at the base of the leg. If necessary to prevent spreading of upturned legs, the legs shall be cross-tied at their bases or

nailed to the forms. For situations where two or more separate mats of reinforcing steel are required, each mat shall be independently supported by an approved support system.

Side-form spacers shall be placed at intervals sufficient to ensure that all reinforcing is at the required clearance.

~~Epoxy coated reinforcing steel shall be held in place with epoxy or plastic coated bar supports and epoxy or plastic coated tie wires. Chairs, bolsters, and other support devices, either plastic or steel, shall meet the requirements of Materials I.M. 451.01.~~

Comments: No comments.

Specification Section Recommended Text:

Replace the title and entire article.

2404.07 Reinforcing Supports and Spacers.

~~Except for vertical bars and bars that can be supported properly by being wired to vertical bars, aAll reinforcement for concrete slabs, girders, arches, floors, the barrels of arch and box culverts, footings above piles, and all other parts of concrete structures, where practicable, shall be supported on chairs approved by the Engineer.~~ All horizontal reinforcement shall be supported using support devices. All vertical reinforcement shall be positioned using side-form spacers. Support devices and side-form spacers, either plastic or steel, shall meet the requirements of Materials I.M. 451.01. Epoxy coated reinforcing steel shall be held in place with epoxy or plastic coated bar supports, and epoxy or plastic coated tie wires. Concrete block inserts, bricks, stones, wood blocks, wood stakes, and similar materials shall not be used for supporting reinforcement if the manner of their use is such that these materials are likely to become embedded in the concrete.

~~Concrete block inserts, bricks, stones, wood blocks, wood stakes, and similar materials shall not be used for supporting reinforcement if the manner of their use is such that these materials are likely to become embedded in the concrete. For situations where two or more separate mats of reinforcing steel are required, each mat shall be independently supported by an approved support system. Spacing of the supporting system~~ Support devices shall be spaced in accordance with the manufacturer's recommendations or as recommended by the current Concrete Reinforcing Steel Institute's Manual of Standard Practice. The support system spacing shall not exceed 4 feet (1.2 m) in each direction for bolsters or continuous high chairs and 3 feet (0.9 m) in each direction for individual bar chairs. The base of all chairs and support bolsters shall rest on the supporting false work. Supporting chairs shall have either upturned legs or a horizontal bar spot welded at the base of the leg. If necessary to prevent spreading of upturned legs, the legs shall be cross-tied at their bases or

nailed to the forms. For situations where two or more separate mats of reinforcing steel are required, each mat shall be independently supported by an approved support system.

Side-form spacers shall be placed at intervals sufficient to ensure that all reinforcing is at the required clearance.

~~Epoxy coated reinforcing steel shall be held in place with epoxy or plastic coated bar supports and epoxy or plastic coated tie wires. Chairs, bolsters, and other support devices, either plastic or steel, shall meet the requirements of Materials I.M. 451.01.~~

Comments: Specification Section thought that the requested added paragraph would be better added to Article 2404.07, Reinforcing Supports. In trying to place the added text, it was discovered that the article needed rewritten and updated.

Member's Requested Change (Redline/Strikeout):

2404.06 PLACING AND FASTENING.

Reinforcement shall be placed in the position indicated in the contract documents and shall be held securely in place during placing and hardening of the concrete. Bars shall be tied at all intersections except where spacing is less than 1 foot (300 mm) in each direction, in which case alternate intersections shall be tied. The locations, fastening, and condition of reinforcement shall be inspected and approved by the Engineer before concrete is placed around it.

Side-form spacers shall be placed between reinforcing steel and form faces to provide required clearance of reinforcing as specified in the contract documents. Side-form spacers may be chairs, bolsters, or other support devices, either plastic or steel, and shall meet the requirements of Materials I.M. 451.01. Epoxy coated reinforcing steel shall be held in place with epoxy or plastic coated bar devices. Side-form spacers shall be placed at intervals sufficient to ensure that all reinforcing is at the required clearance.

In the floors of culverts and in other footings without piling, reinforcement shall be suspended from cross wales above the tops of the forms or shall be supported on steel stakes driven into the subgrade or on chairs. Installation of dowels, deformed bars, inserts, or other articles into existing pavements and structures shall be as shown in the contract documents. When installed with epoxy material, the procedure shall be in accordance with Article 2301.12. Welding of reinforcing steel will not be permitted unless specified in the contract documents or approved by the Engineer.					
Reason for Revision: To provide a positive spacing device between reinforcing bars and formed surfaces to ensure specified bar clearance (ie: concrete cover) is achieved.					
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: Mike Kennerly/Will Stein	**Office:** Design	**Item 7**
Submittal Date: October 30, 2003	**Proposed Effective Date:** April 20, 2004	
Article No.: 2513.01 **Title:** Description	**Other:**	

Specification Committee Action:

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

The Specification Committee had many concerns about replacing rail on a project for winter when the Department has caused the delay. They also asked how to handle The Methods Section of the Office of Design will discuss this issue with Dave Little.

Specification Committee Approved Text:

Comments: The Specification Committee discuss setting a stop date which after the older designed barrier rail could no longer be installed on a project. There was much discussion on what if the contractor wanted to install miles of the older designed barrier rail the day before the stop date and the project will last through the winter.

The main concern is not the first impact on a barrier rail and the steel loop not failing, it is the second impact that it will probably not withstand. Therefore, the Specification Committee asked if the new required barrier railing with the one smooth bar could be used through the winter but must be replaced in a timely manner if it is impacted.

Specification Section Recommended Text:

Replace the last paragraph.

The Contractor shall use F-shape temporary concrete barrier rail on roadways with a posted speed limit greater than 45 mph. F-shape ~~TBR, Type A,~~ temporary barrier rail, as defined in the Standard Road Plans with a Date Manufactured prior to April 15, 2003, shall not be used in all situations requiring the railing to be in place during the winter work period as defined in Article 1108.02, ~~paragraph~~ E. ~~F-shape temporary concrete barrier rail shall be used on projects let on or after October 1, 2002.~~

Comments: The first sentence requires F-shape TBR be used if speed limit is greater than 45 mph. The Standard Road Plan tabulation in the plans defines by date which F-shape TBR standard must be used on a project. Revising the second sentence will allow F-shape TBR manufactured before April 19, 2003, be used in non-winter situations.

Member's Requested Change (Redline/Strikeout):

The Contractor shall use F-shape temporary concrete barrier rail on roadways with a posted speed limit greater than 45 mph. Earlier designs of the F-shape TBR may be used with the following exception: F-shape TBR, Type A, as defined in the Standard Road Plans, shall be used in all situations requiring the railing to be in place during the winter work period as defined in Article 1108.02, paragraph E. F-shape temporary concrete barrier rail shall be used on projects let on or after October 1, 2002.

Reason for Revision: Clarify that earlier F-shape TBR designs may be used in the non-winter work period.

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: Jim Berger	**Office:** Materials	**Item 8**
Submittal Date: October 29, 2003	**Proposed Effective Date:** April 20, 2004	
Article No.: 4136.03 **Title:** Preformed Expansion Joint Filler and Sealer.	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 11-13-03	**Effective Date:** 4-20-04

Specification Committee Approved Text:

Replace the title and entire article.

4136.03 ~~Preformed~~ Expansion Joint Filler And Sealer.

~~Preformed m~~Material for filling expansion joints shall be one of the following types. When the type is not specified, resilient filler shall be used.

A. Resilient Filler.

Resilient filler shall meet requirements of AASHTO M 213 and shall be furnished in strips of dimensions shown in the contract documents. When the self expanding type is specifically required, the material shall meet requirements of AASHTO M 153, Type III. Sealer used with these fillers shall meet requirements of Article 4136.02, A. Other resilient fillers may be approved by the Engineer. Approved sources of resilient expansion joint fillers are listed in Materials I.M. 436.03, Appendix A.

B. ~~Polyethylene~~ Flexible Foam Expansion Joint Filler.

~~Polyethylene joint filler shall be of the size designated in the contract documents, shall be resistant to petroleum derivatives, and shall comply with the following requirements when tested as provided in AASHTO T 42:~~

~~Compression, psi (kPa), maximum~~	~~45 (310)~~
~~Recovery, % minimum~~	~~90~~
~~Extrusion, inches (millimeters), maximum~~	~~0.25 (6.4)~~

Flexible foam expansion joint filler shall be of the size designated in the contract documents and shall be resistant to petroleum derivatives. The joint filler shall comply with the requirements of ASTM D 1752, Sections 5.1 to 5.4; with the Compression requirement modified to 10 psi (0.069 MPa) minimum and 25 psi (0.173 MPa) maximum when tested in accordance with AASHTO T 42. Approved sources for flexible foam expansion joint fillers are listed in Materials I.M. 436.05, Appendix A.

Sealer used with this filler shall ~~be a cold applied sealer meeting~~ meet the requirements of Article 4136.02, A.

C. Tire Buffings Expansion Joints Filler.

When designated in the contract documents tire buffings shall be used to fill expansion joints. Tire buffings shall consist of buffings from the tire retreading industry. Approved sources for tire buffings for expansion joints are listed in Materials I.M. 436.06, Appendix A. The tire buffings shall be clean, dry, and without any contamination. Tire buffings shall be placed loose and struck off level. Any compacted material shall be removed and replaced with loose material. Sealer shall meet the requirements of Article 4136.02, A. Approved sources for sealers are listed in Materials I.M. 436.02, Appendix A.

~~C~~**D. Elastomeric Joint Seals.**
Elastomeric joint seals shall be of the size designated in the contract documents and of a shape approved by the Engineer. The seal and the lubricant adhesive shall meet requirements of AASHTO M 220.

Seals with splices will be acceptable only when splices are made using factory type methods approved by the Engineer. A splice shall not occur within 1 foot (0.3 m) of a sharp bend, when placed in final position, and no piece shall have more than one splice.

~~**D. Preformed Urethane Foam Expansion Joint Filler.**~~
~~Preformed urethane foam expansion joint filler shall be made with a semi-open cell, flexible polyurethane foam which is molded to such cross sectional shape that it can be easily installed in an 3 1/4 inch to 4 1/4 inch (80 mm to 105 mm) wide pavement joint with parallel sides and which will be secured to prevent the material from floating out of the joint. The joint filler may be produced in any convenient lengths in excess of 4 feet (1.2 m) and shall have the following cross sectional dimensions:~~

~~Top width 4 1/2" ± 1/8" (115 mm ± 3 mm)~~
~~Overall depth 7 3/4" ± 1/2" (195 mm ± 13 mm)~~

~~A lubricating adhesive, recommended by the manufacturer for the intended use, shall be provided with the joint filler. The adhesive shall be so formulated that, when applied to the sides of the joint filler, it will provide lubrication to promote easy installation and then adhesion upon solvent release.~~

~~The properties of the urethane foam when determined on skin free specimens shall meet the following requirements when tested according to Iowa DOT Materials Laboratory Test Method 809:~~

~~Density, lb. per cu. ft. (kg/m^3)~~ ~~Compressive load, 50% deflection, lb. per sq. in. (kPa) max.~~ ~~Recovery, min.~~ ~~Water absorption, % by volume, max.~~	~~6.5 to 10.0 (104 to 160)~~ ~~20.0 (138)~~ ~~95%~~ ~~35%~~
~~Chemical Resistance. The material shall be resistant to petroleum solvents and linseed oil.~~	

Comments: A research project in October, 2001, indicated that hot pour and two-component cold pour sealers were very comparable. The results for single-component were not favorable. The research looked at water penetration, compressibility, and recoverability, to name a few. There are other combinations that may be tested in the future.

Crumb rubber was removed because it is not used.

Specification Section Recommended Text:

Replace the title and entire article.

4136.03 ~~Preformed~~ Expansion Joint Filler And Sealer.
~~Preformed m~~Material for filling expansion joints shall be one of the following types. When the type is not specified, resilient filler shall be used.

A. Resilient Filler.
Resilient filler shall meet requirements of AASHTO M 213 and shall be furnished in strips of dimensions shown in the contract documents. When the self expanding type is specifically required, the material shall meet requirements of AASHTO M 153, Type III. Sealer used with these

fillers shall meet requirements of Article 4136.02, A. Other resilient fillers may be approved by the Engineer. Approved sources of resilient expansion joint fillers are listed in Materials I.M. 436.03, Appendix A.

B. ~~Polyethylene~~ Flexible Foam Expansion Joint Filler.
~~Polyethylene joint filler shall be of the size designated in the contract documents, shall be resistant to petroleum derivatives, and shall comply with the following requirements when tested as provided in AASHTO T 42:~~

~~Compression, psi (kPa), maximum~~	~~45 (310)~~
~~Recovery, % minimum~~	~~90~~
~~Extrusion, inches (millimeters), maximum~~	~~0.25 (6.4)~~

Flexible foam expansion joint filler shall be of the size designated in the contract documents and shall be resistant to petroleum derivatives. The joint filler shall comply with the requirements of ASTM D 1752, Sections 5.1 to 5.4; with the Compression requirement modified to 10 psi (0.069 MPa) minimum and 25 psi (0.173 MPa) maximum when tested in accordance with AASHTO T 42. Approved sources for flexible foam expansion joint fillers are listed in Materials I.M. 436.05, Appendix A

Sealer used with this filler shall ~~be a cold applied sealer meeting~~ meet the requirements of Article 4136.02, A.

C. Tire Buffings Expansion Joints Filler.
When designated in the contract documents tire buffings may be used to fill expansion joints. Tire buffings shall consist of buffings from the tire retreading industry. Approved sources for tire buffings for expansion joints are listed in Materials I.M. 436.06, Appendix A. The tire buffings shall be clean, dry, and without any contamination. Tire buffings shall be placed loose and struck off level. Any compacted material shall be removed and replaced with loose material. Crumb rubber may be used instead of tire buffings. Sealer shall be hot pour type and shall meet the requirements of Article 4136.02, A.

~~C~~D. Elastomeric Joint Seals.
Elastomeric joint seals shall be of the size designated in the contract documents and of a shape approved by the Engineer. The seal and the lubricant adhesive shall meet requirements of AASHTO M 220.

Seals with splices will be acceptable only when splices are made using factory type methods approved by the Engineer. A splice shall not occur within 1 foot (0.3 m) of a sharp bend, when placed in final position, and no piece shall have more than one splice.

~~D. Preformed Urethane Foam Expansion Joint Filler.~~
~~Preformed urethane foam expansion joint filler shall be made with a semi-open cell, flexible polyurethane foam which is molded to such cross sectional shape that it can be easily installed in an 3 1/4 inch to 4 1/4 inch (80 mm to 105 mm) wide pavement joint with parallel sides and which will be secured to prevent the material from floating out of the joint. The joint filler may be produced in any convenient lengths in excess of 4 feet (1.2 m) and shall have the following cross sectional dimensions:~~

~~Top width 4 1/2" ± 1/8" (115 mm ± 3 mm)~~
~~Overall depth 7 3/4" ± 1/2" (195 mm ± 13 mm)~~

~~A lubricating adhesive, recommended by the manufacturer for the intended use, shall be provided with the joint filler. The adhesive shall be so formulated that, when applied to the sides of the joint filler, it will provide lubrication to promote easy installation and then adhesion upon solvent release.~~

~~The properties of the urethane foam when determined on skin free specimens shall meet the following requirements when tested according to Iowa DOT Materials Laboratory Test Method 809:~~

~~Density, lb. per cu. ft. (kg/m^3)~~	~~6.5 to 10.0 (104 to 160)~~
~~Compressive load, 50% deflection, lb. per sq. in. (kPa) max.~~	~~20.0 (138)~~
~~Recovery, min.~~	~~95%~~
~~Water absorption, % by volume, max.~~	~~35%~~
~~Chemical Resistance. The material shall be resistant to petroleum solvents and linseed oil.~~	

Comments:

Member's Requested Change (Redline/Strikeout):

4136.03 ~~PREFORMED~~ EXPANSION JOINT FILLER AND SEALER.
~~Preformed~~ ~~m~~Material for filling expansion joints shall be one of the following types. When the type is not specified, resilient filler shall be used.

A. Resilient Filler.
Resilient filler shall meet requirements of AASHTO M 213 and shall be furnished in strips of dimensions shown in the contract documents. When the self expanding type is specifically required, the material shall meet requirements of AASHTO M 153, Type III. Sealer used with these fillers shall meet requirements of Article 4136.02, A. Other resilient fillers may be approved by the Engineer. Approved sources of resilient expansion joint fillers are listed in Materials IM 436.03 Appendix A.

B. ~~Polyethylene~~ Flexible Foam Expansion Joint Filler.
~~Polyethylene joint filler shall be of the size designated in the contract documents, shall be resistant to petroleum derivatives, and shall comply with the following requirements when tested as provided in AASHTO T 42:~~

~~Compression, psi (kPa), maximum~~
~~Recovery, % minimum~~
~~Extrusion, inches (millimeters), maximum~~
~~45 (310)~~
~~90~~
~~0.25 (6.4)~~

Flexible Foam Expansion Joint Filler shall be of the size designated in the contract documents and shall be resistant to petroleum derivatives. The joint filler shall comply with requirements of ASTM D 1752, Sections 5.1 to 5.4 with the Compression requirement modified to 10 psi(0.069Mpa) minimum and 25 psi (0.173Mpa) maximum when tested as provided in AASHTO T 42. Approved sources for Flexible Foam Expansion Joint Fillers are listed in Materials IM 436.05 Appendix A

Sealer used with this filler shall ~~be a cold applied sealer~~ meet~~ing~~ the requirements of Article 4136.02, A.

C. Elastomeric Joint Seals.
Elastomeric joint seals shall be of the size designated in the contract documents and of a shape approved by the Engineer. The seal and the lubricant adhesive shall meet requirements of AASHTO M 220.

Seals with splices will be acceptable only when splices are made using factory type methods approved by the Engineer. A splice shall not occur within 1 foot (0.3 m) of a sharp bend, when placed in final position, and no piece shall have more than one splice.

D. Tire Buffings for filling Expansion Joints.
When designated in the contract documents tire buffings may be used to fill expansion joints. Tire buffings used shall consist of buffings from the tire retreading industry . The tire buffings shall be clean and dry and without any contamination. Joint Filler material is to be placed lose and struck off level in the joint. Any compacted material shall be removed and replaced with loose material.Crump Rubber may be used instead of tire buffings with Engineer's Approval.Sealer used with this filler shall be the hot pour type and shall meet the requirements of Article 4136.02A. Aproved sources for tire buffings for expansion joints are listed in Materials IM 436.06 Appendix A.

~~**D. Preformed Urethane Foam Expansion Joint Filler.**~~
~~Preformed urethane foam expansion joint filler shall be made with a semi-open cell, flexible polyurethane foam which is molded to such cross sectional shape that it can be easily installed in an 3 1/4 inch to 4 1/4 inch (80 mm to 105 mm) wide pavement joint with parallel sides and which will be secured to prevent the material from floating out of the joint. The joint filler may be produced in any convenient lengths in excess of 4 feet (1.2 m) and shall have the following cross sectional dimensions:~~

~~Top width 4 1/2" ± 1/8" (115 mm ± 3 mm)~~
~~Overall depth 7 3/4" ± 1/2" (195 mm ± 13 mm)~~

~~A lubricating adhesive, recommended by the manufacturer for the intended use, shall be provided with the joint filler. The adhesive shall be so formulated that, when applied to the sides of the joint filler, it will provide lubrication to promote easy installation and then adhesion upon solvent release.~~

~~The properties of the urethane foam when determined on skin free specimens shall meet the following requirements when tested according to Iowa DOT Materials Laboratory Test Method 809:~~

~~Density, lb. per cu. ft. (kg/m^3)~~ ~~6.5 to 10.0 (104 to 160)~~
~~Compressive load, 50% deflection, lb. per sq. in. (kPa) max.~~ ~~20.0 (138)~~
~~Recovery, min.~~ ~~95%~~
~~Water absorption, % by volume, max.~~ ~~35%~~

~~Chemical Resistance. The material shall be resistant to petroleum solvents and linseed oil.~~

Reason for Revision: To match the changes made to the design standards for bridge approaches.

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:					