Iowa Department of Transportation

MINUTES
OF
IOWA DOT SPECIFICATION COMMITTEE MEETING

September 14, 2006

Members Present:	John Adam	Statewide Operations Bureau
	Tom Reis, Chair	Specifications Section
	Daniel Harness, Secretary	Specifications Section
	Keith Norris	District 2-District Materials Engineer
	Bruce Kuehl	District 6-District Const. Engineer
	Gary Novey	Office of Bridges & Structures
	John Smythe	Office of Construction
	Roger Bierbaum	Office of Contracts
	Larry Jesse	Office of Local Systems
	Jim Berger	Office of Materials
	Doug McDonald	District 1-Marshalltown RCE Office
Members Not Present:	Troy Jerman	Office of Traffic & Safety
	Mike Kennerly	Office of Design
Advisory Members Present:	Lisa Rold	FHWA
Advisory Members Not Present:	Jim Rost	Office of Location & Environment
	Larry Stevens	SUDAS
Others Present:	Mike Heitzman	Office of Materials

Tom Reis, Specifications Engineer, opened the meeting. The following items were discussed in accordance with the agenda dated September 8, 2006:

1. **Article 1101.02, Definitions of Abbreviations.**
   Article 1101.03, Definitions of Terms.

The Specifications Section requested changes to assist coordination between the Standard Specifications and SUDAS.

2. **Article 1108.02, I, Schedule of Staging.**

The Office of Construction requested a change to ensure effective communications regarding project schedules.

3. **Section 2509, Crash Cushions.**

The Specifications Section requested a new section be added to the Standard Specifications that will address crash cushions.

4. Article 2528.09, Temporary Attenuators.

The Specifications Section requested that this article be deleted since this will now be addressed in Section 2509.

5. Article 2531.03, Construction.
Article 2531.07, Method of Measurement.

The Specifications Section requested a change to clarify the intent of “minimize vertical projections.”

6. Article 2532.03, Construction.
Article 2532.07, Method of Measurement.

The Specifications Section requested a change to clarify the intent of “minimize vertical projections.”

7. Article 2601.22, Basis of Payment.
Article 2602.05, Basis of Payment.

The Office of Contracts requested a change that will allow contractors to be paid for work performed that is greater than the plan quantity for erosion control.

8. Article 2601.22, Basis of Payment.

The Office of Contracts requested a change that will allow contractors to be paid for mobilizations for watering.

9. Article 2602.04, K, Removal and Reinstallation of Silt Fence.
Article 2602.05, K, Removal and Reinstallation of Silt Fence.

The Office of Contacts requested a change that will add removal and reinstallation of silt fence.

10. DS-01085, Added Options Bidding.

The Office of Contacts requested a new DS that will allow the Contracting Authority to obtain the most work, or the best options, for the available funds that have been allocated for the project.

11. DS-01086, Best Value Alternative (A –D) Bidding.

The Office of Contacts requested a new DS that will allow the Contracting Authority to obtain the most work, or the best options, for the available funds that have been allocated for the project.

12. DS-01087, Pavement Surface Repair (Diamond Grinding).

The Specifications Section requested a revision to DS-01067 to add the same verbiage requested to be added to Sections 2531 and 2532.

13. SS-01045, Recycled Asphalt Pavement.

The Office of Materials requested a revision to SS-01039.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Tom Reis/Daniel Harness	**Office:** Specifications Section	**Item 1**
Submittal Date: July 14, 2006	**Proposed Effective Date:** April 17, 2007	
Article No.: 1101.02; 1101.03 **Title:** Definitions of Abbreviations; Definition of Terms	**Other:**	

Specification Committee Action: Approved with changes as noted.

Deferred:	**Not Approved:**	**Approved Date:** 9/14/06	**Effective Date:** 4/17/07

Specification Committee Approved Text:

1101.01, Definitions of Abbreviations.

Add the following abbreviations:

ASA - American Standards Association

IMSA - International Municipal Signal Association

NSF - National Sanitation Foundation

OSHA - Occupational Safety and Health Administration

SUDAS - Statewide Urban Design and Specifications

1101.03, Definition of Terms.

Add the following definitions:

Approved Equal (Equivalent).

A product or material that, upon review of the Engineer, is determined to meet or exceed the requirements called for by the specifications. Upon approval, the item will be allowed in lieu of the specified material or product.

Bid Amount.

The aggregate sum obtained by totaling the amounts arrived at by multiplying the number of units of each class of work, as shown in the proposal, by the unit price specified in the proposal for that class of work.

Bid Item.

See Contract Item (Pay Item).

Bid Bond.

See Proposal Guaranty.

Incidental.

Materials, equipment, or labor identified within the contract documents as items not to be paid for individually, but essential for the proper completion of the work.

Jurisdiction.

Political subdivision acting through its governing body, or through the authorized representatives of such governing body when so authorized.

Jurisdictional Engineer.

See Engineer.

Liquidated Damages.

The dollar amount, estimated by the Engineer, and set forth in the contract documents, as the damage to the Contracting Authority or the public for delay in completion of the work.

Manhole.

See Utility Access.

Mobilization.

Preparatory work and operations for all items under the contract documents, including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; for the establishment of all offices, buildings, and other facilities necessary for work on the projects; and for all other work or operations which must be performed or costs incurred prior to beginning work on the various items on the project site. Mobilization may include bonding, permit, and demobilization costs.

Specifications.

The general term comprising all the written directions, provisions, and requirements to which may be added or adopted Supplemental Specifications, Special Provisions, or Developmental Specifications, all of which are necessary for the proper performance of the contract documents.

Street.

See Road.

SUDAS Standard Specifications.

Refers to the Iowa Statewide Urban Standard Specifications for Public Improvements.

Utility Access.

An inline structure to allow personnel access and maintenance of underground utilites.

Utility.

Includes all privately, publicly, municipally, or co-operatively owned structures and systems for supplying water, sewer, electric lights, street lights and traffic lights, gas, power, telegraph, telephone, communications, transit, pipelines, and the like.

Utility Agency.

Means and includes (1) all franchised utilities having utility system facilities within State or local jurisdiction right-of-way, including but not limited to gas, electric, telephone, cable television, and communications; (2) communications systems allowed by the State or local jurisdiction; and (3)

all governmental agencies owning or operating governmental utility systems, including but not limited to water, sewer, traffic control, and communications.

Work Area.

That portion of the project area in which construction activity is ongoing.

Replace the following term:

~~**Responsible**~~ **Responsive Bid**

Replace the following definitions:

Culvert.

Any structure not classified as a bridge or storm sewer which provides an opening under any roadway or embankment, except that such term shall not include tiles crossing the road, or intakes thereto, where such tiles are part of a tile line or system designed to aid subsurface drainage.

Engineer.

~~The Chief Engineer for contracts let by the Department, the County Engineer for contracts let by the county, the City Engineer for contracts let by the city, or other engineer executive of the contracting Authority, acting directly or through duly authorized representatives, such representative acting within the scope of the particular duties assigned to the Engineer or of the authority given the Engineer.~~

For the Department, the Engineer is the Chief Engineer. For publicly owned projects, the Engineer is the authorized representative of the Contracting Authority. For privately contracted projects, with improvements, that are to become publicly owned, the Engineer is the authorized representative of the public entity ultimately accepting ownership of the improvements. For all other projects, the Engineer is the owner's authorized representative.

The Engineer may act directly, or through duly authorized representatives, acting within the scope of the particular duties assigned to the Engineer, or of the authority given the Engineer.

Laboratory.

The testing laboratory of the Contracting Authority, or any other testing laboratory which may be designated ~~by the Engineer~~ in the contract documents.

Project Area.

The right-of-way between the project limits shown ~~on the plans~~ in the contract documents, and ~~immediately beyond these limits if used by the Contractor; also, any~~ additional area which is necessary for the Contractor to place traffic control devices required by the contract documents or necessary to protect the work.

Roadway.

The portion of the right-of-way designed or ordinarily used for vehicular travel.

Structures.

All objects constructed of materials other than earth, required by the contract documents to be built, or to be removed, but not including pavement, surfacings, base courses, and subbases.

Includes ~~B~~bridges, culverts, intakes, drop inlets, retaining walls, cribbing, manholes, handholes, end walls, buildings, sewers, service pipes, ~~underdrains~~ subdrains, foundation drains, and other features that ~~may be encountered in the work and not otherwise classed herein~~ require engineering analysis.

Delete the following definitions:

~~**Invitation for Bids.**~~

~~See Notice to Bidders.~~

~~**Work Order.**~~

~~A written order, signed by the Engineer, of a contractual status requiring performance by the Contractor without negotiation of any sort, and which may involve starting, resuming, or the suspension of work. (Not to be confused with change order.)~~

Comments: The Office of Bridges and Structures noted that ISO is usually used for International Organization of Standardization. The Committee agreed to eliminate ISO and simply write out Insurance Services Office.

District 2 Materials commented that not all laboratories are Agency labs. There is a Materials I.M. that defines a qualified lab. The Specifications Section suggested changing the wording in the definition of Laboratory to replace "Engineer" with "contract documents."

The Office of Contracts noted that the word "intended" should be eliminated from the definition of Approved Equal (Equivalent). The Office of Construction asked if the definition for Incidental could be reworded to make the intent clearer. The Committee agreed to remove the word "not" from in front of "identified" and insert it in front of "to be paid for". The Specifications Section will discuss this with SUDAS.

The Office of Contracts noted that Liquidated Damages are better defined as "damage to the Contracting Authority or public" rather than a "cost to the Contracting Authority". The Committee agreed that the definition of Substantially Complete is contained in the Iowa Code, so it does not need to be in the Specifications. This will also be discussed with SUDAS.

The Office of Contracts commented that the definitions of Utility Access and Utility don't line up very well. Utility covers a number of different items, but Utility Access is specific to one item. District 1 Construction suggested replacing the word "piping" with "utilities" in the definition of Utility Access.

The Office of Contracts noted that they want wording left in the definition for Engineer that states the Engineer for Iowa DOT projects is the Chief Engineer. The committee agreed to add this language to the definition.

Specification Section Recommended Text:

1101.01, Definitions of Abbreviations.

Add the following abbreviations:

ASA - American Standards Association

IMSA - International Municipal Signal Association

ISO - Insurance Services Office

NSF - National Sanitation Foundation

OSHA - Occupational Safety and Health Administration

SUDAS - Statewide Urban Design and Specifications

1101.03, Definition of Terms.

Add the following definitions:

Approved Equal (Equivalent).

A product or material that, upon review of the Engineer, is determined to meet or exceed the intended requirements called for by the specifications. Upon approval, the item will be allowed in lieu of the specified material or product.

Bid Amount.

The aggregate sum obtained by totaling the amounts arrived at by multiplying the number of units of each class of work, as shone in the proposal, by the unit price specified in the proposal for that class of work.

Bid Item.

See Contract Item (Pay Item).

Bid Bond.

See Proposal Guaranty.

Incidental.

Materials, equipment, or labor not identified within the contract documents as items to be paid for individually, but essential for the proper completion of the work.

Jurisdiction.

Political subdivision acting through its governing body, or through the authorized representatives of such governing body when so authorized.

Jurisdictional Engineer.

See Engineer.

Liquidated Damages.

The dollar amount, estimated by the Engineer, and set forth in the contract documents, as the cost to the Contracting Authority for delay in completion of the work.

Manhole.

See Utility Access.

Mobilization.

Preparatory work and operations for all items under the contract documents, including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site; for the establishment of all offices, buildings, and other facilities necessary for work on the projects; and for all other work or operations which must be performed or costs

incurred prior to beginning work on the various items on the project site. Mobilization may include bonding, permit, and demobilization costs.

Specifications.

The general term comprising all the written directions, provisions, and requirements to which may be added or adopted Supplemental Specifications, Special Provisions, or Developmental Specifications, all of which are necessary for the proper performance of the contract documents.

Street.

See Road.

Substantial Completion.

That date certified by the Engineer when the construction of the project or a specific part thereof is sufficiently completed in accordance with the contract documents so that the project or specific part can be utilized for the purpose for which it is intended. In general, Substantial Completion is reached when only clean-up of the project site and/or completion of minor work remains.

SUDAS Standard Specifications.

Refers to the Iowa Statewide Urban Standard Specifications for Public Improvements.

Utility Access.

An inline structure to allow personnel access and maintenance of underground piping.

Utility.

Includes all privately, publicly, municipally, or co-operatively owned structures and systems for supplying water, sewer, electric lights, street lights and traffic lights, gas, power, telegraph, telephone, communications, transit, pipelines, and the like.

Utility Agency.

Means and includes (1) all franchised utilities having utility system facilities within State or local jurisdiction right-of-way, including but not limited to gas, electric, telephone, cable television, and communications; (2) communications systems allowed by the State or local jurisdiction; and (3) all governmental agencies owning or operating governmental utility systems, including but not limited to water, sewer, traffic control, and communications.

Work Area.

That portion of the project area in which construction activity is ongoing.

Replace the following term:

~~**Responsible**~~ **Responsive Bid**

Replace the following definitions:

Culvert.

Any structure not classified as a bridge or storm sewer which provides an opening under any roadway or embankment, except that such term shall not include tiles crossing the road, or

intakes thereto, where such tiles are part of a tile line or system designed to aid subsurface drainage.

Engineer.

~~The Chief Engineer for contracts let by the Department, the County Engineer for contracts let by the county, the City Engineer for contracts let by the city, or other engineer executive of the contracting Authority, acting directly or through duly authorized representatives, such representative acting within the scope of the particular duties assigned to the Engineer or of the authority given the Engineer.~~

For publicly owned projects, the Engineer is the authorized representative of the Contracting Authority. For privately contracted projects, with improvements, that are to become publicly owned, the Engineer is the authorized representative of the public entity ultimately accepting ownership of the improvements. For all other projects, the Engineer is the owner's authorized representative.

The Engineer may act directly, or through duly authorized representatives, acting within the scope of the particular duties assigned to the Engineer, or of the authority given the Engineer.

Project Area.

The right-of-way between the project limits shown ~~on the plans~~ in the contract documents, and ~~immediately beyond these limits if used by the Contractor; also,~~ any additional area which is necessary for the Contractor to place traffic control devices required by the contract documents or necessary to protect the work.

Roadway.

The portion of the right-of-way designed or ordinarily used for vehicular travel.

Structures.

All objects constructed of materials other than earth, required by the contract documents to be built, or to be removed, but not including pavement, surfacings, base courses, and subbases. Includes ~~B~~bridges, culverts, intakes, drop inlets, retaining walls, cribbing, manholes, handholes, end walls, buildings, sewers, service pipes, ~~underdrains~~ subdrains, foundation drains, and other features that ~~may be encountered in the work and not otherwise classed herein~~ require engineering analysis.

Delete the following definitions:

~~**Invitation for Bids.**~~

~~See Notice to Bidders.~~

~~**Work Order.**~~

~~A written order, signed by the Engineer, of a contractual status requiring performance by the Contractor without negotiation of any sort, and which may involve starting, resuming, or the suspension of work. (Not to be confused with change order.)~~

Comments: This item was deferred in the August meeting. Committee members wanted to see some of the background associated with the proposed changes. That information was sent out with the minutes for the August meeting. In the August meeting, the Committee decided not to define "Bid". District 2 Materials suggested replacing the word "qualities" with the word "requirements" in the definition for Approved Equal (Equivalent).					
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** 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 M. Smythe	**Office:** Construction	**Item 2**
Submittal Date: August 21, 2006	**Proposed Effective Date:** April, 2007	
Article No.: 1108.02, I **Title:** Schedule of Staging	**Other:**	

Specification Committee Action: Approved with changes as noted.

Deferred:	**Not Approved:**	**Approved Date:** 9/14/06	**Effective Date:** 4/17/07

Specification Committee Approved Text: See Specification Section Recommended Text, except replace the fourth paragraph of the recommended text with:

Revised progress schedules shall be prepared and submitted to the Engineer within 5 business days after the request.

Comments: The Office of Contracts asked why 3 copies are required. The Office of Construction explained that one copy is for the inspector, one is for the Resident and one is for the District.

The Office of Contracts asked how the Contractor would estimate the number of weather delay days. The Office of Construction responded that they would use the same method they are currently using.

The Office of Construction asked if the schedule is to be in working days or calendar days. The Office of Construction explained that the schedule is set up by dates.

The Office of Contracts noted that asking contractors to provide revised progress schedules within 5 calendar days may cause some problems when holiday weekends are involved. They suggested instead going with either 7 calendar days or 5 business days. The Committee agreed to 5 business days. Until April, this will be applied to projects as a Developmental Specification.

Specification Section Recommended Text:

1108.02, I, Construction Progress Schedule.

Replace the title and entire article:

~~**I. Schedule of Staging.**~~
~~On any project, or part of a project, on an existing road where the work may prohibit or restrict public or private access that has been previously available, the Contractor may be required to submit a schedule of staging for the Engineer's approval before work is started. Preliminary work may be required in stage construction, even though the work involved in these operations is similar, in order to minimize the inconvenience to the public and those to whom access has been previously available. This requirement will apply equally to work that is subcontracted.~~

I. Construction Progress Schedule
At the preconstruction conference, the Contractor shall provide the Engineer with a preliminary schedule. At least 5 calendar days prior to starting work, the Contractor shall furnish the Engineer with 3 copies of a satisfactory construction progress schedule. This schedule shall be, at a minimum, a chronologically sequenced bar chart showing the proposed starting dates and durations for each of the items of work. The durations shall include the estimated number of weather delay days. The schedule shall also clearly show the controlling item of work for each day of the schedule, and the intended rate of production for each item of work. In addition, it shall

include project staging, project required milestones, and project suspensions that are 3 working days or longer.

The progress schedule shall be based on an adequate daily working hour schedule, with sufficient materials, equipment, and labor being furnished to ensure completion of the contract within the contract period. The Contractor shall commence and prosecute the work in accordance with the accepted progress schedule, with forces and equipment adequate to complete the controlling operations on schedule.

The progress schedule will be used to identify the controlling operations and as a check on the rate of progress. The Engineer will jointly review the schedule with the Contractor at least every 2 weeks to determine if progress is satisfactory. The Engineer may request the Contractor to revise the schedule for one or more of the following reasons:

1. The project completion or intermediate completion targets are delayed 10 or more working days.

2. The Engineer determines that the progress of the work differs significantly from the current schedule such that it is unlikely the project will be completed within the contract period.

3. A contract change order requires a revision of the Contractor's work sequence or the method of performing the work.

Revised progress schedules shall be prepared and submitted to the Engineer within 5 calendar days after the request.

Acceptance of the Contractor's progress schedules by the Engineer does not waive any contract requirements.

No direct payment will be made for furnishing construction progress schedules or revisions. If the Contractor fails to comply with the requirement to supply a satisfactory schedule or any revised schedule, the Engineer may withhold progress payments until a schedule has been submitted and accepted. The cost of the schedule should be included in the cost of mobilization.

Comments:

Member's Requested Change: **(DO NOT USE "Track Changes," or "Mark-Up". Use ~~Strikeout~~/Highlight)**

Replace 1108.02 I, Schedule of Staging with the following new 5 paragraphs:

~~**I. Schedule of Staging.**~~
~~On any project, or part of a project, on an existing road where the work may prohibit or restrict public or private access that has been previously available, the Contractor may be required to submit a schedule of staging for the Engineer's approval before work is started. Preliminary work may be required in stage construction, even though the work involved in these operations is similar, in order to minimize the inconvenience to the public and those to whom access has been previously available. This requirement will apply equally to work that is subcontracted.~~

I. Construction Progress Schedule

At the preconstruction conference the Contractor shall provide the Engineer with a preliminary schedule. At least 5 days prior to starting work, the Contractor shall furnish the Engineer with 3 copies of a satisfactory construction progress schedule. This schedule shall be, at a minimum, a chronologically sequenced bar chart showing the proposed starting dates and durations for each of the items of work. The durations must include the estimated number of weather delay days.

The schedule shall also clearly show the controlling item of work for each day of the schedule, and the intended rate of production for each item of work. It shall also include project staging, project required milestones, and project suspensions that are 3 days or longer.

The progress schedule shall be based on an adequate daily working hour schedule, with sufficient materials, equipment, and labor being furnished to ensure completion of the contract within the allowed contract period. The Contractor shall commence and prosecute the work in accordance with the accepted progress schedule, with forces and equipment adequate to complete the controlling operations on schedule.

The progress schedule will be used to identify the controlling operations and as a check on the rate of progress. The Engineer and Contractor will jointly review the schedule at least every 2 weeks to determine if progress is satisfactory. The Engineer may request the Contractor to revise the schedule for one or more of the following reasons:

1. The project completion or intermediate completion targets are delayed 10 or more working days.
2. The Engineer determines that the progress of the work differs significantly from the current schedule such that it is unlikely the project will be completed within the contract period.
3. A contract change order requires a revision of the Contractor's work sequence or the method of performing the work.

Revised progress schedules shall be prepared and submitted to the Engineer within 5 calendar days after the request.

Acceptance of the Contractor's progress schedules by the Engineer does not waive any contract requirements.

No direct payment will be made for furnishing construction progress schedules or revisions. If the Contractor fails to comply with the requirement to supply a satisfactory schedule or any revised schedule, the Engineer may withhold progress payments until a schedule has been submitted and accepted. The cost of the schedule should be included in the cost of mobilization.

Reason for Revision: To ensure effective communications regarding project schedules.

County or City Input Needed (X one)			**Yes**	**No** X	
Comments:					
Industry Input Needed (X one)			**Yes** X	**No**	
Industry Notified:	**Yes** X	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments: Anticipate comments prior to September 14 Specification Committee meeting.					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Tom Reis/Daniel Harness	**Office:** Specifications Section	**Item 3**
Submittal Date: September 6, 2007	**Proposed Effective Date:** April 17, 2007	
Article No.: 2509 **Title:** Crash Cushions	**Other:**	

Specification Committee Action: Approved with changes as noted.

Deferred:	**Not Approved:**	**Approved Date:** 9/14/06	**Effective Date:** 4/17/07

Specification Committee Approved Text: See Specification Section Recommended Text, except delete the last sentence of the second paragraph of Article 2509.03 and add as the second paragraph of Article 2509.04:

Backup structures, paved footings, and additional connection hardware will not be measured separately for payment.

Comments: The Office of Contracts noted that payment information regarding additional hardware, backup structures, and paved footings should be in the Method of Measurement, not in Construction.

Specification Section Recommended Text:

2509, Crash Cushions.

Add as a new section:

2509.01 General.
This work shall consist of furnishing and installing crash cushions.

Crash cushions shall be accepted as a crashworthy device by the FHWA and shall meet the requirements of NCHRP Report 350, Test Level 3 criteria. Approved products are listed in Materials I.M. 455, Appendix A. All products listed in Materials I.M. 455, Appendix A are acceptable for use as temporary crash cushions. When a permanent, redirective, or severe-use crash cushion is required by the contract documents, one of the crash cushions specifically designated for such use in Materials I.M. 455, Appendix A shall be installed.

In case of a discrepancy between these Specifications and the manufacturer's recommendations, these Specifications shall govern.

2509.02 Materials.
Crash cushion materials shall meet the manufacturer's requirements. All crash cushions shall be in good repair when installed. For permanent crash cushions and spare parts kits, equipment and materials shall be of new stock unless the contract documents provide for the relocation or the use of fixtures furnished by others.

Spare parts kits shall include all parts listed in Materials I.M. 455, Appendix A. Spare parts kits shall be supplied by the crash cushion manufacturer and shall contain materials designated for repairing the specific brand and model of crash cushion furnished.

2509.03 Construction.
Crash cushions shall be installed according to the manufacturer's recommendations. Prior to installation, the Contractor shall provide the Engineer with:

- Three copies of the manufacturer's most current product manuals covering installation and maintenance of the unit.
- Required certification statements.
- Additional hardware, tools, or documentation supplied by the manufacturer.

The manufacturer may require the use of additional connection hardware, construction of a backup structure, or construction of a paved footing for a specific installation. When required, these items shall be constructed and attached to the obstacle, the crash cushion, or both, in a manner specified by the manufacturer. These items will not be measured separately for payment.

Grading work, if required, shall be completed prior to installation of crash cushions.

When a roadway is closed to public traffic for construction, all crash cushions shall be installed prior to opening the road to traffic.

Attachments to new concrete or to anchor bolts set in epoxy resin shall not be stressed until the new concrete or epoxy resin has attained an age of 3 calendar days. This time requirement may be lengthened by the Engineer during cool weather.

When damaged, the Contractor shall repair or replace the crash cushion. Initiation of service to a damaged crash cushion shall be within one hour of notification. The object that is being shielded shall not be exposed to traffic for more than 12 hours.

A. Temporary Crash Cushions.
When a temporary crash cushion is no longer required, the crash cushion shall be removed and become the property of the Contractor. The Contractor shall remove any anchor bolts and fill the bolt holes with one of the non-shrink grouts listed in Materials I.M. 491.13, Appendix B.

When a crash cushion is required after the final stage of a project, the crash cushion will remain in place and become the property of the Contracting Authority.

B. Permanent Crash Cushions.
Permanent crash cushions will become the property of the Contracting Authority.

2509.04 Method of Measurement.
The Engineer will count the number of temporary or permanent crash cushions installed and the number of spare parts kits delivered to the local maintenance office.

2509.05 Basis of Payment.

A. Temporary Crash Cushions.
For each crash cushion installed, the Contractor will be paid the contract unit price. For repairing or replacing crash cushions damaged by public traffic, the Contractor will be paid as extra work in accordance with Article 1109.03, B, of the Standard Specifications.

B. Permanent Crash Cushions.
For each crash cushion installed, the Contractor will be paid the contract unit price.

C. Crash Cushion Spare Parts Kit.
For each spare parts kit delivered, the Contractor will be paid the contract unit price.

Comments:

Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'.Use ~~Strikeout~~ and Highlight.					
Reason for Revision: The Standard Specifications cover only Temporary Attenuators. Section 2509 also covers permanent installations and updates terminology to match other states. Most other states refer to attenuators as crash cushions.					
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: Tom Reis/Daniel Harness	**Office:** Specifications Section	**Item 4**
Submittal Date: September 6, 2007	**Proposed Effective Date:** April 17, 2007	
Article No.: 2528.09 **Title:** Temporary Attenuators	**Other:**	

Specification Committee Action: Approved as is.

Deferred:	**Not Approved:**	**Approved Date:** 9/14/06	**Effective Date:** 4/17/07

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: None.

Specification Section Recommended Text:

2528.09, Temporary Attenuators.

Delete the title and the entire article:

~~The Contractor shall furnish an attenuator from the approved list of attenuators shown in Materials I.M. 455. The attenuator shall be installed according to the manufacturer's recommendations.~~

~~When damaged, the Contractor shall repair or replace the attenuator. Initiation of service to a damaged attenuator shall be within one hour of notification. The object that is being shielded shall not be exposed to traffic for more than 12 hours.~~

~~When the temporary attenuator is no longer required, the attenuator shall be removed and become the property of the Contractor. The Contractor shall remove the anchor bolts and fill the bolt holes with one of the non-shrink grouts listed in Materials I.M. 491.13, Appendix B.~~

Comments: This will be covered in Section 2509, Crash Cushions.

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** 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: Tom Reis/Daniel Harness	**Office:** Specifications Section	**Item 5**
Submittal Date: July 11, 2006	**Proposed Effective Date:** April 17, 2007	
Article No.: 2531.03 **Title:** Construction	**Other:**	

Specification Committee Action: Approved as is.

Deferred:	**Not Approved:**	**Approved Date:** 9/14/06	**Effective Date:** 4/17/07

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: None.

Specification Section Recommended Text:

2531.03, Construction.

Add as the fourth paragraph:

In order to match the outside edge of the pavement, adjacent paved areas (for example, shoulders, curb and gutter, turn lanes, tapers, paved crossovers, and so forth) shall be milled to minimize vertical projections.

2531.07, Method of Measurement.

Replace the second paragraph:

Adjacent paved areas ~~of a paved shoulder~~ milled to minimize vertical projections will not be measured for payment.

Comments: This item came out of Item 18 of the August meeting. The Committee decided not to make the suggested changes. The Committee decided instead that the intent of "minimize vertical projections" should be explained.

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** 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: Tom Reis/Daniel Harness	**Office:** Specifications Section	**Item 6**
Submittal Date: July 11, 2006	**Proposed Effective Date:** April 17, 2007	
Article No.: 2532.03 **Title:** Construction	**Other:**	

Specification Committee Action: Approved replacing all of Section 2532 with text from Draft DS-01087 of Item 12.

Deferred:	**Not Approved:**	**Approved Date:** 9/14/07	**Effective Date:** 4/17/07

Specification Committee Approved Text:

2532, Pavement Surface Repair (Diamond Grinding).

Replace the title and the entire section:

2532.01 DESCRIPTION.
This work involves grinding an existing PCC pavement surface for profile improvement, for use as a traffic surface, using a diamond grinder. Grinding and texturing shall be performed at the locations shown in the contract documents except for bridge decks in which case the complete deck shall be ground according to Article 01087.03, B.

The existing surface and the coarse aggregate will be described in the contract documents.

This work may involve grinding a newly constructed deck surface for providing temporary surface texture, using a diamond grinder. Grinding shall be performed prior to opening the deck segment to traffic.

2532.02 EQUIPMENT.
Grinding and texturing shall be done utilizing diamond blades, mounted on a self propelled machine that has been designed for grinding and texturing of concrete surfaces. The equipment shall be such that it will not cause strain or damage to the underlying pavement or bridge deck. Grinding and texturing equipment that causes excessive ravels, aggregate fractures, spalls, or disturbance of the transverse and/or longitudinal joints will not be permitted.

Grinding equipment shall have a minimum effective head width of 36 inches (900 mm).

2532.03 CONSTRUCTION.
Pavement surface repair (diamond grinding) shall consist of grinding and texturing the concrete surface in a longitudinal direction.

The ground surface shall be of uniform texture. When more than one grinding machine is used in the same travel lane, the blade segment thicknesses, blade spacings, and blade diameter shall be similar so that the texture of the ground surface is reasonably uniform across the lane.

Both the land area and the texture depth shall be within the specified ranges to be in compliance. It may be necessary to adjust the blade spacing during a project to stay within specified ranges.

For multiple passes, the equipment shall be carefully controlled to minimize the overlap. Overlaps shall not exceed 1 inch (25 mm).

The transverse slope of the ground concrete surface shall be uniform to a degree that there are no depressions or misalignment of slope greater than 1/4 inch in 12 feet (6 mm in 3.6 m) when tested by stringline or straightedge placed perpendicular to the center line.

In order to match the outside edge of the pavement, adjacent paved areas (for example, shoulders, curb and gutter, turn lanes, tapers, paved crossovers, and so forth) shall be ground to minimize vertical projections.

The Contractor shall be responsible for quality control of the texture. The Engineer will conduct random Quality Assurance inspections.

A. PCC Pavement.

Substantially the entire surface area of the pavement shall be ground and textured until the pavement surface on both sides of the transverse joints and all cracks are in the same plane and meet the smoothness required. In each lane, at least 95% of the area in each 100 foot (30 m) section shall have a newly ground surface.

Grinding shall be performed in a longitudinal direction. All construction traffic entering or leaving the work area shall move in the direction of traffic of the open lane. Grinding shall begin and end at lines normal to the pavement center line within any one ground area and at the project limits. This will not be required at the end of each shift. Good transverse drainage shall be maintained at all times.

The grinding head should be assembled to produce the following tolerances on pavements with the indicated coarse aggregates:

(ENGLISH)	Limestone	Gravel
Blade segment thickness Land area between grooves*	0.130" maximum 0.100" to 0.135"	0.130" maximum 0.080" to 0.110"
Texture depth**	Target of 1/16" with average between 1/32" to 3/32"	
(METRIC)	**Limestone**	**Gravel**
Blade segment thickness Land area between grooves*	3.30 mm maximum 2.5 mm to 3 mm	3.30 mm maximum 2 mm to 2.75 mm
Texture depth**	Target of 2 mm with average between 1 mm to 2.5 mm	
* Based on an average of a minimum of ten measurements across the ground width for one pass. ** Based on an average of a minimum of six measurements across the ground width for one pass.		

A test area 500 feet in length and the width of the grinding head will be allowed for each new or restacked head, provided a surface texture in reasonable conformance with the specification is being produced.

B. Bridge Deck.

The entire surface of the bridge deck shall be ground and textured except the area within approximately 2 foot (0.6 m) of the railing. No areas greater than 2 feet (0.6 m) in length shall be left without texture. The total depth of concrete surface ground shall not exceed 1/4 inch (6 mm).

The grinding head should be assembled to produce the following tolerances on bridge decks:

(ENGLISH)	Limestone
Blade segment thickness Land area between grooves*	0.130" maximum 0.100" to 0.125"
Texture depth**	Target: 1/8" ± 1/32"

(METRIC)	Limestone
Blade segment thickness Land area between grooves*	3.30 mm maximum 2.5 mm to 3 mm
Texture depth**	Target: 3 mm ± 1 mm
* Based on an average of a minimum of ten measurements across the ground width for one pass. ** Based on an average of a minimum of six measurements across the ground width for one pass.	

2532.04 SMOOTHNESS.

A. PCC Pavement.
The pavement will be partly profiled on the initial trace by the Engineer using the procedure described in Article 2316.02 of the Standard Specifications. The average profile index for each area will be shown in the contract documents. The bidder is also advised that all profilograph information is available for inspection at the Office of Contracts, by a request to the Contracts Engineer. After the contract is awarded, the profilograph information will be available from the Engineer. This information represents a summary of conditions found to exist at the time the survey was made. The availability of this information will not constitute a guarantee that a profile other than that indicated will not be encountered at the time of grinding.

The Contractor shall provide a control profilograph trace as described in Article 2316.02 of the Standard Specifications prior to performing any grinding work. This control trace will be used to identify the required smoothness for the project. Each segment of the finished ground surface shall have a final profile index of 10 inches per mile (160 mm/km) or less, and shall not include any bumps exceeding 0.5 inches in 25 feet (13 mm in 8 m). Prior to diamond grinding, the Contractor shall identify depressed pavement areas and localized areas with excess faulting greater than 1 inch (25 mm). The Contractor and Engineer shall review those areas to determine the limits for exclusion from the profile index calculation.

The ground surface shall be tested and evaluated in accordance with Section 2316 of the Standard Specifications.

B. Bridge Deck.
For bridge decks the smoothness requirements of Section 2317 of the Standard Specifications shall be met prior to performing the texturing. After texturing, the bridge deck shall be tested again in accordance with Article 2317.03 of the Standard Specifications and the resulting profile index shall not exceed the corrected profile index prior to the texturing.

2532.05 LIMITATIONS.
When nighttime work is required, lighting shall be included at each work area. Lighting shall not glare into oncoming motorists.

Removal of all slurry or residue resulting from the grinding operations shall be continuous and shall not be deposited on the slab or shoulder. Pavement and paved shoulders shall be left in a clean condition. Residue from grinding operations shall not be permitted to flow across lanes occupied by public traffic or to flow into gutters or other drainage facilities. This residue may be spread on the foreslope or removed in accordance with Article 1104.08 of the Standard Specifications.

A. PCC Pavement.
Uncompleted sections may be opened to traffic without completion of grinding across an entire lane.

During nighttime operations, grinding shall progress in the direction with normal traffic in the lane being ground.

When the following work is included in the contract, the operations shall be sequenced in the following order:

1. undersealing
2. longitudinal subdrains
3. patching
4. installation of retrofit load transfer
5. diamond grinding
6. crack and joint sealing

B. Bridge Deck.
Work under this specification shall be completed and smoothness requirements met prior to opening to traffic.

2532.06 METHOD OF MEASUREMENT.

A. PCC Pavement.
The quantity of pavement ground, in square yards (square meters), will be the quantity of Pavement Surface Repair, of the type specified, shown in the contract documents.

Adjacent paved areas ground to minimize vertical projections will not be measured for payment.

B. Bridge Deck.
The quantity of bridge deck ground and textured, in square yards (square meters), will be the quantity of Pavement Surface Repair, of the type specified, shown in the contract documents.

2532.07 BASIS OF PAYMENT.
For the number of square yards (square meters) of Pavement Surface Repair, (Grinding Limestone) or (Grinding Gravel), completed and measured as provided above, the Contractor will be paid the contract unit price per square yard (square meter). This payment shall be full compensation for furnishing all equipment, materials, and labor to grind the concrete surface and test for smoothness according to the contract documents, including removal of slurry and residue from this operation.

Comments: After the agenda was sent out, the Offices of Construction and Materials, along with the Specifications Section agreed that rather than publishing Draft DS-01087 of Item 12, all of Section 2532 and the title should be replaced with the text in Draft DS-01087. The Committee agreed.

Specification Section Recommended Text:

2532.03, Construction.

Add as the eight paragraph:

In order to match the outside edge of the pavement, adjacent paved areas (for example, shoulders, curb and gutter, turn lanes, tapers, paved crossovers, and so forth) shall be ground to minimize vertical projections.

2531.07, Method of Measurement.

Replace the second paragraph:

Adjacent paved areas ~~of a paved shoulder~~ ground to minimize vertical projections will not be measured for payment.

Comments: This item came out of Item 19 of the August meeting. The Committee decided not to make the suggested changes. The Committee decided instead that the intent of "minimize vertical projections" should be explained. This same verbiage will be added to DS-01067, Pavement Surface Repair (Diamond Grinding).					
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** 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: Roger Bierbaum/Ed Kasper	**Office:** Contracts	**Item 7**
Submittal Date: 8/25/06	**Proposed Effective Date:** April 2007 GS	
Article No.: 2601.22; 2602.05 **Title:** Basis of Payment	**Other:**	

Specification Committee Action: Approved changes noted in Specification Committee Approved Text.

Deferred:	**Not Approved:**	**Approved Date:** 9/14/06	**Effective Date:** 4/17/07

Specification Committee Approved Text:

2601.21, Method of Measurement.

Replace the first paragraph and the first indented paragraph:

The various items of work involving erosion control will be ~~measured~~ determined on satisfactory completion as follows:

The Engineer will ~~measure~~ compute in acres to the nearest 0.1 acre (hectares to the nearest 0.1 hectare) the surface areas of Overseeding and Fertilizing, Seeding and Fertilizing, Mulching, Native Grass Seeding, Wetland Grass Seeding, Wildflower Seeding, Stabilizing Crop Seeding and Fertilizing, Seeding Special Areas, and Crownvetch Seeding.

Comments: The Office of Contracts noted that areas are either measured or determined ahead of time. They don't see the need for the proposed changes in the Specification Recommended Text. Instead they proposed the changes in the Specification Committee Approved Text. The Office of Contracts noted that how payment will be made for extra material placed if the area computed is smaller than the actual area will be covered in the Construction Manual.

Specification Section Recommended Text:

2601.22, Basis of Payment.

Add as the sixteenth indented paragraph:

When the quantity of material placed is greater than the plan quantity due to an inaccurate estimate of the area by the Contracting Authority, the Contractor will be paid the invoice price for the additional materials properly placed.

2602.05, Basis of Payment.

Add as the third paragraph:

When the quantity of material placed is greater than the plan quantity due to an inaccurate estimate of the area by the Contracting Authority, the Contractor will be paid the invoice price for the additional materials properly placed.

Comments:

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

Add a new paragraph to both 2601.22 Basis of payment – Erosion Control, and 2062.05 Basis of Payment – Water Pollution Control (Soil Erosion)

> When the quantity of material is placed at a quantity greater than the minimum required, due to an inaccurate estimate of the area by the contracting authority, the contractor will be paid the invoice price for the additional materials properly placed.

Reason for Revision: Requested by erosion control contractors. They explained that they are often called out to place erosion control before the area has been measured. When the area is finally measured, it is less than what the contractor was called to do. The end result is the contractor is not being fully compensated for the materials they have supplied and placed. For example, a contractor is called to do 30 acres, but the area is later measured to be 27 acres. The contractor is paid for 27 acres despite placing 30 acres of material.

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

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Roger Bierbaum/Ed Kasper	**Office:** Contracts	**Item 8**
Submittal Date: 8/25/06	**Proposed Effective Date:** April 2007 GS	
Article No.: 2601.22 **Title:** Basis of Payment	**Other:**	

Specification Committee Action: Approved with changes as noted.

Deferred:	**Not Approved:**	**Approved Date:** 9/14/06	**Effective Date:** 4/17/07

Specification Committee Approved Text:

2601.21, Method of Measurement.

Add as the sixth indented paragraph:

Mobilization for watering will be paid for by count for each mobilization. Mobilization for the initial watering required at installation of the plant material will not be measured for payment.

Add as the eleventh indented paragraph:

Mobilization for watering will be paid for by count for each required watering at the pre-determined price of $350.00 each.

Comments: The Specifications Section noted that this should be paid at the same rate ($350.00) as Mobilization for Erosion Control. The Committee agreed. The Office of Construction asked if mobilization should be paid for by count for each watering required since the Contractor may water part of the area and then return later to water the rest. The Office of Contracts noted the Specifications Section Recommended Text is incorrect. The first paragraph should be in the Method of Measurement, not in the Basis of Payment.

Specification Section Recommended Text:

2601.22, Basis of Payment.

Add as the eleventh and twelfth indented paragraphs:

Mobilization for watering will be paid for by count for each mobilization. Mobilization for the initial watering required at installation of the plant material will not be measured for payment.

Mobilization for watering will be paid for at the pre-determined price of $500.00 each.

Comments:

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

Add a new paragraph to 2601.22

Mobilization for watering will be paid for by count for each mobilization. Mobilization for the initial watering required at installation of the plant material will not be measured for payment.

Add a new paragraph to 2601.23 Mobilization for watering will be paid for at the pre-determined price of $500.00 each.					
Reason for Revision: Requested by erosion control contractors. The number of required waterings is unknown at letting because the amount of natural rainfall can't be predicted. This compensates contractors only for mobilizations actually performed instead of estimating an amount to include in the bid.					
County or City Input Needed (X one)			**Yes**	**No** X	
Comments:					
Industry Input Needed (X one)			**Yes** X (provided)	**No**	
Industry Notified:	**Yes** x	**No**	**Industry Concurrence:**	**Yes** x	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Roger Bierbaum/Ed Kasper	**Office:** Contracts	**Item 9**
Submittal Date: 8/25/06	**Proposed Effective Date:** April 2007 GS	
Article No.: 2602.04, K; 2602.05, K **Title:** Removal and Reinstallation of Silt Fence	**Other:**	

Specification Committee Action: Approved as is.

Deferred:	**Not Approved:**	**Approved Date:** 9/14/06	**Effective Date:** 4/17/07

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: None.

Specification Section Recommended Text:

2602.04, K, Removal and Reinstallation of Silt Fence.

Add as a new article:

Silt fence repaired through removal and reinstallation will be measured in linear feet (meters) to the nearest foot (meter).

2602.05, K, Removal and Reinstallation of Silt Fence.

Add as a new article:

Silt fence that must be repaired by removal and reinstallation, through no fault of the Contractor, will be paid at two times the contract unit price for the type of silt fence properly repaired.

Comments:

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

Add a new paragraph to 2602.04 Method of Measurement

2602.04 J. Removal and reinstallation of silt fence

Silt fence repaired though removal and reinstallation will be measured in linear feet (meters) to the nearest foot (meter).

Add a new paragraph to 2602.05 Basis of Payment

2602.05 K. Removal and reinstallation of silt fence

Silt fence that must be repaired by removal and reinstallation, through no fault of the contractor, will be paid at two times the contract unit price for the type of silt fence properly repaired.

Reason for Revision: Erosion control contractors requested the change. Currently they are not compensated for the removal of damaged fence when it is replaced. They are only paid for the installation of the replacement fence.					
County or City Input Needed (X one)			**Yes**	**No** X	
Comments:					
Industry Input Needed (X one)			**Yes** X (provided)	**No**	
Industry Notified:	**Yes** X	**No**	**Industry Concurrence:**	**Yes** X	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Roger Bierbaum	**Office:** Contracts	**Item 10**
Submittal Date: August 15, 2006	**Proposed Effective Date:** December 2006	
Article No.: DS-01085 **Title:** Added Options Bidding	**Other:**	

Specification Committee Action: Approved. The Office of Contracts will work on the wording before implementing.

Deferred:	**Not Approved:**	**Approved Date:** 9/14/06	**Effective Date:** 12/19/06

Specification Committee Approved Text:

Comments: The Office of Contracts pointed out that the target for this DS and the DS in Item 11 is enhancement projects. District 6 Construction noted that the third paragraph of Article 01085 was difficult to read and understand. The Office of Contracts will work on the wording. The Statewide Operations Bureau asked how this DS will get out to consultants and local agencies and who would monitor for correct use of the DS. The Office of Contracts explained that the Local Systems Engineers would pass this information on. The Contracts Engineer will be the controller and will monitor use. The Office of Contracts explained that after two years of use, they will submit a report to the FHWA regarding the successes and difficulties encountered with the DS.

Specification Section Recommended Text:

Comments:

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

See attached draft DS

Reason for Revision: The purpose of added this DS is to allow the Contracting Authority to obtain the most work, or the best options, for the available funds that have been allocated for the project.

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

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

Comments: AGC has been notified of this proposed DS. A presentation to the AGC membership is planned for AGC Days on September 7, 2006.

DRAFT DS-01085
(New)

Iowa Department of Transportation

DEVELOPMENTAL SPECIFICATIONS

FOR

ADDED OPTIONS BIDDING

Effective Date
December 19, 2006

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.

01085.01 Purpose
This specification allows the Contracting Authority to obtain the most work, or the best options, for the available funds allocated for the project.

01085.02 Definitions

Added Options.
One, or more, sections in the proposal form which will be included in the contract award if the Contracting Authority has funds available. Added Options will be listed by alpha priority (e.g. Added Option A, Added Option B, etc.) in the proposal form.

Base Set of Items.
The smallest group of items that would be considered for awarding a contract. These items will be listed first on the Schedule of Prices in the proposal form, and may include several sections.

Contract Award Limit.
A maximum dollar amount the Contracting Authority has determined it will award to obtain Added Options for the contract. This dollar amount will be listed in the proposal form and will be used to determine the number of Added Options included in the contract awarded.

01085.03 Applications of Added Options
The Contracting Authority may include Added Options in a proposal to achieve several objectives.

A. Maximize the use of available funds (additional items for additional work) – The Contracting Authority includes the minimum project requirements in the Base Set of Items and includes additional work to be included if the bids allow that additional work to be done for less than the Contract Award Limit. For example the Base Set of Items may include 10 miles of HMA resurfacing. An Added Option may include the bid items to add an additional 2 miles of HMA resurfacing if the total cost could be completed for less than the Contract Award Limit. The additional 2 miles would be included in the contract if this additional work could be done for less than the Contract Award Limit.

B. Obtain the best options for the available funds (bid item for incremental cost over base requirement) - The Base Set of Items is for the basic requirement, and the Added Options include a bid item for the incremental cost of upgraded materials or options. For example the requirements in the Base Set of Items may be for standard aggregate and there is an Added Option with an item for the incremental cost for a higher grade aggregate. The contract award would include the higher grade aggregate if the additional cost could be done for less than the Contract Award Limit.

01085.04 Bidding Procedure
The proposal form will list the Contract Award Limit. The proposal form will list which sections are the Base Set of Items that shall be bid. The proposal form will also list the sections which contain one (or more) Added Options that may be bid (e.g. a bidder shall bid the Base Set of Items, but would not have to bid the Added Options to be considered responsive). The Added Options will be listed in order of preference to be added to the Base Set of Items if the bids do not exceed the Contract Award Limit. Added Options will only be considered by their alpha priority.

Bidders do not need to bid Added Options sections which would exceed the Contract Award Limit.

01085.05 Contract Award Procedure
The first basis for award is the bidder submitting a bid with the most Added Options (in order of preference) not exceeding the Contract Award Limit. If more than one bidder submits a bid under the Contract Award Limit for the same number of Added Options, the bidder with the lowest total bid for the Base Set of Items and those Added Options will be the bidder considered for award.

If all bids exceed the Contract Award Limit, then the bidder with the lowest bid for the Base Set of Items will be considered for award. The Contracting Authority may award a contract to the bidder with the lowest bid for the Base Set that exceeds the Contract Award Limit. The Contracting Authority will not award a contract for a bid with Added Options exceeding the Contract Award Limit.

The basis of Good Faith Effort to meet a DBE goal on this proposal, will be the bidder's effort based on all on DBE commitments on work in the Base Set of Items and any federal aid Added Options for which the bidder's proposal is less than the Contract Award Limit.

01085.06 Example
The Contracting Authority desires to maximize the $2,000,000 that it has available for this project. The proposal form has defined a Base Set of Items, Added Option A, Added Option B, Added Option C, and designated $2,000,000 as Contract Award Limit.

Bidder	$ bid on Base Set of Items	$ Bid on Added Option A	$ Bid on Added Option B	$ Bid on Added Option C
AAAA	$1,500,000	$300,000	$150,000	$300,000
BBBB	$1,600,000	$250,000	$ 50,000	$300,000
CCCC	$1,700,000	$200,000	$ 80,000	$200,000
DDDD	$1,800,000	$150,000	$150,000	$ 50,000

The first basis for award is the bidder submitting a bid with the most Added Options (in order of preference) not exceeding the Contract Award Limit ($2,000,000). Bidders AAAA, BBBB, and CCCC submitted bids for the Base Set of Items and Options A and B which do not exceed $2,000,000. Bidder DDDD will not be further considered because they submitted a bid where the Base Set of Items and only Option A is less than $2,000,000 (i.e. Bidder DDDD submitted a bid with fewer options not exceeding the Contract Award Limit).

The next basis for award is the lowest bid submitted (not exceeding the Contract Award Limit) with the Base Set of Items and the same Added Options. In this example, Bidder BBBB's bid of $1,900,000 for the Base Set of Items with Options A and B is the low bid. Bidder AAAA's bid for the Base Set of Items and

Options A and B is $1,950,000. Bidder CCCC's bid for the Base Set of Items and Options A and B is $1,980,000.

It makes no difference that:

- Bidder AAAA is the low bidder on only the Base Set of Items (because options could be added to the contract that would not exceed the Contract Award Limit).
- Bidder CCCC is the low bidder on the Base Set of Items and Option A (because Option B could be added to the contract and not exceed the Contract Award Limit).
- Bidder DDDD is the low bidder on the Base Set of Items and all Added Options (because their bid would exceed the Contract Award Limit).

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Roger Bierbaum			**Office:** Contracts		**Item 11**
Submittal Date: August 15, 2006			**Proposed Effective Date:** December 2006		
Article No.: DS-01086 **Title:** Best Value Alternative Bidding (A-D)			**Other:**		
Specification Committee Action: Approved as is.					
Deferred:	**Not Approved:**	**Approved Date:** 9/14/06		**Effective Date:** 12/19/06	
Specification Committee Approved Text: See attached Draft DS-01086					
Comments: The Office of Bridges and Structures noted that using this DS would result in designers needing to provide additional details for the options.					
Specification Section Recommended Text:					
Comments:					
Member's Requested Change: (Do not use 'Track Changes', or 'Mark-Up'.Use ~~Strikeout~~ and Highlight. See attached draft DS					
Reason for Revision: The purpose of added this DS is to allow the Contracting Authority to obtain the most work, or the best options, for the available funds that have been allocated for the project.					
County or City Input Needed (X one)			**Yes**	**No** X	
Comments:					
Industry Input Needed (X one)			**Yes** X	**No**	
Industry Notified:	**Yes** X	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments: AGC has been notified of this proposed DS. A presentation to the AGC membership is planned for AGC Days on September 7, 2006.					

DRAFT DS-01086
(New)

Iowa Department of Transportation

DEVELOPMENTAL SPECIFICATIONS

FOR

BEST VALUE ALTERNATIVE (A – D) BIDDING

Effective Date
December 19, 2006

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.

01086.01 Purpose
This specification expands the number of options a bidder can bid and allows the Contracting Authority to receive the best value based on individual alternatives selected by each bidder.

The Contracting Authority has traditionally made pre-letting choices on their willingness to pay additional cost for one design or material over other designs or materials. In Best Value Alternative Bidding, the Contracting Authority expands the choices of designs or materials it is willing to award, and includes the basis for low bidder selection of these designs and materials in proposal.

01086.02 Definitions

Alternative Differential (D)
The dollar value the Contracting Authority has predetermined that it is willing to pay for a Better Value Alternative Section over the Base Alternative for that work.

Alternative Sections
Sections in the Schedule of Prices in the proposal form that the bidder has the choice of bidding the Base Alternative Section or the Better Value Alternative Section.

Base Alternative Section
The section in the proposal form that includes the minimum requirements for an alternative of work.

Better Value Alternative Section
The section in the proposal form which the Contracting Authority is willing to pay an Alternative Differential over the Base Alternative Section

01086.03 Bidding Procedure
The proposal form will have Alternative Sections. The proposal form will also list a dollar value (Alternative Differential) the Contracting Authority has pre-determined it will pay for each Alternative Section over the Base Alternative Section. For each set of alternatives, the bidder will be allowed to bid one Alternative Section (e.g. either the Base Alternative Section or Better Value Alternative Section)

01086.04 A – D Contract Award Procedure
The basis for determining the low bidder for consideration for award will be the bidder who submitted the lowest Bid Total minus the sum of the Alternative Differentials for that bidder (e.g. A – D Bidding).

01086.05 Example
In the following example, the Contracting Authority is willing to pay $200,000 additional to have a Better Value Alternative Section X2 built over the Base Alternative Section X1. In addition, the Contracting Authority is willing to pay an additional $400,000 to have a Better Value Alternative Section Alternative Y2 built over the Base Alternative Section Y1.

Bidder AAAA submitted the lowest Bid Total (A), however Bidder BBBB will be considered the low bidder because they have the lowest Basis for Award (A – D) total.

Bidder	$ bid on non-Alternative Sections Items	Alt. Bid	X Bid	Alt. Bid	Y Bid	Bid Total for the Proposal (A)	Sum of Alternative Differentials (D)	Basis for Award (A – D)
AAAA	$1,000,000	X1	$200,000	Y1	$200,000	$1,400,000	$ 0	$1,400,000
BBBB	$1,050,000	X2	$250,000	Y1	$250,000	$1,550,000	$200.000	$1,350,000
CCCC	$1,300,000	X2	$300,000	Y2	$400,000	$2,000,000	$600,000	$1,400,000
DDDD	$1,250,000	X1	$300,000	Y2	$300,000	$1,850,000	$400,000	$1,450,000

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Tom Reis/Daniel Harness	**Office:** Specifications Section	**Item 12**
Submittal Date: September 6, 2007	**Proposed Effective Date:** April 17, 2007	
Article No.: DS-01087 **Title:** Pavement Surface Repair (Diamond Grinding)	**Other:**	

Specification Committee Action: Approved replacing all of Section 2532 with text from Draft DS-01087.

Deferred:	**Not Approved:**	**Approved Date:** 9/14/06	**Effective Date:** 4/17/07

Specification Committee Approved Text: See Item 6.

Comments: This will not be published as a DS, but will instead replace Section 2532 of the Standard Specifications.

Specification Section Recommended Text:

Comments:

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

This is a revision to DS-01067, Pavement Surface Repair (Diamond Grinding). Text is being added to explain the intent of "minimize vertical projections." The same verbiage is being added to Section 2532 of the Standard Specifications

Reason for Revision:

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/Mike Heitzman	**Office:** Materials	**Item 13**
Submittal Date: September 8, 2006	**Proposed Effective Date:** October 17, 2006	
Article No.: SS-01045 **Title:** Recycled Asphalt Pavement	**Other:**	

Specification Committee Action: Approved with the changes noted.

Deferred:	**Not Approved:**	**Approved Date:** 9/14/06	**Effective Date:** 10/17/06

Specification Committee Approved Text: See attached Draft SS-01045.

Comments: District 2 Materials expressed concerns with contractors adding to an unclassified stockpile after binder content and gradation of the stockpile have been determined. They suggested initiating some type of stockpile management. The Office of Construction suggested adding wording that would prohibit adding to a stockpile once its characteristics have been determined and a mix designed. The Office of Construction noted that there was some confusion regarding the added language in Article 2303.02, C, 2. They asked if the "or less" applied to the number of ESALs. The Office of Materials verified this and suggested that this be reworded to clarify the intent. District 2 Materials asked if the last two paragraphs could be added to Materials I.M. 505. The Committee agreed this will be handled with the next Material I.M. revisions.

Specification Section Recommended Text:

Comments:

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

See attached draft SS-01045.

Reason for Revision:

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

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

DRAFT SS-01045
(Replaces SS-01039)

Iowa Department of Transportation

SPECIFICATIONS

FOR

RECYCLED ASPHALT PAVEMENT (RAP)

Effective Date
October 17, 2006

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.

This specification applies to projects on the Primary Road System only. It may apply to other projects when specifically identified in the contract documents.

Replace all of Article 2303.02, C with the following:

C. Recycled Asphalt Pavement.
RAP is salvaged asphalt pavement. RAP shall be from a source designated in the contract documents, a Classified RAP stockpile, or Unclassified RAP furnished by the Contractor. The designations Classified and Unclassified are exclusively for the use of RAP in HMA.

The Contractor shall identify each RAP stockpile and document Classified RAP stockpiles as directed in Appendix A. Information required for documentation of Classified RAP material in a stockpile for future use in HMA shall include identification of the project from which the material was removed; mix data from the original project including mixture type, aggregate classification, location and depth in the pavement structure; extracted gradation information, if available; and description of stockpile location and quantity. Additional material shall not be added to a Classified RAP stockpile without the approval of the District Materials Engineer.

The Engineer may reject a RAP stockpile for non-uniformity based on visual inspection. Stockpiles shall be worked in such a manner that the materials removed are representative of a cross section of the pile.

Stockpiles of RAP shall be placed on a base sufficient to prevent contamination as directed in Appendix A. RAP stockpiles containing concrete chunks, grass, dirt, wood, metal, coal tar, or other foreign or environmentally restricted materials shall not be used. RAP stockpiles may include PCC ~~patches~~ (not to exceed 10% of the stockpile ~~pavement surface area~~) from patches or composite pavement that was milled as part of the asphalt pavement ~~may be included in the stockpile~~.

When RAP is taken from a project, or is furnished by the Contracting Authority, the contract documents will indicate quantity of RAP expected to be available and test information, if known. The Contractor is responsible for salvaging this material. Unless otherwise specified in the contract documents, RAP not used in HMA shall become the property of the Contractor.

For HMA mix design purposes, the Contracting Authority will test samples of the RAP. The aggregate gradation and amount of asphalt binder in the RAP will be based on the Contract

Authority's extraction tests. When the amount of RAP binder exceeds 20% of the total asphalt binder, the asphalt binder grade shall be changed as directed in Materials I.M. 510.

1. Classified RAP.
Classified RAP is from a documented source with the aggregate meeting the appropriate quality requirements in Materials I.M. 510, and properly stockpiled.

Classified RAP may be used in the base, intermediate, and surface mixtures for which the RAP aggregate qualifies. The surface course may use up to 15% of Classified RAP. The Contractor may ~~shall obtain the Engineer's approval to~~ use more than 15% of Classified RAP for the surface course when there is quality control sampling and testing of the RAP meeting the requirements in Appendix A. Not more than 30% of the total asphalt binder in the surface mix shall come from the RAP.

2. Unclassified RAP.
Any stockpiled RAP not meeting the requirements of Classified RAP or from an unknown source shall be designated as Unclassified RAP. For Interstate and Primary projects, up to 10% Unclassified RAP may be used in HMA base and shoulder mixtures. For Primary projects, up to 10% Unclassified RAP may be used for equal to or less than 1,000,000 ESAL intermediate mixtures. For all other projects, up to 10% Unclassified RAP may be used in HMA base, intermediate, and shoulder mixtures. There will be ~~is~~ no friction aggregate credit or aggregate crushed particles credit for Unclassified RAP.

When an Unclassified RAP stockpile is characterized by sampling and testing for mix design, no material can be added to the stockpile until the project is completed.

Replace all of Article 2303.05, C with the following:

C. Recycled Asphalt Pavement.
The quantity of asphalt binder in classified or unclassified RAP, which is incorporated into the mix, will be calculated in tons (megagrams) of asphalt binder in the RAP, based on the actual asphalt binder content determined for the mix design from the results of the Engineer's extraction test.

The quantity of asphalt binder in classified or unclassified RAP, which is incorporated into the mix, will be included in the quantity of asphalt binder used.

Replace the second paragraph of Article 2303.06, B with the following:

Payment for asphalt binder will be for all new asphalt binder and the asphalt binder in the RAP which is incorporated in the mixture.

Appendix A – Instructions for RAP for HMA Mixtures (Supersedes Materials I.M. 505)

GENERAL

This Appendix describes requirements for processing, storing, documenting, and sampling & testing of RAP intended for use in HMA mixtures.

All notifications and documentation shall be submitted to the District Materials Engineer based on the District responsible for the location of the initial RAP stockpile.

PROCESSING

RAP suitable for HMA shall be processed by milling and/or crushing to a maximum particle size of 1.5 inches (37.5 mm). The Contractor shall notify the Engineer and District Materials Engineer 48 hours before processing begins.

Additional screening or blending may be done to achieve a more uniform stockpile. This processing may be done as the stockpile is built or as part of the HMA plant production. Additional actions that may improve the consistency of the RAP include further crushing to reduce top size, screening into coarse and fine fractions, or blending by proportioning through a two-bin cold feed.

STORAGE

Stockpiles shall be placed on a base with adequate drainage, constructed in layers to minimize RAP segregation and ensure a workable face.

To meet Classified RAP criteria, separate stockpiles shall be constructed for each source of RAP based on the quality of aggregate, type and quantity of asphalt binder, and size of processed material.

All RAP stockpiles shall be identified by maps of stockpile areas and signs placed in or near each stockpile.

DOCUMENTATION of CLASSIFIED RAP STOCKPILES

Stockpiled RAP material will only be considered Classified RAP when the following documentation requirements are met. No documentation is required when the RAP is used on the project it came from, or a tied project.

- Form 820009r (see Appendix B) is completed by the RAP owner and a copy is forwarded to the District Materials Engineer within 10 calendar days of completing the stockpile.
- Any special handling, treatment or conditions of the RAP or it's use should be described on this form.
- Maps shall provide details that depict the stockpile site, including adjacent stockpiles of RAP or aggregates, permanent plant equipment, and landmarks.
- Maps and signs shall identify the stockpile by RAP Identification Number.

The District Materials Engineer will review Form 820009r for accuracy. Portions of the form including assigning the RAP identification number, aggregate quality type, crushed particle and friction type credit, average values for extracted aggregate gradation, aggregate bulk specific gravity, aggregate absorption and asphalt binder content will be completed by the District Materials Engineer.

Notify the District Materials Engineer at least 48 hours before relocating or reprocessing a classified RAP stockpile for future use (not intended for a specific project). The notification shall include the estimated quantity of RAP being relocated or reprocessed and the new location of the stockpile. Relocation of RAP shall be reported on Form 820009r and submitted to the District Materials Engineer within 10 calendar days of completing the relocation. Reprocessing a Classified RAP stockpile may require additional sampling, testing, and new Form 820009r with reassignment of a RAP Identification Number.

Before January 1st of each year, the ~~c~~Contractor shall update Form 820009r on the status of each Classified RAP stockpile. Report the estimated quantity of RAP removed for the construction season completed and the available RAP in each stockpile for future use.

SAMPLING AND TESTING

Mix Design

A certified Level I Aggregate Technician shall obtain the samples. Samples for mix design testing shall be obtained from at least 3 locations. Significant mixture differences in the pavement to be recycled may require separate stockpiles and samples. A sampling plan shall be developed by the Contractor and approved by the District Materials Engineer prior to sampling.

Samples for mix design obtained from the RAP stockpile are the most representative, but not always possible when the mix designs are performed. When stockpile samples are not available, RAP samples shall be obtained by milling a minimum of 50 feet (15 m) of project length at each sample location. Other methods of sampling for mix design, including coring or air-hammer patch areas, may only be used with the approval of the District Materials Engineer.

Obtain sufficient material for contractor mix design testing and owner agency RAP extraction testing as recommended in Materials I.M. 510. A representative 30 pound (15 kg) sample split from the total sample shall be delivered to the District Materials Laboratory for extraction testing. Results of the extraction test will be provided to the Contractor within 4 weeks of sample delivery.

Quality Control

When RAP quality control is required, the Contractor shall use one of the following quality control sampling programs. A certified Level I Aggregate Technician shall obtain the samples.

- Stockpiles – The Contractor shall obtain a representative sample of RAP from the stockpile for each 1000 tons of RAP placed in the stockpile.
- HMA Plant – The Contractor shall obtain a representative sample of RAP from the HMA plant RAP feed belt for each lot of HMA produced.

The Contractor shall use the ignition oven (Materials I.M. 338) or chemical extraction (AASHTO T 164) to extract the aggregate from the RAP sample. Calibration of the asphalt binder content from the ignition oven extraction is not required for the RAP quality control program. The gradation of the extracted RAP aggregate and the un-calibrated asphalt binder content shall be logged and charted within 24 hours of sampling.

Appendix B – Classified RAP Stockpile Report (Form 820009r)

820009r (December 2005)

Classified RAP Stockpile Report					
Stockpile Owner:			**RAP Stockpile ID #**		
SOURCE OF RAP	Project No.		Dates of Removal		
Route No.	From		To		
Removal Depth	JMF No(s)	Mix Type / Size	Crushed Particle %		

LOCATION OF RAP STOCKPILE:

County	Section	Township	Range

Description of stockpile base:

Processing remarks:

STOCKPILE QUANTITY INVENTORY LOG		
Date	Quantity	Disposition (Project No. and use)
		Total initial stockpile quantity

Average EXTRACTION TEST RESULTS		**Aggregate Characteristics**	
Gradation	Lab Report nos.		
3 / 4		Aggregate Type	
1 / 2			
3 / 8	Pb =	Crushed Particles	%
No. 4			
No. 8	Gsb =	Aggr Friction Type 2	%
No. 16			
No. 30	Abs% =	Aggr Friction Type 3	%
No. 50			
No. 100	FAA =	Aggr Friction Type 4	%
No. 200			

Shaded boxes to be completed by the District Materials Engineer

Stockpile Owner Representative		Date
District Materials Representative		Date