MINUTES
OF
IOWA DOT SPECIFICATION COMMITTEE MEETING

December 11, 2025

Members Present:	Christy Vanbuskirk	Fairfield RCE
	Daniel Harness	Design Bureau
	Eric Johnsen, Chair	Contracts & Specifications Bureau
	Scott Nixon	Construction & Materials Bureau
	Frank Leong	Grimes RCE
	Michael Nop	Bridges & Structures Bureau
	Dillon Feldmann	Local Systems Bureau
	Shane Neuhaus	District 6 – Materials
Members Not Present:	Mark Dunn	Contracts & Specifications Bureau
	Tony Gustafson	Chief Engineer
	Willy Sorenson	Traffic & Safety Bureau
	Ben Hucker	Maintenance Bureau
Advisory Members Present:	Luke Bowdish	Fayette County
	Jeff De Vries	Construction & Materials Bureau
	Ryan Weidemann	Hamilton County
	Bryan Horesowsky	Muscatine County
	Elijah Gansen	Construction & Materials Bureau
	Jeff Brinkman	Contracts & Specifications Bureau

The Specification Committee met on Thursday, December 11, 2025, at 9:00 a.m. Eric Johnsen, Specifications Engineer, opened the meeting. The items were discussed in accordance with the agenda dated December 1, 2025.

The agenda is as follows:

1. **Article 1101.03, Definition of Terms, Joint Venture.**
Article 1107.02, Insurance.
Contracts and Specifications Bureau requested to update the insurance requirements for contractors.

2. **Article 2001.21, C, Truck Mixer and Agitator (General Equipment Requirements).**
Construction and Materials Bureau requested to update specifications to require measurement of added water.

3. **Article 2303.03, C, 2, b, 5, Flexible Pavement.**
Construction and Materials Bureau and requested to specify that tack must cure naturally.

4. **Article 2501.05, L, 1, Dynamic Pile Test (Basis of Payment).**
The Specifications Section requested to change the method of measurement for dynamic pile tests.

5. **DS-23077, Quality Management Concrete (QM-C)**

The Construction and Materials Bureau requested updates to the Developmental Specifications for Quality Management Concrete (QM-C).

Form 510130 (07-24)

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SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Mark Dunn/Eric Johnsen	**Bureau/Office:** Contracts & Specifications	Item 1
Submittal Date: 11/17/2025	**Proposed Effective Date:** 1/1/2027	
Article No.: 1101.03 **Title:** Definition of Terms, Joint Venture **Article No.:** 1107.02 **Title:** Insurance	**Other:**	

Specification Committee Action: Approved as recommended.

Deferred:	**Not Approved:**	**Approved Date:** 12/11/25	**Effective Date:** 1/1/2027

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: This revision will be a part of the October 2026 GS, but will be written out by proposal note until January 2027 to allow contractors a full calendar year after approval to make sure their insurance meets the new requirements.

Specification Section Recommended Text:

1101.03, Definition of Terms, Joint Venture.

Replace the Article:

The joining of two or more qualified contractors for the purpose of combining equipment, personnel, and finances in order to submit a bid on a single proposal. This includes both joint bidders and formal joint ventures.

1107.02, Insurance.

Add at the beginning of the Article:

The insurance requirements of this article shall apply to all new contracts, as well as insurance renewals for existing contracts, starting on January 1, 2027.

Comments:

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

Reason for Revision: Clarity that a joint venture as far as the DOT is concerned for bidding and contracting includes formal agreement joint ventures as well as informal joint bidders

Clarify that beginning when the changes to the insurance specification go into effect, they will apply insurance renewals as well as new contracts. This makes sure that there is only one insurance standard at that time.

New Bid Item Required (X one)	**Yes**	**No** X
Bid Item Modification Required (X one)	**Yes**	**No** X
Bid Item Obsoletion Required (X one)	**Yes**	**No** X

Comments:

County or City Comments:
Industry Comments: Submitted to AGC for review with no comments received

Form 510130 (08-15)

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SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Wes Musgrove	**Office:** Construction & Materials	Item 2
Submittal Date: 11/25/2025	**Proposed Effective Date:** 10/21/2026	
Article No.: 2001.21, C **Title:** Truck Mixer and Agitator (General Equipment Requirements)	**Other:**	

Specification Committee Action: Approved as recommended.

Deferred:	**Not Approved:**	**Approved Date:** 12/11/25	**Effective Date:** 10/21/26

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: None.

Specification Section Recommended Text:

2001.21, C, Truck Mixer and Agitator.

Add the Article:

8. Measure quantity of added water by visual methods or flow meters in accordance with ASTM C 94.

Comments:

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

2001.21 PORTLAND CEMENT CONCRETE MIXING EQUIPMENT.

C. Truck Mixer and Agitator.

Add paragraph 8.

8. Measure quantity of added water by visual methods or flow meters in accordance with ASTM C 94.

Reason for Revision: Sight glass for water addition on ready mix trucks has been enforced in the field for decades. However, no specification language actually covers and ASTM C 94 was not required for ready mix trucks. This change will add language to cover what has been routinely enforced for years.

New Bid Item Required (X one)	**Yes**	**No** X
Bid Item Modification Required (X one)	**Yes**	**No** X
Bid Item Obsoletion Required (X one)	**Yes**	**No** X

Comments:

County or City Comments:

Industry Comments: Sent to ICPA

Form 510130 (07-24)

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SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Nixon/ Johnson	**Bureau/Office:** Construction and Materials	Item 3
Submittal Date: 11/18/2025	**Proposed Effective Date:** 10/21/2026	
Article No.: 2303.03, C, 2, b, 5 **Title:** Flexible Pavement	**Other:**	

Specification Committee Action: Approved as recommended.

Deferred:	**Not Approved:**	**Approved Date:** 12/11/25	**Effective Date:** 10/21/26

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments:

Specification Section Recommended Text:

2303.03, C, 2, b, 5.

Replace the first sentence:

Allow tack coat to adequately cure without use of artificial means of drying or heating prior to placement of HMA.

Comments:

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

5) Allow tack coat to adequately cure prior to placement of HMA. Allow tack coat to cure without use of artificial means of drying or heating. If tack coat surface becomes dirty from weather or traffic, thoroughly clean and, if necessary, retack. A light application of sand cover may also be required for excessive application rates, breakdowns, and short sections remaining at the end of a day's run.

Reason for Revision: We had a contractor trying to "dry" and break the tack with an open flame and a leaf blower. This is not how we want our tack to break. The moisture should evaporate out of the emulsion naturally.

New Bid Item Required (X one)	**Yes**	**No** X
Bid Item Modification Required (X one)	**Yes**	**No** X
Bid Item Obsoletion Required (X one)	**Yes**	**No** X

Comments:

County or City Comments:

Industry Comments:

Form 510130 (07-24)

IOWA | DOT

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Eric Johnsen	**Bureau/Office:** Specifications	Item 4
Submittal Date: 11/18/2025	**Proposed Effective Date:** 10/21/2026	
Article No.: 2501.05, L, 1 **Title:** Basis of Payment (Dynamic Pile Test)	**Other:**	

Specification Committee Action: Approved as recommended.

Deferred:	**Not Approved:**	**Approved Date:** 12/11/25	**Effective Date:** 10/21/26

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: None.

Specification Section Recommended Text:

2501.05, L, 1.

Replace the Article:

When required by the contract documents, or ordered ~~as directed~~ by the Engineer, payment will be ~~a lump sum price of~~ $500.00 per ~~test~~ each pile tested.

Comments:

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

Reason for Revision: Most projects require multiple dynamic pile tests and the predetermined price is $500 per test pile, so the item should be measured by each.

New Bid Item Required (X one)	**Yes**	**No** X
Bid Item Modification Required (X one)	**Yes X**	**No**
Bid Item Obsoletion Required (X one)	**Yes**	**No** X

Comments: Change current bid item from lump sum to each.

County or City Comments:

Industry Comments:

Form 510130 (07-24)

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SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Scott Nixon	**Bureau/Office:** Construction & Materials	Item 5
Submittal Date: 11/19/2025	**Proposed Effective Date:** 2/17/2026	
Article No.: **Title:**	**Other:** DS-23077, Quality Management Concrete (QM-C)	

Specification Committee Action: Approved as recommended.			
Deferred:	**Not Approved:**	**Approved Date:** 12/11/25	**Effective Date:** 10/21/26
Specification Committee Approved Text: See attached Developmental Specifications for Quality Management Concrete (QM-C).			
Comments: None.			
Specification Section Recommended Text: See attached Draft Developmental Specifications for Quality Management Concrete (QM-C).			
Comments:			

Member's Requested Change: (Do not use '<u>Track Changes</u>', or '<u>Mark-Up</u>'. Use ~~Strikeout~~ and Highlight.)

DS-230077 attached

Reason for Revision: Add QMPEM mix requirements for mix design and testing. Contractors can use the QMPEM mix when aggregate shape allows for reduced cement content.

New Bid Item Required (X one)	**Yes**	**No** X
Bid Item Modification Required (X one)	**Yes**	**No** X
Bid Item Obsoletion Required (X one)	**Yes**	**No** X
Comments:		
County or City Comments:		
Industry Comments: Sent to ICPA. Comments added from review		

DS-23084
(Replaces DS-23077)

DEVELOPMENTAL SPECIFICATIONS
FOR
QUALITY MANAGEMENT CONCRETE (QM-C)

Effective Date
February 17, 2026

THE STANDARD SPECIFICATIONS, SERIES 2023, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE DEVELOPMENTAL SPECIFICATIONS AND THEY PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

23084.01 DESCRIPTION.

A. This specification identifies a concrete mixture design with an optimum combined aggregate gradation, and the Contractor's testing and quality control responsibilities. Optimization of the aggregates should produce concrete with low water requirement as well as improved workability and finishing characteristics. While concrete strength is important and is measured, it is not the basis for optimization of the concrete mixture design.

B. Testing and quality control apply to all Contractor produced concrete using the Concrete Design Mixture (CDM). The CDM applies to mainline slip form pavement. At the Contractor's option, the CDM may apply to any other slip form paving.

C. References to QMC applies to Quality Management Performance Engineered Mix (QMPEM) mixes. QMPEM will be specifically referenced when the topic applies to QMPEM only.

23084.02 MATERIALS.

For all materials, meet the quality requirements for the respective items in Division 41 of the Standard Specifications. Compatibility of all material combinations is the Contractor's responsibility based on acquired field experience with proposed materials.

23084.03 CONCRETE DESIGN MIXTURE.

A. An Iowa DOT PCC Level III Certified Technician is responsible for the development of the CDM. Develop a CDM based on a unit volume of 1.000 according to industry standard practice, and containing proportions of materials, including admixtures. Base the proportions upon saturated surface dry aggregates to produce a workable concrete mixture meeting the constraints of Table DS-23068.03-1:

Table DS-23084.03-1: Concrete Mixture Constraints

Constraint	Value
Nominal Maximum Coarse Aggregate Size	Greater than or equal to 1 inch
Gradation	Materials I.M. 532
Cementitious Content, Absolute Volume	QMC = 0.106, QMPEM =0.099* ~~Minimum, 560 pounds per cubic yard*~~
Fly Ash Substitution Rate	See Article 2301.02, B, 6

Constraint	Value
Water/Cementitious Ratio	Maximum, 0.435
Air Content	6% ±1%, Design Absolute Volume = 0.060
28 Day Flexural Strength, Third Point	Minimum, 640 pounds per square inch

* ~~The minimum cement content assumes the use of Type I/II cement with a specific gravity of 3.14 for an absolute volume of 0.106. If cement other than Type I/II is used, use an absolute volume of 0.106 and determine the weight of cement from the specific gravity of the cement.~~ Total cementitious content is determined from the absolute volume for the mix design and the specific gravity of the cement used. Cement content may need to be increased to maintain the water to cementitious ratio during hot weather conditions.

B. Develop a target combined gradation in Zone II for each CDM based on normal production gradations and the relative percentages of each individual aggregate. Submit Form 955QMC to aggregate producer(s) to ensure individual gradations used are acceptable. Limit the percent passing the No. 200 sieve to no more than 1.5% for the combined aggregate gradation. When the coarse aggregate used meets the increase in percent passing the No. 200 sieve, according to Section 4109, Aggregate Gradation Table, Note 10 of the Standard Specifications, limit the percent passing the No. 200 sieve to no more than 2.0% for the combined aggregate gradation. 28 day flexural strength is sampled and tested by agency during normal production (Materials I.M. 530).

C. Contractor may use water reducing admixture, Type A, high-range water reducing, Type F, or water reducing and retarding admixture, Type D, in the CDM.

D. When a QMPEM mix is proposed, perform a trial batch prior to mix approval. Conduct trial batch in a ready mix or central batch plant and meet the following conditions:

E. An Iowa DOT PCC Level III Certified Technician is required to oversee the development of the CDM. Allow the Engineer to witness the development of the CDM. Provide 7 calendar days notice prior to this event. In addition to the constraints in Table 1, perform the tests in Table DS-23084.03-2 in the development of the CDM:

Table DS-23084.03-2: Tests for QMPEM

Constraint	Test Method	Value
Unit Weight of Plastic Concrete	AASHTO T 121	
Box Test	AASHTO T396	1 or less
SAM Air Test	AASHTO T395	0.25 or less

23084.04 MIX DESIGN DOCUMENTATION.

At least 7 calendar days prior to the start of paving, submit a CDM report to the District Materials Engineer for approval on Iowa DOT form. Contract extensions will not be allowed due to inadequate or additional CDMs. Include additional testing from trial batch for QMPEM mix design.

23084.05 QUALITY CONTROL.

A. General.

1. The Contractor is responsible for quality control of the concrete. An Iowa DOT PCC Level II Certified Technician is required to oversee quality control operations. The individual conducting the testing on grade is required to be an Iowa DOT PCC Level I Certified Technician. Calibrate and correlate testing equipment prior to and during paving operations.

2. At least 7 calendar days prior to the preconstruction conference, submit to the Engineer a Quality Control Plan complying with Materials I.M. 530. Include the proposed mix design(s)

with the Quality Control Plan. Do not begin paving until the plan is reviewed for compliance with the contract documents. Maintain equipment and qualified personnel to direct and perform all field quality control sampling and testing necessary to:

- Determine the various properties of the concrete governed by the contract documents, and
- Maintain the properties described in this specification.

B. Quality Control Testing.

1. Perform all quality control tests necessary to control the production and construction processes applicable to this specification and as set forth in the Quality Control Plan. Take samples for quality control testing in a random manner according to the prescribed sampling rate. Perform the tests listed in Table DS-23084.05-1:

Table DS-23084.05-1: Quality Control Table

Test	Limits	Testing Frequency	Test Methods
Unit Weight (Mass) of Plastic Concrete	Monitor for changes, ±3%	Twice/day	AASHTO T 121
Gradation Combined % Passing	See Article DS-23084.05, B, 2	1/1500 cubic yard	Materials I.M. 216, 301, 302, 531
Aggregate moisture contents	See Materials I.M. 527	1/1500 cubic yard	Materials I.M. 308
Air Content Plastic Concrete in Front of Paver	See Article 2301.02, B, 4	1/350 cubic yard or 1/100 cubic yard (ready mix)	Materials I.M. 318
Air Content Plastic Concrete in Back of Paver	May be used by Project Engineer to adjust target air in front of paver	2/day for first 3 days and 1/week thereafter (for each paver used)	Materials I.M. 318
Water/Cementitious Ratio	0.435 maximum	Twice/day	Materials I.M. 527
Vibrator frequency	See Article 2301.03, A, 3, a, 6, a	With Electronic Vibration Monitoring: Twice/day Without Electronic Vibration Monitoring: Twice/Vibrator/Day	Materials I.M. 384
SAM Number (QMPEM only)	0.30 maximum (Information only)	1/day	AASHTO T118
Box Test (QMPEM only)	1 maximum	Mix change or as needed	AASHTO T137

2. Maintain the running average of three combined aggregate gradation tests within the limits established by the CDM target gradation and the working ranges of Table DS-23084.05-2:

Table DS-23084.05-2: CDM Target Gradations

Sieve Size	Working Range
No. 4 or greater	±5%
No. 8 to No. 30	±4%
No. 50	±3%
No. 100	±2%
minus No. 200	See Article DS-23084.03

C. Corrective Action.

For QM-C mixes only, plot all process control test results on control charts as described in Materials I.M. 530.

1. **Aggregate Tests.**
   Take corrective action when the running average approaches the working range limits. When a combined gradation test result for a sieve exceeds the working range limits, adjust the target and notify the Engineer. If the verification test result for the minus No. 200 exceeds the limits in Article DS-23084.03 for the combined gradation, the material represented by that test for this sieve will be considered non-complying. Price adjustments will be assessed based on Coarseness/Workability Factors as described in Article DS-23084.07, E.

2. **Concrete Tests.**
   Take corrective action when an individual test result approaches the control limits. Notify the Engineer whenever an individual test result exceeds the control limits.

D. Acceptable Field Adjustments.

1. All mix changes must be mutually agreed upon between the Contractor and Engineer. Document all mix changes on the QM-C Mix Adjustment form. Determine batch weights using a basic water cement ratio of 0.40. When the water cement ratio varies more than ±0.03 from the basic water cement ratio, adjust the mix design to unit volume of 1.000. A change in the source of materials or an addition of admixtures or additives requires a new CDM. The following are small adjustments that may be made without a new CDM being required:
   - Increase cementitious content.
   - Decrease fly ash substitution rate.
   - Aggregate proportions may be adjusted from CDM proportions by a maximum of ± 4% for each aggregate.
   - Change water reducer to water reducer retarder.
   - Adjustment in water reducer or water reducer retarder admixture dosage.
   - Change in source of fly ash.
   - Change in source of sand, provided target gradation limits are met.

2. When circumstances arise, such as a cement plant breakdown, that create cement supply problems, a change in cement source may be allowed with the Engineer's approval. Consult the District Materials Engineer for approval of other changes to the mix design. A set of three beams for 28 day flexural strength testing may be required to document the changes.

3. Should conditions beyond the Contractor's control prevent completion of the work with the CDM, a Class C mix, or a mix based on Class C mix proportions using project materials, will be allowed, at no additional cost to the Contracting Authority. Mutual agreement between the Contractor and Engineer is required. When Class C mix, or mix based on Class C mix proportions using project materials is allowed it will not be considered in the coarseness and workability lot evaluation.

4. When a QMPEM mix is utilized, monitor workability and finishing characteristics. Take corrective action when issues are found. If box test is a 2 or higher and does not improve with admixtures, adjust cement content to maintain w/c ratio below maximum. If w/c ratio approaches or exceeds the maximum, permit the contractor to adjust cement content to reduce w/c ratio within ten loads. Do not exceed 0.45 w/c ratio during mix adjustment.

E. Hand Finished Pavement.
Use project materials based on Class C or Class M concrete mix proportions. With approval of the Engineer, the Contractor's CDM may be used for hand finished pavement. Quality control, as required in this specification, will not apply to hand finished pavement.

23084.06 METHOD OF MEASUREMENT.
Measurement will be as follows:

A. Standard or Slip-Form Portland Cement Concrete Pavement, QM-C.
Square yards shown in the contract documents.

B. Portland Cement Concrete Overlay, QM-C, Furnish Only.
Article 2310.04, A, of the Standard Specifications applies.

C. Portland Cement Concrete Overlay, QM-C, Placement Only.
Article 2310.04, B, of the Standard Specifications applies.

D. Hand Finished Pavement.
Square yards of Standard or Slip-Form Portland Cement Concrete Pavement, QM-C, constructed using Class C or Class M mixtures. For overlays, the Engineer will compute the number of:

- Square yards of Portland Cement Concrete Overlay, QM-C, Placement Only, constructed using Class C or Class M mixtures, and
- Cubic yards of Class C and Class M mixtures used.

23084.07 BASIS OF PAYMENT.
The cost for furnishing labor, equipment, and materials for the work required by the Contractor to design, test, and provide process control for production of QM-C shall be included in the contract unit price for QM-C bid items. Payment will be the contract unit prices as follows:

A. Standard or Slip Form Portland Cement Concrete Pavement, QM-C.
Contract unit price for Standard or Slip-Form Portland Cement Concrete Pavement, QM-C, per square yard.

B. Portland Cement Concrete Overlay, QM-C, Furnish Only.
Article 2310.05, A, of the Standard Specifications applies. Average coarseness and workability factor for each lot will be determined according to Materials I.M. 530.

C. Portland Cement Concrete Overlay, QM-C, Placement Only.
Article 2310.05, B, of the Standard Specifications applies. Average coarseness and workability factor for each lot will be determined according to Materials I.M. 530.

D. Hand Finished Pavement.

1. Standard or Slip-Form Portland Cement Concrete Pavement, QM-C: per square yard.

2. Portland Cement Concrete Overlay, QM-C, Placement Only: per square yard.

3. Portland Cement Concrete Overlay, QM-C, Furnish Only: per cubic yard.

E. Price Adjustment
Failure to provide an optimized gradation within Zone II, when required, will result in the following price adjustments.

Table DS-23084.07-1: Price Adjustments

Gradation Zone (Materials I.M. 532)	Price Adjustment Per Lot
IV	2%
I	5%