



APPROVED MINUTES

August 15, 2024, Standards Committee Meeting

October 25, 2024

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Minutes from the August 15, 2024, Standards Committee Meeting

The Standards Committee meeting was called to order by Mr. Novak, Chair, at 09:00 a.m., on Thursday, August 15, which was held virtually via *Teams* (Microsoft application). The meeting was adjourned at 9:59 a.m.

The following committee members were in attendance:

Novak, Joseph, * Chairman, Director, Construction Management
Bruno, Joseph, ** Traffic Engineering
Cool, Melissa, *** District Construction, Fort Wayne District
Hauser, Derrick, ****, Construction Management
Orton, Mark, Highway Engineering
Pelz, Kurt, Construction Technical Support
Rearick, Anne, Bridge Management
Reilman, Jim, Materials and Tests
Thomas, Matt*, Pavement Engineering
White, Peter, Bridge Engineering
Wooden, John, Contract Administration
*Proxy for Pankow, Gregory
**Proxy for Boruff, Dave
***Proxy for Koch, Mike
****Proxy for Novak, Joseph

Also, the following attendees were present:

Aquirre, Frank, INDOT
Awwad, Nathan, INDOT
Barney, Bruce, INDOT

Jacobs, David, INDOT
Kreutzjans, Gary, INDOT
Leckie, John, IRMCA

Blanchard, Jacob, INDOT
 Cool, Melissa, INDOT
 Cosenza, Nicholas, INDOT
 Couch, Gregory, INDOT
 Cruz, Elena, INDOT
 Delp, Patrick, INDOT
 Duncan, Thomas (FHWA)
 Feutz, Douglas, INDOT
 Fisher, Steve, INDOT
 Fox, Gary, INDOT
 Galetka, Jason, INDOT
 Hailat, Mahmoud, INDOT
 Harding, Matthew, INDOT

Mouser, Elizabeth, INDOT
 Osborn, Dan, ICI
 Perugu, Kshitija, INDOT
 Plant, William, INDOT
 Podorvanova, Lana, INDOT
 Powell, Traci, INDOT
 Shi, Runfa, INDOT
 Siddiki, Nayyar Zia, INDOT
 Smart, Steve, guest
 Thornton, Donald, INDOT
 Trammell, Scott, INDOT
 Yoon, Sung Min (Sean), INDOT

The following items were discussed:

A. GENERAL BUSINESS

OLD BUSINESS(No items were listed)

NEW BUSINESS

1. *Approval of the Minutes from the [July 18](#) meeting*

Mr. Novak, sitting-in as proxy for Mr. Pankow, requested a motion to approve the Minutes from the July 18, 2024 meeting.

Motion: Mr. Pelz
 Second: Mr. Wooden
 Ayes: 10
 Nays: 0

ACTION: PASSED AS SUBMITTED

B. CONCEPTUAL PROPOSAL

(No items were listed)

C. STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, AND STANDARD DRAWINGS PROPOSAL

OLD BUSINESS

[Item No. 5 \(7/18/24\)](#) [Mr. Reilman](#) [pg. 4](#)

2024 Standard Specifications:
 SECTION 301

AGGREGATE BASE

ACTION: PASSED AS REVISED

Item No. 6 (7/18/24)	Mr. Reilman	pg. 10
2024 Standard Specifications: SECTION 303	AGGREGATE PAVEMENTS OR SHOULDERS	
ACTION:	PASSED AS REVISED	
Item No. 8 (7/18/24)	Mr. Reilman	pg. 16
2024 Standard Specifications: 203.18	Embankment Construction	
ACTION:	PASSED AS REVISED	
<u>NEW BUSINESS</u>		
Item No. 1	Mr. Reilman	pg. 21
2024 Standard Specifications: 703.06 707.04 910.01	Placing and Fastening Steel and Concrete Requirements Reinforcing Bars, Dowel Bars and WWR	
ACTION:	WITHDRAWN	
Item No. 2	Mr. White	pg. 29
2024 Standard Specifications: 702.28	Basis of Payment	
ACTION:	PASSED AS SUBMITTED	
Item No. 3	Mr. Reilman	pg. 33
2024 Standard Specifications: 902.01(b)	Asphalt Emulsions	
ACTION:	PASSED AS SUBMITTED	
Item No. 4	Mr. Reilman	pg. 37
2024 Standard Specifications: 206.08	Preparation of Foundation Surfaces	
ACTION:	PASSED AS SUBMITTED	
cc: Committee Members FHWA ICI		

PROPOSAL TO STANDARDS COMMITTEE

PROBLEMS(S) ENCOUNTERED: Obsolete subgrade treatment types (ID, IV, and IVA) were specified. Additional details are needed for aggregate subgrade compaction and construction. Priming is no longer used on INDOT contracts. The aggregate moisture content up to optimal moisture content is not necessary.

PROPOSED SOLUTION: Delete the obsolete subgrade treatment types (ID, IV, and IVA). Additional details for aggregate compaction and construction were provided, including proofrolling requirements of aggregate subgrade, use of geosynthetics, spreading, and leveling devices. The priming section (301.08) was deleted. The aggregate moisture requirement for compaction was revised from "between 4% and optimal moisture content" to "between 4% and 7%".

APPLICABLE STANDARD SPECIFICATIONS: 301

APPLICABLE STANDARD DRAWINGS: NA

APPLICABLE DESIGN MANUAL SECTION: NA

APPLICABLE SECTION OF GIFE: NA

APPLICABLE RECURRING SPECIAL PROVISIONS: NA

PAY ITEMS AFFECTED: No

APPLICABLE SUB-COMMITTEE ENDORSEMENT: ICA, Subcontractors, Area Engineers, Material Engineers and Geotechnical Engineers.

IMPACT ANALYSIS (attach report): NA

Submitted by: Jim Reilman for Nayyar Siddiki

Title: State Materials Engineer

Organization: INDOT

Phone Number: 317-522 9692

Date: 8/1/2024

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Approved Materials List? No

Will this proposal improve:

Construction costs: NA
Construction time: Yes
Customer satisfaction? NA
Congestion/travel time? NA
Ride quality? NA

Will this proposal reduce operational costs or maintenance effort? NA

Will this item improve safety:

For motorists? NA
For construction workers? NA

Will this proposal reduce operational costs or maintenance effort? NA

Will this item improve safety:

For motorists? NA
For construction workers? NA

Will this proposal improve quality for:

Construction procedures/processes? Yes
Asset preservation? NA
Design process? NA

Will this change provide the contractor more flexibility? NA

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? NA

Is this proposal needed for compliance with:

Federal or State regulations: No
AASHTO or other design code: No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: _____

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 301 – AGGREGATE BASE

(Previously approved changes by the Standards Committee – orange and are shown in Recurring Special Provision: [207-R-781](#) SUBGRADE TREATMENT)

The Standard Specifications are revised as follows:

SECTION 301, BEGIN LINE 1, DELETE AND INSERT AS FOLLOWS:

SECTION 301 – AGGREGATE BASE

301.01 Description

This work shall consist of placing coarse aggregate on a prepared grade in accordance with 105.03.

MATERIALS

301.02 Materials

Materials shall be in accordance with the following:

Coarse Aggregate, Class D or Higher	904.03
Geosynthetic Materials.....	918

~~ACBF shall not be used for subgrade treatment Type ID, Type IV, and Type IVA. Recycled concrete pavement processed into coarse aggregate-sized material, No. 53, and ACBF, shall not be used when an underdrain is specified.~~

CONSTRUCTION REQUIREMENTS

301.03 Preparation of Subgrade

Subgrade shall be prepared *and proofrolled* in accordance with 207.04. *When shown on the plans, geosynthetics shall be placed over the prepared subgrade in accordance with 214.03, or as directed.* Proofrolling will not be required in trench sections and other areas where proofrolling equipment cannot be used.

301.04 Temperature Limitations

Aggregate shall not be placed when the air temperature is less than 35 °F. ~~Aggregate shall not be placed on a frozen subgrade.~~ Frozen aggregate shall not be placed. *Aggregate shall not be placed on frozen subgrade, subbase, or aggregate base.*

301.05 Spreading

The moisture content of the aggregate shall be between 4% and ~~the optimum moisture content when the aggregate is delivered to the project~~ 7%. *If necessary, the Contractor shall adjust the water content to meet this moisture the compaction requirement. Unless otherwise directed, water shall not be added to the aggregate on the grade.*

Aggregate shall be spread in uniform lifts with a spreading and leveling device approved by the Engineer. The spreading and leveling device shall be capable of placing

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 301 – AGGREGATE BASE

aggregate to the depth, width, and slope specified. *The material shall be placed with self-propelled spreading equipment, such as a spreader box or paver, capable of placing the material true to line and grade. The material shall be spread such that it minimizes segregation and requires minimal blading or manipulation.* The compacted depth of each lift shall be ~~a minimum of 3 in. and~~ a maximum of 6 in.

Aggregate shall be *transported*, handled, and ~~transported~~ compacted to minimize segregation and the loss of moisture. ~~In areas inaccessible to mechanical equipment, each lift shall be 3 in. and an approved hand spreading method may be used.~~ *Aggregate shall be spread in uniform lifts with a spreading and leveling device as approved by the Engineer.*

The Contractor may use hand-placing methods, dozers, or graders in small areas, areas of subgrade construction, or where self-propelled spreading equipment is impractical. Small areas include lane widths less than 12 ft or lengths less than 1,000 ft. In small areas, or areas inaccessible to self-propelled spreading equipment, each lift shall be a maximum of 4 in.

The material shall be placed in two or more approximately equal lifts when the specified compacted thickness exceeds the maximum allowed.

301.06 Compacting

Each lift shall be compacted immediately after spreading. Dense graded aggregate shall be compacted to achieve the allowable average deflection as determined with LWD testing in accordance with 203.24(b).

The allowable average deflection *and the maximum deflection* for aggregate over the chemically modified soils, ~~and~~ untreated soils, *and cement stabilized subgrade soils* shall be in accordance with the Tables shown in 203.24(b) ~~and 219.12, respectively.~~ *The test section shall be constructed in accordance with ITM 514 for other materials not included in the table shown in 203.24(b).*

As an alternate *to LWD*, aggregates shall be compacted to a minimum of 100% of the maximum dry densities in accordance with AASHTO T 99. In situ density will be determined in accordance with 203.24(b). Aggregate shall meet the compaction requirements at the time subsequent courses are placed. ~~Stiffness and density methods will not be used in the same project.~~

~~Coarse graded aggregates shall be compacted in accordance with 203.25.~~

In areas inaccessible to compaction equipment, such as private drives and mailbox approaches, the compaction requirements may be accepted by visual inspection.

All displacement or rutting of the aggregate shall be repaired prior to placing subsequent material.

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 301 – AGGREGATE BASE

301.07 Checking and Correcting Base

The top of each aggregate course shall be checked transversely to the cross section and all deviations in excess of 1/2 in. shall be corrected. If additional aggregate is required, the course shall be remixed and re-compacted.

301.08 Priming

~~A prime coat, when required, shall be in accordance with 405.~~

301.0908 Method of Measurement

Compacted aggregate base will be measured by the cubic yard based on the theoretical volume to the neat line as shown on the plans. ~~Geotextiles~~ *Geosynthetics* will be measured in accordance with ~~616.12214.05~~.

301.1009 Basis of Payment

The accepted quantities of compacted aggregate base will be paid for at the contract unit price per cubic yard, complete in place. ~~Geotextiles~~ *Geosynthetics* will be paid for in accordance with ~~616.13214.06~~.

Payment will be made under:

Pay Item	Pay Unit Symbol
Compacted Aggregate, No. 2.....	CYS
Compacted Aggregate, No. 5.....	CYS
Compacted Aggregate, No. 8.....	CYS
Compacted Aggregate, No. 53.....	CYS

The cost of placing, *spreading*, compacting, water, aggregate placed outside neat lines as shown on the plans, and necessary incidentals shall be included in the cost of the pay item.

Payment will not be made for material placed outside of a 1:1 slope from the planned typical section.

Replacement of pavement damaged by the Contractor's operations shall be at no additional payment.

COMMENTS AND ACTION

SECTION 301 – AGGREGATE BASE

DISCUSSION:

Mr. Reilman introduced and presented this item, assisted by Mr. Siddiki, explaining that the obsolete subgrade treatment types ID, IV, and IVA, were specified in 301, and additional details are needed for aggregate subgrade compaction and construction. Priming is no longer used on Department contracts. The aggregate moisture content up to optimal moisture content is not necessary.

Mr. Reilman proposed to delete the obsolete subgrade treatment types ID, IV, and IVA. Additional details for aggregate compaction and construction were provided, including proofrolling requirements of aggregate subgrade, use of geosynthetics, spreading, and leveling devices. The priming section, 301.08, has been deleted. The aggregate moisture requirement for compaction was revised from "between 4% and optimal moisture content" to "between 4% and 7%".

Following a brief discussion with Mr. Yoon, Mr. Koch, and Ms. Mouser, Mr. Reilman agreed to remove the stiffness and density language from 301.06, as shown. Further revisions were incorporated pursuant to discussions between Mr. Yoon, Mr. Reilman, Mr. Cosenza, Mr. Osborn (ICI), and Ms. Mouser.

Mr. Reilman revised his motion. There was no further discussion and this item passed as revised.

Mr. Siddiki and Mr. Reilman agreed to extend the effective date of the RSP to June 2025, as recommended by Mr. Osborn.

<p>Motion: Mr. Reilman Second: Mr. ? Ayes: 10 Nays: 0 FHWA Approval: YES</p>	<p>Action: <input type="checkbox"/> Passed as Submitted <input checked="" type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn</p>
<p>2024 Standard Specifications Sections: 301 pg. 263 through pg. 265.</p>	<p><input checked="" type="checkbox"/> 2026 Standard Specifications <input type="checkbox"/> Revise Pay Items List <input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP</p>
<p>Recurring Special Provisions or Plan Details: 207-R-781 SUBGRADE TREATMENT 214-R-784 GEOSYNTHETICS (to change references in 2026 SS: 301.09 and 301.10)</p>	<p><input checked="" type="checkbox"/> Create RSP (No. <u>301-R-xxx</u>) Effective: <u>June 1, 2025</u></p>
<p>Standard Drawing affected: NONE</p>	<p><input checked="" type="checkbox"/> Revise RSP (No. <u>207-R-781</u>) Effective: <u>June 1, 2025</u></p>
<p>Design Manual Chapter: NONE</p>	<p><input type="checkbox"/> Standard Drawing Effective:</p>
<p>GIFE Section: NONE</p>	<p><input type="checkbox"/> Create RPD (No. <u> </u>) Effective:</p>
	<p><input type="checkbox"/> GIFE Update <input checked="" type="checkbox"/> Frequency Manual Update <input checked="" type="checkbox"/> SiteManager Update</p>

PROPOSAL TO STANDARDS COMMITTEE

PROBLEMS(S) ENCOUNTERED:

Recycled Concrete Aggregate is not currently allowed in aggregate pavement and shoulder and additional details are needed for aggregate pavement and shoulder compaction and construction.

PROPOSED SOLUTION: Allow Recycled Concrete Aggregate to be incorporated into projects. Provide additional details for aggregate compaction and construction, including proofrolling, Add LWD deflection requirements, and address compaction equipment in the inaccessible areas.

APPLICABLE STANDARD SPECIFICATIONS: 303

APPLICABLE STANDARD DRAWINGS: NA

APPLICABLE DESIGN MANUAL SECTION: NA

APPLICABLE SECTION OF GIFE: NA

APPLICABLE RECURRING SPECIAL PROVISIONS: NA

PAY ITEMS AFFECTED: No

APPLICABLE SUB-COMMITTEE ENDORSEMENT: ICA, Subcontractors, Area Engineers, Material Engineers and Geotechnical Engineers.

IMPACT ANALYSIS (attach report): NA

Submitted by: Jim Reilman for Nayyar Siddiki

Title: State Materials Engineer

Organization: INDOT

Phone Number: 317-522 9692

Date: 8/1/2024

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Approved Materials List? No

Will this proposal improve:

Construction costs: NA
Construction time: Yes
Customer satisfaction? NA
Congestion/travel time? NA
Ride quality? NA

Will this proposal reduce operational costs or maintenance effort? NA

Will this item improve safety:

For motorists? NA
For construction workers? NA

Will this proposal reduce operational costs or maintenance effort? NA

Will this item improve safety:

For motorists? NA
For construction workers? NA

Will this proposal improve quality for:

Construction procedures/processes? Yes
Asset preservation? NA
Design process? NA

Will this change provide the contractor more flexibility? NA

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? NA

Is this proposal needed for compliance with:

Federal or State regulations: No
AASHTO or other design code: No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: _____

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 303 – AGGREGATE PAVEMENTS OR SHOULDERS

The Standard Specifications are revised as follows:

SECTION 303, BEGIN LINE 1, DELETE AND INSERT AS FOLLOWS:

SECTION 303 – AGGREGATE PAVEMENTS OR SHOULDERS

303.01 Description

This work shall consist of placing a dense-graded compacted aggregate on prepared subgrade in accordance with 105.03.

MATERIALS

303.02 Materials

Materials shall be in accordance with the following:

Coarse Aggregate, Class D or Higher, Size No. 53	904
Coarse Aggregate, Class D or Higher, Size No. 73*	904
* Surface courses only, when specified.	

CONSTRUCTION REQUIREMENTS

303.03 Preparation of Subgrade

Subgrade shall be prepared *and proofrolled* in accordance with 207.04. *When shown on the plans, geosynthetics shall be placed in accordance with 214.03, or as directed. Proofrolling shall be performed in accordance 203.26.* Proofrolling will not be required in trench sections and other areas where proofrolling equipment cannot be used.

303.04 Temperature Limitations

Aggregate shall not be placed when the air temperature is less than 35°F. Aggregate shall not be placed on a frozen subgrade. Frozen aggregate shall not be placed.

303.05 Spreading

Aggregate shall be spread in uniform lifts with a spreading and leveling device approved by the Engineer. The spreading and leveling device shall be capable of placing aggregate to the depth, width, and slope specified. The compacted depth of each lift shall be a minimum of 3 in. and a maximum of 6 in., except where utilized as a shoulder. The compacted depth of a lift for a shoulder shall be a minimum of 3 in. and a maximum of 9 in.

Aggregate shall be handled and transported to minimize segregation and the loss of moisture. In areas inaccessible to mechanical equipment, approved hand spreading methods may be used.

The moisture content of the aggregate shall be between 4% and ~~the optimum~~ ~~moisture content when the aggregate is delivered to the project~~ 7%. *If necessary, the*

REVISION TO THE 2024 STANDARD SPECIFICATIONS
SECTION 303 – AGGREGATE PAVEMENTS OR SHOULDERS

Contractor shall adjust the water content to meet ~~this moisture~~ the compaction requirement. Water shall not be added to the aggregate on the grade.

303.06 Compacting

Compaction shall be in accordance with 301.06.

The allowable average deflection and the maximum deflection for the aggregate over the chemically modified soils and untreated soils, shall be in accordance with the Tables shown in 203.24(b). The test section shall be constructed in accordance with ITM 514 for other materials not included in the table shown in 203.24(b). All displacement or rutting of the compacted aggregate shall be repaired prior to placing subsequent material.

In the areas inaccessible to compaction equipment, such as private drives, compaction requirements may be accepted by visual inspection.

303.07 Checking and Correcting Base and Surface

The top of each aggregate course shall be checked transversely and all deviations in excess of 1/2 in. shall be corrected. If additional aggregate is required, the course shall be remixed and re-compacted.

303.08 Dust Palliative

A dust palliative, if required, shall be in accordance with 407.

303.09 Method of Measurement

Compacted aggregate will be measured by the ton in accordance with 109.01(b) for the type specified. *Geosynthetics will be measured in accordance with 214.05.*

303.10 Basis of Payment

The accepted quantities of compacted aggregate will be paid for at the contract unit price per ton, for the type specified, complete in place. *Geosynthetics will be paid for in accordance with 214.06.*

Payment will be made under:

Pay Item	Pay Unit Symbol
Compacted Aggregate, No. 53	TON
Compacted Aggregate, No. 73	TON

The cost of placing, *spreading*, compacting, water, and necessary incidentals shall be included in the costs of the compacted aggregate.

Payment will not be made for material placed outside of a 1:1 slope from the planned typical section.

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 303 – AGGREGATE PAVEMENTS OR SHOULDERS

Replacement or repair of pavement or shoulders damaged by the Contractor's operations shall be at no additional payment.

APPROVED MINUTES

COMMENTS AND ACTION

SECTION 303 – AGGREGATE PAVEMENTS OR SHOULDERS

DISCUSSION:

This item was introduced and presented by Mr. Reilman, assisted by Mr. Siddiki, who explained that Recycled Concrete Aggregate No. 53 may be used in aggregate pavement and shoulder, and it was determined that further details were needed for aggregate pavement and shoulder compaction and construction.

Mr. Reilman proposed to add language that allows Recycled Concrete Aggregate No. 53 when specified. Further details in aggregate compaction and construction have been added, including proofrolling, along with LWD deflection requirements, and compaction equipment in the inaccessible areas.

Following a brief discussion with Mr. Yoon and Ms. Mouser, Mr. Reilman agreed to remove the proofrolling language from 303.03, as shown, since it is already covered in 207.04. Further revisions were incorporated pursuant to discussion between Mr. Yoon, Mr. Reilman, Mr. Cosenza, Mr. Osborn (ICI), and Ms. Mouser.

Mr. Reilman revised his motion. There was no further discussion and this item passed as revised.

<p>Motion: Mr. Reilman Second: Mr. ? Ayes: 10 Nays: 0 FHWA Approval: YES</p>	<p>Action: <input type="checkbox"/> Passed as Submitted <input checked="" type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn</p>
<p>2024 Standard Specifications Sections: 303 pg. 267 through pg. 269.</p>	<p><input checked="" type="checkbox"/> 2026 Standard Specifications <input type="checkbox"/> Revise Pay Items List <input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP</p>
<p>Recurring Special Provisions or Plan Details: NONE</p>	<p><input checked="" type="checkbox"/> Create RSP (No. <u>303-R-xxx</u>) Effective: <u>June 1, 2025</u></p>
<p>Standard Drawing affected: NONE</p>	<p><input type="checkbox"/> Revise RSP (No. <u> </u>) Effective:</p>
<p>Design Manual Chapter: NONE</p>	<p><input type="checkbox"/> Standard Drawing Effective:</p>
<p>GIFE Section: NONE</p>	<p><input type="checkbox"/> Create RPD (No. <u> </u>) Effective:</p>
	<p><input type="checkbox"/> GIFE Update <input checked="" type="checkbox"/> Frequency Manual Update <input checked="" type="checkbox"/> SiteManager Update</p>

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS

REVISION TO THE 2024 STANDARD SPECIFICATIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: A previous revision to 203.18 in October 2023 clarified the use of recycled concrete pavement by requiring it to be processed into coarse aggregate-sized material. INDOT Geotechnical Engineering desired additional clarification for use of recycled concrete in embankment.

PROPOSED SOLUTION: Clarify where and what size the recycled concrete pavement must be for use in embankments.

APPLICABLE STANDARD SPECIFICATIONS: none

APPLICABLE STANDARD DRAWINGS: none

APPLICABLE DESIGN MANUAL SECTION: none

APPLICABLE SECTION OF GIFE: none

APPLICABLE RECURRING SPECIAL PROVISIONS: RSP 203-R-786

PAY ITEMS AFFECTED: none

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad hoc: Nayyar Siddiki, Sean Yoon

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: same as existing RSP 203-R-786

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman

Title: State Materials Engineer

Organization: INDOT

Phone Number: (317) 522-9692

Date: 8/1/24

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS

REVISION TO THE 2024 STANDARD SPECIFICATIONS

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Approved Materials List? N/A

Will this proposal improve:

Construction costs? Yes

Construction time? Yes

Customer satisfaction? N/A

Congestion/travel time? N/A

Ride quality? N/A

Will this proposal reduce operational costs or maintenance effort? N/A

Will this item improve safety:

For motorists? N/A

For construction workers? N/A

Will this proposal improve quality for:

Construction procedures/processes? N/A

Asset preservation? N/A

Design process? N/A

Will this change provide the contractor more flexibility? Yes

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? N/A

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda:

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 203 – EXCAVATION AND EMBANKMENT

203.18 Embankment Construction

(Note: previously approved changes are shown highlighted gray and are in RSP [203-R-786](#).
Basis for Use: Required for all contracts with any 203 pay items.)

The Standard Specifications are revised as follows:

SECTION 203, BEGIN LINE 761, DELETE AND INSERT AS FOLLOWS:

203.18 Embankment Construction

Embankment construction shall consist of constructing roadway embankments, including preparation of the areas upon which they are to be placed; the construction of dikes within or outside the right-of-way; the placing and compacting of approved material within roadway areas where unsuitable material has been removed; and the placing and compacting of embankment material in holes, pits, and other depressions within the roadway area. Only approved materials shall be used in the construction of embankment backfill. Recycled concrete pavement *processed into coarse aggregate* shall be from past documented Department projects. RAP shall be the product resulting from the cold milling or crushing of an existing HMA pavement. Rocks, broken concrete, RAP, or other solid materials shall not be placed in embankment areas where piling ~~is and other foundations are~~ to be placed or driven.

~~Recycled concrete pavement *processed into coarse aggregate* shall meet the gradation requirements of B borrow in accordance with 904.06. Construction requirements shall be in accordance with 203.20(a) or 211.03 measuring 12 in. or less in all directions may be incorporated into the embankment. Reinforcement shall not protrude from the recycled concrete pavement aggregate. Construction of embankment shall be in accordance with 203.20(a). Each layer shall be choked ~~thoroughly~~ with broken concrete aggregates and be compacted to the required stiffness or as directed. The final 30 in. of the embankment just below the subgrade shall be composed of material meeting the gradation requirements of coarse aggregate in accordance with 904.01, or B borrow in accordance with 904.06. Construction requirements shall be in accordance with 211.03.~~

Only RAP particles measuring 2 in. or less in all directions shall be incorporated into the top ~~52 ft~~ 30 in. of the embankment. *When an underdrain is specified, the RAP embankment shall be terminated below the bottom of the underdrain and the rest of the embankment shall be constructed with the coarse aggregate.* RAP particles incorporated anywhere in the embankment shall be 5 in. or less. *RAP shall be constructed in accordance with 203.24.*

When two sizes are used for one embankment, materials shall be separated with a layer of geotextile in accordance with 918.02(c), Type 2A. Geotextile used between recycled material lifts shall be included in the cost of the embankment pay item.

Recycled concrete pavement *processed into coarse aggregate* and RAP shall not be mixed together or with other materials. When two or more approved materials are allowed for one embankment, materials shall be separated with a layer of geotextile in

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 203 – EXCAVATION AND EMBANKMENT

203.18 Embankment Construction

accordance with 918.02(c), Type 2A. Geotextile used between recycled material lifts shall be included in the cost of the embankment pay item.

Recycled concrete pavement *processed into coarse aggregate* or RAP shall only be used below the elevation of the pavement underdrains. Compacted lift thickness for RAP shall not be greater than 6 in. within the top ~~52 ft~~ *30 in.* of the embankment. Where the depth of the embankment exceeds 5 ft, the compacted lift thickness for RAP shall not be greater than 12 in. Recycled concrete pavement ~~*processed into coarse aggregate*~~ and RAP shall not be used within 2 ft of the water table.

~~Recycled concrete pavement *processed into coarse aggregate* shall be constructed in accordance with 203.20. RAP shall be constructed in accordance with 203.23 or 203.24. Proofrolling in accordance with 203.26 shall be performed to cover the entire grade for every at a maximum thickness of 5 ft of fill recycled concrete or RAP.~~

A geotextile in accordance with 918.02(c), Type 2B shall be placed in accordance with 214 prior to the placement of subgrade treatment Type IC, ~~or Type II, or Type IV~~ in accordance with 207 when recycled concrete pavement *processed into coarse aggregate* or RAP is used for embankment construction. Recycled concrete pavement *processed into coarse aggregate* or RAP shall not be used for embankment construction when subgrade Type I, Type IBC, or Type IBL is specified. Geotextile shall be placed completely covering the top of the embankment. A minimum 24 in. soil encasement shall be constructed concurrently with the recycled concrete pavement *processed into coarse aggregate* or RAP lift. The soil encasement shall be suitable for vegetation growth and shall be constructed in accordance with 203.09.

COMMENTS AND ACTION

203.18 Embankment Construction

DISCUSSION:

This item was introduced and presented by Mr. Reilman, assisted by Mr. Siddiki, who explained that a previous revision to 203.18 in October 2023 clarified the use of recycled concrete pavement by requiring it to be processed into coarse aggregate-sized material. The Department’s Geotechnical Engineering Division desired additional clarification for use of recycled concrete in embankments.

Mr. Reilman proposed to clarify where and what size the recycled concrete pavement shall be for use in embankments. Mr. Jacobs suggested removing the word “thoroughly”, which everyone agreed to, since it is a subject word.

Mr. Reilman revised his motion which was seconded by Mr. Dave. There was no further discussion and this item passed as revised.

<p>Motion: Mr. Reilman Second: Mr. Bruno Ayes: 10 Nays: 0 FHWA Approval: YES</p>	<p>Action: <input type="checkbox"/> Passed as Submitted <input checked="" type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn</p>
<p>2024 Standard Specifications Sections: 203.18 pg. 168-169</p> <p>Recurring Special Provisions or Plan Details: 203-R-786 Excavation and Embankment</p> <p>Standard Drawing affected: NONE</p> <p>Design Manual Chapter: NONE</p> <p>GIFE Section: NONE</p>	<p><input checked="" type="checkbox"/> 2026 Standard Specifications <input type="checkbox"/> Revise Pay Items List <input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP</p> <p><input type="checkbox"/> Create RSP (No. __) Effective:</p> <p><input checked="" type="checkbox"/> Revise RSP (No. <u>203-R-786</u>) Effective: <u>March 1, 2025</u></p> <p><input type="checkbox"/> Standard Drawing Effective:</p> <p><input type="checkbox"/> Create RPD (No. __) Effective:</p> <p><input type="checkbox"/> GIFE Update <input checked="" type="checkbox"/> Frequency Manual Update <input checked="" type="checkbox"/> SiteManager Update</p>

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Specification currently do not allow welding of reinforcing bars. Fabrication of certain precast concrete elements would benefit from using reinforcing cages that are welded instead of tied.

PROPOSED SOLUTION: Incorporate proposed changes to allow ASTM A706 weldable grade rebar to be used in addition to A615 rebar. Also where allowed in the specifications, if weldable grade rebar is used, allow it to be welded.

APPLICABLE STANDARD SPECIFICATIONS: 703, 707, 910

APPLICABLE STANDARD DRAWINGS: None

APPLICABLE DESIGN MANUAL SECTION: None

APPLICABLE SECTION OF GIFE:

APPLICABLE RECURRING SPECIAL PROVISIONS: create new 703 RSP

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad hoc: Jim Reilman, Pete White

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE:
Required for all contracts, except mowing, herbicide, sweeping, light bulb replacement, or tree removal/trimming.

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman

Title: State Materials Engineer

Organization: INDOT

Phone Number: (317) 522-9692

Date: 7/18/24

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Approved Materials List? Yes

Will this proposal improve:

Construction costs? Yes

Construction time? N/A

Customer satisfaction? N/A

Congestion/travel time? N/A

Ride quality? N/A

Will this proposal reduce operational costs or maintenance effort? N/A

Will this item improve safety:

For motorists? N/A

For construction workers? N/A

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? N/A

Design process? N/A

Will this change provide the contractor more flexibility? Yes

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? N/A

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda:

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 703 - REINFORCING BARS

703.06 Placing and Fastening

SECTION 707 – PRECAST CONCRETE AND PRECAST PRESTRESSED CONCRETE STRUCTURAL MEMBERS

707.04 Steel and Concrete Requirements

SECTION 910 METAL MATERIALS

910.01 Reinforcing Bars, Dowel Bars and WWR

The Standard Specifications are revised as follows:

SECTION 703, BEGIN LINE 52, INSERT AS FOLLOWS:

703.06 Placing and Fastening

(a) General Requirements

Reinforcing bars shall not be ordered for piers or bents to be founded on soil or rock until the foundation conditions have been investigated. The bottom elevations of such footings will then be determined. Written permission will then be given to order such reinforcing bars. Sufficient excavation and all necessary soundings shall be made as directed so that exact bottom elevations of footings may be determined.

All dimensions shown on the plans for spacing of reinforcing bars apply to centers of bars unless otherwise noted. All bars shall be accurately placed and, during placing of the concrete, held firmly in the position as shown on the plans. Distances from the forms shall be maintained by means of chairs, ties, hangers, or other approved support devices. All reinforcing bars shall be wired rigidly or fastened securely at sufficient intervals to hold the bars in place. *Welding of reinforcing bars shall not be performed except as noted in 703.06(c).* Epoxy coated reinforcing bars shall be tied with epoxy coated or plastic coated tie wire. ~~Chairs and supports holding upper layers of reinforcing bars shall support the transverse bars.~~ The upper layer and lower layer of reinforcing bars in RCBA's and bridge floors shall be tied or fastened at a minimum of every other intersection of the longitudinal and transverse bars to prevent an upward or a lateral movement of a bar from the planned position.

Layers of reinforcing bars shall be separated by ~~spacers~~ *support devices in accordance with 910.01(b)11 or epoxy coated reinforcing bars. Epoxy coated reinforcing bars used to separate and support layers of reinforcing bars shall be shop bent to the dimensions required to secure the layers of reinforcing bars in the positions shown on the plans. The size and spacing of support devices or epoxy coated reinforcing bars used as supports shall be such that the plan reinforcing bars are not displaced by the weight of the concrete, upper layers of reinforcing bars, or construction loads, but and in no case shall the spacing exceed 4 ft in any direction.* Reinforcing bars shall be separated from horizontal surfaces by being suspended or supported on approved ~~chairs and spacers~~ *support devices* capable of supporting the designed loads. Supports and spacers shall be of such shape as to be easily encased in concrete. That portion which is in contact with the forms shall be non-corrosive and non-staining material. They shall be of an approved type. ~~Vertical stirrups shall always pass around main tension members and shall be securely attached thereto.~~ The use of pebbles, pieces of broken stone or bricks, metal pipe, wooden blocks, and similar devices for holding bars in position will not be allowed.

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 703 - REINFORCING BARS

703.06 Placing and Fastening

SECTION 707 – PRECAST CONCRETE AND PRECAST PRESTRESSED CONCRETE STRUCTURAL MEMBERS

707.04 Steel and Concrete Requirements

SECTION 910 METAL MATERIALS

910.01 Reinforcing Bars, Dowel Bars and WWR

SECTION 703, BEGIN LINE 81, DELETE AND INSERT AS FOLLOWS:

After being placed, reinforcing bars will be inspected and approved before the concrete is deposited. The positions of the reinforcing bars shall not be disturbed both during and after depositing the concrete. All concrete placed in violation of this requirement may be rejected and its removal will be required. Where reinforcing bars project from construction joints, all mortar clinging to the reinforcing bars from previous pours shall be removed before the next enveloping pour is made.

(b) Splicing and Lapping

1. Reinforcing Bars

All reinforcing bars shall be furnished in the full lengths shown on the plans unless splices are indicated. No other splicing will be allowed except with written permission. Unless otherwise shown on the plans, reinforcing bars shall be lapped 32 diameters to make a splice. Construction joints shall not be made within the limits of lapped bars. For lapped splices, reinforcing bars shall be placed in contact and rigidly clamped or wired in an approved manner. Insofar as possible, splices shall be staggered and well distributed or located at points of low tensile stress. Splices will not be allowed at points where the section does not provide a distance of at least 2 in. between the splice and the nearest adjacent bar or surface of the concrete.

When splicing is indicated or allowed, an appropriate splice system on the QPL of Reinforcing Bar Splicing Systems may be used in lieu of lapped bars. The splicing system shall be installed in accordance with the manufacturer's recommendations. If an offset splicing system is selected, it shall only be used on spiral, hoop, or ring-type reinforcement.

~~WWR, when required, shall be placed as shown on the plans or as otherwise directed. The sheets shall overlap sufficiently to maintain uniform strength and shall be securely fastened at lapped ends and edges. The laps shall be no less than one mesh in width.~~

2. Spiral Reinforcement

Spiral reinforcement, consisting of evenly spaced continuous spirals, shall be held firmly in place by attachment to vertical reinforcement. The spirals shall be held true to line by vertical spacers. Anchorage for spiral reinforcement shall be provided with 1 1/2 extra turns of the spiral rod or wire at each end of the spiral unit. Splices in spiral rods or wire shall be made with a lap of 1 1/2 turns.

3. Threaded Tie Bar Assemblies

Threaded tie bar assemblies may be used in lieu of spliced reinforcing bars shown on the plans. Threaded tie bar assemblies shall achieve the minimum strength in accordance with 910.01(b)2. The Contractor shall coat any exposed part of threaded bar assemblies in

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 703 - REINFORCING BARS

703.06 Placing and Fastening

SECTION 707 – PRECAST CONCRETE AND PRECAST PRESTRESSED CONCRETE STRUCTURAL MEMBERS

707.04 Steel and Concrete Requirements

SECTION 910 METAL MATERIALS

910.01 Reinforcing Bars, Dowel Bars and WWR

accordance with 910.01(b)2.

(c) Welding Reinforcing Bars in Precast and Precast Prestressed Concrete Structural Members

In lieu of tying or using WWR in accordance with 737, reinforcing bars used in precast and precast prestressed concrete structural members may be welded in accordance with the following:

1. *Reinforcing bars that are welded shall be in accordance with 910.01(b)1.*
2. *All welding procedures and welders shall be qualified to AWS D1.4. All welds shall be QC inspected by an AWS Certified Welding Inspector or at a minimum approved by an AWS Certified Welding Inspector. Welds shall have a satisfactory appearance. Notching, or undercutting of the reinforcing bars, or bars with a loss of cross-section resulting from welding will be cause for rejection of the damaged bars and the bars shall be replaced as directed.*
3. *Welding shall only be ~~done~~ performed at intersections of reinforcing bars. Reinforcing bars shall not be spliced by welding.*
4. *Sheets of reinforcing bars created by welding the intersections of reinforcing bars together shall be made continuous by providing lap splices in accordance with AASHTO LRFD Bridge Design Specifications and 703.06.*
5. *Epoxy-coated reinforcing bars that are to be welded shall have the epoxy coating removed in the vicinity of the weld. Once the welded area has cooled below 90°F (32°C) and before visible oxidation appears, the weld and surrounding bare metal shall be cleaned and recoated in accordance with 910.01(b)9.*

SECTION 703, BEGIN LINE 157, DELETE AND INSERT AS FOLLOWS:

The cost of ~~metal chairs~~ *support devices or epoxy coated reinforcing bars used as supports*, spacers, clips, wire, or other mechanical means used for fastening or holding reinforcement in place, and laps shall be included in the cost of reinforcing bars. The cost of coating materials and repair of damaged or removed coating materials on reinforcing bars and on metal chairs, spacers, clips, or other mechanical means used for fastening or holding reinforcement in place, and laps shall be included in the cost of epoxy coated reinforcing bars. If threaded tie bar assemblies are used in lieu of spliced reinforcing bars as shown on the plans, the cost of such assemblies shall be included in the cost of

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 703 - REINFORCING BARS

703.06 Placing and Fastening

SECTION 707 – PRECAST CONCRETE AND PRECAST PRESTRESSED CONCRETE STRUCTURAL MEMBERS

707.04 Steel and Concrete Requirements

SECTION 910 METAL MATERIALS

910.01 Reinforcing Bars, Dowel Bars and WWR

reinforcing bars.

If WWR is required, the cost of furnishing and placing shall be included in the cost of the concrete in which it is placed.

SECTION 707, BEGIN LINE 84, INSERT AS FOLLOWS:

707.04 Steel and Concrete Requirements

(a) Reinforcing Bars

A tight coat of concrete grout extending 1/2 in. maximum from the top of precast concrete and precast prestressed concrete structural members will be allowed to remain on reinforcing bars extending from precast concrete and precast prestressed concrete structural members. All loose and flaky material on these reinforcing bars shall be removed. Lap splices shall be in accordance with 703.06. *In lieu of tying or using WWR in accordance with 737, reinforcing bars used in precast or precast prestressed concrete structural members may be welded in accordance with 703.06(c).*

SECTION 707, BEGIN LINE 558, INSERT AS FOLLOWS:

Reinforcing bars, WWR, prestressing strands, elastomeric bearing pads, modifications to bearing pads, bearing beams required for box beams, bearing assemblies required for I-beams, bulb-T beams, U-beams, box beams, bearing plates, threaded reinforcing bars, threaded inserts in fascia beams, hex bolts, sealer on the outside face and bottom flange of fascia beams and on the tops of all beams, working drawings and design calculations, and necessary incidentals shall be included in the cost of the pay items of this section.

All costs associated with welding weldable reinforcing bars, including but not limited to welding consumables, qualifying procedures and welders to AWS D1.4, other AWS D1.4 documents, QC inspection and approval by an AWS certified welding inspector, and all other items incidental to this work shall be included in the cost of the pay items of this section.

The cost of tensioning rods and steel plates shall be included in the cost of the pay items of this section.

SECTION 910, BEGIN LINE 22, INSERT AS FOLLOWS:

(b) Specific Requirements

1. Billet Steel Bars

Billet steel bars shall be in accordance with ASTM A615 or ASTM A706.

When the specifications allow for welding of bars and the Contractor chooses to

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 703 - REINFORCING BARS

703.06 Placing and Fastening

SECTION 707 – PRECAST CONCRETE AND PRECAST PRESTRESSED CONCRETE STRUCTURAL MEMBERS

707.04 Steel and Concrete Requirements

SECTION 910 METAL MATERIALS

910.01 Reinforcing Bars, Dowel Bars and WWR

weld, only bars produced to meet the requirements of ASTM A706 and marked with a W or bars produced to meet the requirements of ASTM A706 and marked with both an S and W shall be welded. Bars marked only with an S shall not be welded.

SECTION 910, BEGIN LINE 93, INSERT AS FOLLOWS:

8. Steel Spiral Reinforcement

Steel spiral reinforcement shall be either:

- a. deformed billet steel, ASTM A615 *or* ASTM A706, grade 60, or
- b. cold drawn steel wire, ASTM A1064.

SECTION 910, BEGIN LINE 135, INSERT AS FOLLOWS:

10. Dowel Bars

Dowel bars shall be plain billet steel in accordance with ASTM A615; grade 40 or higher, *or* ASTM A706 grade 60 or higher, except that the bend test and elongation requirements will not apply. The dowel bar area and weight for the nominal bar diameter shall be as follows:

COMMENTS AND ACTION

703.06 Placing and Fastening
 707.04 Steel and Concrete Requirements
 910.01 Reinforcing Bars, Dowel Bars and WWR

DISCUSSION:

Mr. Reilman introduced and presented this item explaining that the Standard Specifications currently do not allow welding of reinforcing bars. Fabrication of certain precast concrete elements would benefit from using reinforcing cages that are welded instead of tied.

Mr. Reilman withdrew this item pending further review.

<p>Motion: Second: Ayes: Nays: FHWA Approval:</p>	<p>Action: <input type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input checked="" type="checkbox"/> Withdrawn</p>
<p>2024 Standard Specifications Sections: 703.06 pg. 650; 707.04 pg. 665; 910.01 pg. 1051. Recurring Special Provisions or Plan Details: NONE Standard Drawing affected: NONE Design Manual Chapter: NONE GIFE Section: NONE</p>	<p><input type="checkbox"/> 2026 Standard Specifications <input type="checkbox"/> Revise Pay Items List <input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP <input type="checkbox"/> Create RSP (No. __) Effective: <input type="checkbox"/> Revise RSP (No. __) Effective: <input type="checkbox"/> Standard Drawing Effective: <input type="checkbox"/> Create RPD (No. __) Effective: <input type="checkbox"/> GIFE Update <input type="checkbox"/> Frequency Manual Update <input type="checkbox"/> SiteManager Update</p>

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Section 702.28 of the *Standard Specifications* currently indicates that the cost of polychloroprene sheeting and high density bearing strips, which are used in semi-integral end bent construction, shall be included in the cost of concrete A, substructure. However, when existing end bents are converted to semi-integral the type of concrete that is most often used is class C, and class A might not be included in the contract. Roofing felt is also often used in semi-integral end bent conversions, but isn't currently included in the list of incidental items.

PROPOSED SOLUTION: Revise 702.28 to indicate that the cost of polychloroprene sheeting, high density bearing strips, and roofing felt shall be included in the cost of other items in that section.

APPLICABLE STANDARD SPECIFICATIONS: 702.28

APPLICABLE STANDARD DRAWING: N/A

APPLICABLE DESIGN MANUAL CHAPTER: 17 and 409 (no changes required)

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: N/A

PAY ITEMS AFFECTED: N/A

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad hoc committee including Jim Reilman, Mike Koch, and Stephanie Wagner.

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: All contracts that include 702 pay items.

IMPACT ANALYSIS (attach report):

Submitted By: Pete White

Title: Design Manager

Division: INDOT Bridge Engineering

E-mail: pewwhite@indot.in.gov

Date: July 17, 2024

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Qualified Products List (QPL)? No

Will this proposal improve:

Construction costs? No

Construction time? No

Customer satisfaction? No

Congestion/travel time? No

Ride quality? No

Will this proposal reduce operational costs or maintenance effort? No

Will this item improve safety:

For motorists? No

For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? No

Design process? No

Will this change provide the contractor more flexibility? No

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? Yes

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda:

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 702 – STRUCTURAL CONCRETE

702.28 Basis of Payment

The Standard Specifications are revised as follows:

SECTION 702, BEGIN LINE 1384, INSERT AS FOLLOWS:

The cost of forms, PVC for bridge floor drains, falsework, falsework piling, centering, expansion joints, preformed expansion joint filler, waterproofing, curing, finishing, *roofing felt, polychloroprene sheeting, high density bearing strips*, and necessary incidentals shall be included in the cost of the pay items *within this section*. The cost of placing epoxy resin adhesive on existing concrete surfaces shall be included in the cost of new concrete which abuts the existing concrete. Payment for concrete used in footings in class X excavation will be made at the contract unit price only for the cubic yards placed within the neat lines of the footings as shown on the plans or as revised.

SECTION 702, BEGIN LINE 1410, DELETE AS FOLLOWS:

~~The cost of furnishing and installing polychloroprene sheeting shall be included in the cost of concrete, A, substructure.~~

~~The cost of high density plastic bearing strips shall be included in the cost of concrete, A, substructure.~~

APPROVED MINUTES

COMMENTS AND ACTION

702.28 Basis of Payment

DISCUSSION:

This item was introduced and presented by Mr. White who stated that 702.28 currently indicates that the cost of polychloroprene sheeting and high-density bearing strips, which are used in semi-integral end bent construction, shall be included in the cost of concrete A, substructure. However, when existing end bents are converted to semi-integral, the type of concrete that is most often used is class C, and class A might not be included in the contract. Roofing felt is also often used in semi-integral end bent conversions, but isn't currently included in the list of incidental items.

Mr. White proposed to revise 702.28 to indicate that the cost of polychloroprene sheeting, high density bearing strips, and roofing felt shall be included in the cost of other items in that section.

There was no further discussion and this item passed as submitted.

<p>Motion: Mr. White Second: Mr. Hauser Ayes: 10 Nays: 0 FHWA Approval: YES</p>	<p><u>Action:</u></p> <p><input checked="" type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn</p>
<p>2024 Standard Specifications Sections: 702.28 pg. 649.</p>	<p><input checked="" type="checkbox"/> 2026 Standard Specifications <input type="checkbox"/> Revise Pay Items List <input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP</p>
<p>Recurring Special Provisions or Plan Details: NONE</p>	<p><input type="checkbox"/> Create RSP (No. __) Effective:</p>
<p>Standard Drawing affected: NONE</p>	<p><input type="checkbox"/> Revise RSP (No. __) Effective:</p>
<p>Design Manual Chapter: 17 and 409 (no changes required)</p>	<p><input type="checkbox"/> Standard Drawing Effective:</p>
<p>GIFE Section: NONE</p>	<p><input type="checkbox"/> Create RPD (No. __) Effective:</p>
	<p><input type="checkbox"/> GIFE Update <input type="checkbox"/> Frequency Manual Update <input type="checkbox"/> SiteManager Update</p>

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Section 902 contains a requirement for force ratio for AE-90S. This test is not commonly used anymore and has become outdated with today's availability of material.

PROPOSED SOLUTION: Update the emulsion table to remove the force ratio requirement for AE-90S

APPLICABLE STANDARD SPECIFICATIONS: 902.01

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: N/A

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad Hoc. Asphalt Institute, National Center for Pavement Preservation, poll of emulsion suppliers currently on QPL

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: Not needed, 2026 speck book

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman

Title: State Materials Engineer

Division: Materials and Tests

E-mail: jreilman@indot.in.gov

Date: 7/22/24

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Qualified Products List (QPL)? No

Will this proposal improve:

Construction costs? no

Construction time? no

Customer satisfaction? no

Congestion/travel time? no

Ride quality? no

Will this proposal reduce operational costs or maintenance effort? no

Will this item improve safety:

For motorists? no

For construction workers? no

Will this proposal improve quality for:

Construction procedures/processes? no

Asset preservation? no

Design process? no

Will this change provide the contractor more flexibility? no

Will this proposal provide clarification for the Contractor and field personnel? no

Can this item improve/reduce the number of potential change orders? no

Is this proposal needed for compliance with:

Federal or State regulations? no

AASHTO or other design code? no

Is this item editorial? no

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: Most states have dropped this test (except for maybe two) to help with identifying polymer modification in PG binders. Not many labs run it, there is the Elastic Recovery requirement in the AE-90S spec to aid in determining the presence of polymer.

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 902 - ASPHALT MATERIALS

902.01(b) Asphalt Emulsions

The Standard Specifications are revised as follows:

SECTION 902, BEGIN LINE 69, DELETE AS FOLLOWS:

Characteristics ⁽¹⁾	Test Method	AE-90		AE-90S		AE-NT		AE-F		AE-150		AE-PL	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Test on Emulsion													
Viscosity, Saybolt Furol at 25°C (77°F), s or Viscosity, Rotational Paddle at 25°C (77°F), mPa*s	AASHTO T 59					15 30	100 200		100 200	50 100			115 230
Viscosity, Saybolt Furol at 50°C (122°F), s or Viscosity, Rotational Paddle at 50°C (122°F), mPa*s	AASHTO T 59	50 100		50 100						75 150	300 600		
Demulsibility w/35 mL, 0.02N CaCl ₂ , %	AASHTO T 59			30									
Demulsibility w/50 mL, 0.10N CaCl ₂ , %	AASHTO T 59	75											
Oil Distillate by Distillation, mL/100 g Emulsion ⁽²⁾	AASHTO T 59		4.0		3.0		4.0		4.0		7.0		3.0
Residue by Distillation, %	AASHTO T 59	65		65 ⁽⁴⁾		50		27	35	65		30	
Sieve Test, sample retained, %	AASHTO T 59		0.10		0.10		0.30		0.10		0.10		0.10
Penetrating Ability, mm	902.02(u)												6.0
Stone Coating Test, %	902.02(r)3a	90								90			
Settlement, % (5 days)	AASHTO T 59		5.0				5.0						
Storage Stability, %	AASHTO T 59				1.0								
Tests on Residue													
Penetration (0.1 mm) at 25°C (77°F), 100g, 5 s ⁽³⁾	AASHTO T 49	100	200	90	150		40		90				
Penetration (0.1 mm) at 25°C (77°F), 50g, 5 s ⁽³⁾	AASHTO T 49									100	300		
Ductility at 25°C (77°F), mm	AASHTO T 51	400											
Ash Content, %	AASHTO T 111		1.0		1.0		1.0		1.0		1.0		1.0
Float Test at 60°C (140°F), s ⁽³⁾	AASHTO T 50	1200		1200						1200			
Force Ratio	AASHTO T 300			0.30									
Elongation Recovery, at 4°C (39°F)	AASHTO T 301			58									
Notes: ⁽¹⁾ Broken samples or samples more than 14 days old will not be tested. ⁽²⁾ Oil distillate shall be in accordance with ASTM D396, table 1, grade No. 1. ⁽³⁾ The Engineer may waive the test. ⁽⁴⁾ Maximum temperature to be held for 15 minutes at 350 ±9°F (175 ±5°C).													

COMMENTS AND ACTION

902.01(b) Asphalt Emulsions

DISCUSSION:

Mr. Reilman introduced and presented this item stating that 902 contains a requirement for force ratio for AE-90S. This test is not commonly used anymore and has become outdated with today's availability of material. Mr. Reilman further explained that most states have dropped this test, except for maybe two, to help with identifying polymer modification in PG binders. Not many labs run this test and there is the Elastic Recovery requirement in the AE-90S spec to aid in determining the presence of polymer.

Mr. Reilman proposed to update the emulsion table to remove the force ratio requirement for AE-90S.

<p>Motion: Mr. Reilman Second: Mr. ? Ayes: 10 Nays: 0 FHWA Approval: YES</p>	<p>Action:</p> <p><input checked="" type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn</p>
<p>2024 Standard Specifications Sections: 902.01 pg. 987 - 988.</p> <p>Recurring Special Provisions or Plan Details: NONE</p> <p>Standard Drawing affected: NONE</p> <p>Design Manual Chapter: NONE</p> <p>GIFE Section: NONE</p>	<p><input checked="" type="checkbox"/> 2026 Standard Specifications <input type="checkbox"/> Revise Pay Items List <input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP</p> <p><input type="checkbox"/> Create RSP (No. __) Effective:</p> <p><input type="checkbox"/> Revise RSP (No. __) Effective:</p> <p><input type="checkbox"/> Standard Drawing Effective:</p> <p><input type="checkbox"/> Create RPD (No. __) Effective:</p> <p><input type="checkbox"/> GIFE Update <input type="checkbox"/> Frequency Manual Update <input checked="" type="checkbox"/> SiteManager Update</p>

PROPOSAL TO STANDARDS COMMITTEE

PROBLEMS(S) ENCOUNTERED: It is difficult and costly to take photos of the borehole sidewall for the proof-test holes. It was determined that the cost and time required for sidewall photo do not justify the benefit.

PROPOSED SOLUTION: The requirement of the photos showing the sidewall of the proof-test hole was removed.

APPLICABLE STANDARD SPECIFICATIONS: 206.08

APPLICABLE STANDARD DRAWINGS: NA

APPLICABLE DESIGN MANUAL SECTION: NA

APPLICABLE SECTION OF GIFE: NA

APPLICABLE RECURRING SPECIAL PROVISIONS: NA

PAY ITEMS AFFECTED: No

APPLICABLE SUB-COMMITTEE ENDORSEMENT: ICA, Subcontractors, Area Engineers, and Geotechnical Engineers.

IMPACT ANALYSIS (attach report): NA

Submitted by: Jim Reilman for Nayyar Siddiki

Title: State Materials Engineer

Organization: INDOT

Phone Number: 317-522 9692

Date: 8/1/2024

IMPACT ANALYSIS REPORT CHECKLIST

Explain the business case as to why this item should be presented to the Standards Committee for approval. Answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections? No

Will approval of this item affect the Approved Materials List? No

Will this proposal improve:

Construction costs: Yes
Construction time: Yes
Customer satisfaction? NA
Congestion/travel time? NA
Ride quality? NA

Will this proposal reduce operational costs or maintenance effort? NA

Will this item improve safety:

For motorists? NA
For construction workers? NA

Will this proposal reduce operational costs or maintenance effort? NA

Will this item improve safety:

For motorists? NA
For construction workers? NA

Will this proposal improve quality for:

Construction procedures/processes? Yes
Asset preservation? NA
Design process? NA

Will this change provide the contractor more flexibility? NA

Will this proposal provide clarification for the Contractor and field personnel? Yes

Can this item improve/reduce the number of potential change orders? NA

Is this proposal needed for compliance with:

Federal or State regulations: No
AASHTO or other design code: No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: _____

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 206 – STRUCTURE EXCAVATION
206.08 Preparation of Foundation Surfaces

The Standard Specifications are revised as follows:

SECTION 206.08, BEGIN LINE 142, DELETE AS FOLLOWS:

206.08 Preparation of Foundation Surfaces

Excavation for foundations on rock without piles shall extend a minimum of 2 ft into solid rock. All rock or other hard material, if to be left in place as a foundation surface, shall be freed of loose material, cleaned, and cut to a firm surface. The final surface shall be level, stepped, or serrated as directed. Seams shall be cleaned and filled with concrete, cement mortar, or grout. These conditions shall prevail when the foundation masonry is placed.

Where the masonry is to rest on a foundation surface other than those described above, the approximate bottom of the excavation shall not be disturbed. The final removal of material to the required grade shall be done carefully just prior to placing the foundation masonry. The final surface shall be left smooth and, unless otherwise designated, be level.

Notification shall be given after final excavation of each foundation is completed. No masonry shall be placed until the depth of the excavation and the character of the foundation material have been approved.

Rock at the bottom of spread footings shall be proof-tested. For state-administered contracts, the Department's Geotechnical Engineering Division shall be contacted prior to proof-testing. For local public agency contracts, the Engineer shall be contacted prior to proof-testing. Proof-testing with a small diameter test hole of a minimum 2 in. inside diameter shall be drilled into the foundation base using rotary or percussive drilling methods. Holes shall be drilled into sound rock to a depth of 5 ft or as directed. Three holes shall be drilled into each foundation base. Observations shall be made at each hole as follows:

1. speed of drilling
2. drill pressure
3. dropping or clogging of drill bit
4. loss of drill water, if used
5. probing of the sides of the holes with a right angled chisel point. The chisel shall be formed from a rod of 3/8 or 1/2 in. diameter
6. continuity of bearing material
7. rock quality designation in accordance with ASTM D6032

REVISION TO THE 2024 STANDARD SPECIFICATIONS

SECTION 206 – STRUCTURE EXCAVATION

206.08 Preparation of Foundation Surfaces

8. ~~photos shall be taken of the rock core and the sidewall of the borehole from which core has been extracted.~~

A professional engineer shall supervise the proof testing work. A report for each hole shall be prepared and submitted to the Engineer for review and approval.

APPROVED MINUTES

COMMENTS AND ACTION

206.08 Preparation of Foundation Surfaces

DISCUSSION:

This item was introduced and presented by Mr. Reilman who stated that it is difficult and costly to take photos of the borehole sidewall for the proof-test holes. It was determined that the cost and time required for sidewall photos do not justify the benefit.

Mr. Reilman proposed to remove the requirement of the photos showing the sidewall of the proof-test hole.

There was no further discussion and this item passed as submitted.

<p>Motion: Mr. Reilman Second: Ayes: 10 Nays: 0 FHWA Approval: YES</p>	<p><u>Action:</u> <input checked="" type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn</p>
<p>2024 Standard Specifications Sections: 206.08 pg. 218 -219.</p>	<p><input checked="" type="checkbox"/> 2026 Standard Specifications <input type="checkbox"/> Revise Pay Items List <input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP</p>
<p>Recurring Special Provisions or Plan Details: NONE</p>	<p><input type="checkbox"/> Create RSP (No. __) Effective:</p>
<p>Standard Drawing affected: NONE</p>	<p><input type="checkbox"/> Revise RSP (No. __) Effective:</p>
<p>Design Manual Chapter: NONE</p>	<p><input type="checkbox"/> Standard Drawing Effective:</p>
<p>GIFE Section: NONE</p>	<p><input type="checkbox"/> Create RPD (No. __) Effective:</p>
	<p><input type="checkbox"/> GIFE Update <input type="checkbox"/> Frequency Manual Update <input type="checkbox"/> SiteManager Update</p>