



APPROVED MINUTES

April 15, 2021 Standards Committee Meeting

May 27, 2021

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Minutes from the April 15, 2021 Standards Committee Meeting

The Standards Committee meeting was called to order by Mr. Pankow, Chair, at 09:01 a.m. on April 15, 2021, and was held virtually via *Teams* (Microsoft application). The meeting was adjourned at 09:21 a.m.

The following committee members were in a virtual attendance:

Gregory Pankow, Chairman, Director, Construction Management
John Wooden, Contract Administration Division
Dave Boruff, Traffic Engineering
Mark Orton, Bridge Design Division
Joe Novak, Construction Management
Kumar Dave, Pavement Engineering, Highway Design
Jim Reilman, Materials and Tests Division
Michael Koch, District Construction, Fort Wayne District
Elena Veksler, Highway Design and Technical Support
Kurt Pelz, Construction Technical Support

Also, virtual presence was captured by *Microsoft Teams* of the following:

Susong, John, quest
Leckie, John, quest
Blanchard, Jacob, INDOT
Duncan, Thomas, FHWA
Jelks, Linda, INDOT
Mouser, Elizabeth, INDOT
Ritter, John, INDOT
McNutt, Donald, guest

Trammell, Scott, INDOT
Smart, Steve, guest
Smutzer, Katherine, INDOT
Podorvanova, Lana, INDOT
Osborn, Dan, ICI
Patterson, Patrick, INDOT
Harris, Tom, INDOT
Pfeiffer, Nate, INDOT

Corrice, Zachariah, INDOT

Fisher, Steve, INDOT

The following items were discussed:

A. GENERAL BUSINESS ITEMS

OLD BUSINESS

(No items were listed)

NEW BUSINESS

1. *Approval of the Minutes from the March 18, 2021 meeting*

DISCUSSION: Mr. Pankow requested a motion to approve the Minutes from the March 18, 2021 meeting.

Motion: Mr. Boruff
Second: Mr. Reilman
Ayes: 9
Nays: 0

ACTION: PASSED AS SUBMITTED

B. CONCEPTUAL PROPOSAL ITEMS

OLD BUSINESS

(No items were listed)

NEW BUSINESS

(No items were listed)

C. STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS
PROPOSED ITEMS

OLD BUSINESS

(No items were listed)

NEW BUSINESS

Item No. 1 (2020 SS)

Mr. Reilman

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Recurring Special Provision:
724-B-145

STRUCTURAL EXPANSION JOINT SEALING
SYSTEM (proposed to delete)

ACTION: PASSED AS SUBMITTED

Item No. 2 (2020 SS)

Mr. Reilman

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Standard Specifications:

913.04

Lime

ACTION:

PASSED AS SUBMITTED

cc: Committee Members
FHWA
ICI

APPROVED MINUTES

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS

REVISION TO SPECIAL PROVISIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The Expansion Joint Sealing System (RSP 724-B-145) is no longer being specified by INDOT. It has been replaced by the Pre-compressed foam joint system (RSP 724-B-309).

PROPOSED SOLUTION: remove RSP 724-B-145 from the list of RSPs and obsolete the associated pay item. This product could still be used as a unique provision but will need some updates to the referenced ASTM and AASHTO Standards.

APPLICABLE STANDARD SPECIFICATIONS: None

APPLICABLE STANDARD DRAWINGS: None

APPLICABLE DESIGN MANUAL SECTION:

APPLICABLE SECTION OF GIFE:

APPLICABLE RECURRING SPECIAL PROVISIONS: 724-B-145 (eliminate)

PAY ITEMS AFFECTED: Yes, all pay items contained within 724-B-145

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad Hoc: Adam Post, Jim Reilman, Pete White, District Bridge Asset Engineers

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman

Title: State Materials Engineer

Organization: INDOT

Phone Number: 317-522-9692

Date: 3/12/21

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS
REVISION TO SPECIAL PROVISIONS

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? N/A

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? Yes

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? Yes

Design process? N/A

Will this change provide the contractor more flexibility? N/A

Will this proposal provide clarification for the Contractor and field personnel? N/A

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 SPECIAL PROVISION

724-B-145 STRUCTURAL EXPANSION JOINT SEALING SYSTEM (proposed to delete)

724-B-145 STRUCTURAL EXPANSION JOINT SEALING SYSTEM

(Revised 03-02-15)

Description

This work shall consist of furnishing and placing the joint sealant, and the nosing, if required, in accordance with 105.03.

Materials

The materials for this work shall be supplied by:

Silicone Specialties, Inc.
P.O. Box 50009
Tulsa, OK 74150
www.ssicm.com

Dow Corning Corporation
P.O. Box 994
Midland, MI 48688-0994
www.dowcorning.com

Watson Bowman Acme Corporation
95 Pineview Drive
Amherst, NY 14228
<https://wbacorp.com>

The joint sealant shall be a rapid cure 100% silicone, self-leveling, 2-part formulation, and cold applied. Silicone sealant shall be compatible with the surface to which it is applied.

Sealant shall be delivered to the project site in the manufacturer's original container. Each container shall be marked with the manufacturer's name and lot number. Each lot number shall be accompanied by a Type A Certification in accordance with 916. The materials shall be in accordance with the following:

<u>TEST</u>	<u>LIMITS</u>	<u>TEST METHOD</u>
Extrusion Rate	200-550 G/minute	MIL S 8802
Specific Gravity	1.23-1.35	ASTM D 1475
Nonvolative Content	93% min.	

and as installed at 77°F and 50% relative humidity, after 48 h cure:

<u>TEST</u>	<u>LIMITS</u>	<u>TEST METHOD</u>
Skin-over time	20 minutes, max.	
Joint Elongation	600% min.	ASTM D 3583 ^{1,2}
Joint Modulus	3-12 psi	ASTM D 3583 ^{1,2}

¹ Section 114, modified with pull rate of 2 in./minimum

² Joint size 1/2 in. by 1/2 in. by 2 in.

REVISION TO SPECIAL PROVISION**724-B-145 STRUCTURAL EXPANSION JOINT SEALING SYSTEM (proposed to delete)**

The binder shall be Silspec 900 PNSS polymer nosing system or approved equal. The binder shall be a 2-component, rapid curing, liquid polymer that cures to a dense semi-flexible polymer that is resistant to chemicals, weather, abrasion, and impact. The material shall be capable, when blended with Silspec blended aggregate of forming a polymer-based mortar for nosing and joint repair, or when cured in neat form of acting as a combination primer and protective coating for steel. A Type A Certification in accordance with 916 shall be required for polymer nosing system binder. The combined liquid base and reactor component materials shall be in accordance with the following as supplied:

<u>TEST</u>	<u>LIMITS</u>	<u>TEST METHOD</u>
Mixing Ratio	1:1 by volume of weight	ASTM D 2393
Viscosity	9-20 poises, Brookfield Model LVT Spindle #2, 30 rpm, 75°F, +/- 2°F	
Color	Black	
Gel Time	25-50 minutes	AASHTO M 200

and as cured:

<u>TEST</u>	<u>LIMITS</u>	<u>TEST METHOD</u>
Elongation	40-55%	ASTM D 638 ¹
Tensile Strength	900 psi min.	ASTM D 638 ¹
Shore Hardness at 77°F	45	ASTM D 2240

¹ Test method Type 1, molded specimens, 0.25 in. thick

A Type A Certification in accordance with 916 shall be required for polymer nosing system mortar. The materials shall be in accordance with the following:

<u>TEST</u>	<u>LIMITS</u>	<u>TEST METHOD</u>
Compressive Strength	2,200 psi min.	ASTM C 579 ¹
Bond Shear Strength	900 psi min.	ASTM C 882
Abrasion Resistance, Wear Index, Table H-22	1.0 max.	ASTM C 502
Compressive Stress	350 psi min.	
Resilience	70% min.	

¹ at 24 hours, Method B

Aggregate for the nosing material shall be Silspec blended aggregate or aggregate as approved by the manufacturer.

A bond breaker material shall be installed prior to installation of the sealant to maintain minimum or maximum depth of sealant. The bond breaker shall serve to ensure that the bottom of the sealant is bond free, thereby allowing the sealant to adhere only to the sides of the joint. No

REVISION TO SPECIAL PROVISION

724-B-145 STRUCTURAL EXPANSION JOINT SEALING SYSTEM (proposed to delete)

bond or adverse reaction shall occur between the bond breaker and the sealant.

Acceptable types of bond breakers shall include:

- (a) Closed cell expanded polyethylene foam backer rod. Primary use shall be with new joint construction and remedial joint construction.
- (b) Bond breaker tape. Application of bond breaker tape shall be subject to written approval by the sealant manufacturer. Primary use shall be with wide shallow joints.
- (c) Open cell backing material with an impervious skin. Application shall be subject to written approval by the sealant manufacturer. Primary use shall be with irregular remedial joint construction.

Primer shall be applied as shown on the plans prior to installation of the nosing and sealant, or as specified by the sealant manufacturer.

Construction Requirements

The location and general appearance of the installed joint shall be as shown on the plans. Additional details shall be in accordance with the manufacturer's drawings. Working drawings, specifications, and other details in accordance with 105.02 shall be provided to the Engineer prior to commencing joint installation. A qualified representative of the sealant and polymer mortar manufacturer shall be present at the beginning of the work to ensure adequate workmanship and inspection of the sealing operation.

Rapid cure joint sealant shall be installed when the temperature is above 60°F or as directed. The sealant shall be installed in the expansion joints when the openings are at or near a minimum width.

Joints shall be inspected for proper depth, width, alignment and preparation as shown on the plans. Joints shall be cleaned of all old joint seals, old expansion materials or devices, bituminous material, dirt, grease, and all other deleterious material. The joints shall be cleaned over the total area of the block out or openings to receive the nosing or sealant material. Preparation shall be as recommended by the nosing or sealant manufacturer. If an armored joint is present, a near white blast cleaning shall be provided for the steel in accordance with 619.03. All joints to receive nosing or sealant shall be sound, clean, dry, and frost free.

The nosing material shall be mixed and placed in accordance with the manufacturer's printed instructions and as provided herein. As a witness point, one set of the manufacturer's instructions shall be provided to the Engineer not less than one week prior to the beginning of joint placement.

The nosing material shall be installed when the temperature is a

REVISION TO SPECIAL PROVISION

724-B-145 STRUCTURAL EXPANSION JOINT SEALING SYSTEM (proposed to delete)

minimum of 45°F and rising. Cure time of the nosing material may be accelerated by the use of methods or techniques as approved by the manufacturer. Prior to placing the nosing material, the surface of the substrate against which the polymer based mortar is to be placed shall be primed with neat binder. The polymer based mortar shall be applied within 15 minutes of the mixing and shall be thoroughly consolidated and finished within 30 minutes of mixing or before the primer has set. The polymer-based mortar shall be trowelled even with and parallel to the roadway surface and finished to provide a smooth surface free of voids or tears.

The rapid cure, silicone joint sealant shall be installed in accordance with the manufacturer's recommendations. If the joint opening at the time of installation is less than 1 in. or greater than 3 in., the work shall be stopped and the joint manufacturer contacted. Joints outside this range shall not be sealed without the approval of the joint manufacturer.

Method of Measurement

The structural expansion joint sealing system will be measured by the linear foot along and parallel to the plane of the finished joint surface. Concrete removal for the joint, sealant material, nosing materials if required, backer rods, and all other materials used in the construction of the joint will not be measured for payment.

Basis of Payment

The structural expansion joint sealing system will be paid for at the contract unit price per linear foot for expansion joint sealing system, complete in place.

Payment will be made under:

Pay Item

Pay Unit Symbol

Structural Expansion Joint, Sealing System.....LFT

The cost of concrete removal, sealant material, nosing materials if required, backer rods, and all other materials shall be included in the structural expansion joint, sealing system pay item.

COMMENTS AND ACTION

724-B-145 STRUCTURAL EXPANSION JOINT SEALING SYSTEM (proposed to delete)

DISCUSSION:

This item was introduced and presented by Mr. Reilman who explained that the Expansion Joint Sealing System specified in Recurring Special Provision 724-B-145, is no longer being specified by INDOT. It has been replaced by the Pre-compressed foam joint system as specified in Recurring Special Provision 724-B-309.

Mr. Reilman therefore proposed to remove RSP 724-B-145 from the list of RSPs and obsolete the associated pay item. This product could still be used as a unique special provision, but will need some updates to the referenced ASTM and AASHTO Standards.

Ms. Mouser suggested that this RSP have a restriction in the Basis for Use stating that it needs to be approved prior to use. Mr. Reilman and Mr. Wooden reiterated that by reverting it back to a USP will accomplish that intention, as it will then need to go through the USP review process.

Motion: Mr. Reilman Second: Mr. Pelz Ayes: 9 Nays: 0 FHWA Approval: YES	Action: <input checked="" type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn
Standard Specifications Sections referenced and/or affected: <p style="text-align: center;">NONE</p>	<input type="checkbox"/> 2024 Standard Specifications <input checked="" type="checkbox"/> Revise Pay Items List
Recurring Special Provision affected: <p style="text-align: center;">724-B-145 STRUCTURAL EXPANSION JOINT SEALING SYSTEM</p>	<input checked="" type="checkbox"/> Discontinue RSP (No. <u>724-B-145</u>) Effective: <u>September 1, 2021</u> RSP Sunset Date:
Standard Drawing affected: <p style="text-align: center;">TBD</p>	<input type="checkbox"/> Standard Drawing Effective:
Design Manual Sections affected: <p style="text-align: center;">NONE</p>	<input type="checkbox"/> Create RPD (No. <u> </u>) Effective:
GIFE Sections affected: <p style="text-align: center;">TBD</p>	<input type="checkbox"/> GIFE Update <input checked="" type="checkbox"/> SiteManager Update <input type="checkbox"/> Frequency Manual Update

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS
REVISION TO STANDARD SPECIFICATIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Specification 913 revisions are proposed by the lime by-product producers to increase their ability to provide a supply of lime by-products.

PROPOSED SOLUTION: Revise sieve analysis requirements in 913.04 for lime by-products.

APPLICABLE STANDARD SPECIFICATIONS: 913.04.

APPLICABLE STANDARD DRAWINGS: NA

APPLICABLE DESIGN MANUAL SECTION: NA

APPLICABLE SECTION OF GIFE: NA

APPLICABLE RECURRING SPECIAL PROVISIONS: None

PAY ITEMS AFFECTED: NA

APPLICABLE SUB-COMMITTEE ENDORSEMENT: NA

IMPACT ANALYSIS (attach report): NA

Submitted By: Jim Reilman for Nayyar Siddiki

Title: State Materials Engineer

Organization: Division of Materials & Tests

Phone Number: 317-522-9692

Date: 03/18/2021

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS
REVISION TO 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? Yes

Will this proposal improve:

Construction costs? Yes

Construction time? NA

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 improve quality for:

Construction procedures/processes? yes

Asset preservation? NA

Design process? NA

Will this change provide the contractor more flexibility? yes

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

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

Is this proposal needed for compliance with:

Federal or State regulations? NA

AASHTO or other design code? NA

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 STANDARD SPECIFICATIONS

SECTION 913 – SOIL TREATMENT MATERIALS

913.04 Lime

The Standard Specifications are revised as follows:

SECTION 913, BEGIN LINE 27, DELETE AND INSERT AS FOLLOWS:

913.04 Lime

Lime shall be a hydrated lime when used in masonry or a hydrated lime, quicklime, or lime by-product when used for soil modification.

(a) Hydrated Lime for Masonry

Hydrated lime used in masonry shall be in accordance with ASTM C207, Type N.

(b) Lime for Soil Modification

Hydrated lime, quicklime, or lime by-product used for soil modification shall be approved in accordance with ~~from the QPL of Soil Modifiers~~. A product will be considered for inclusion on the QPL by following ITM 806, Procedure P and shall meet the following requirements.

1. Hydrated Lime and Quicklime

Hydrated lime and quicklime shall be in accordance with AASHTO M 216.

2. Lime By-Products

Lime by-products shall be hydrated lime or quicklime by-products in accordance with ASTM C25 having the following requirements.

- a. The lime by-products shall contain a minimum of 60% total calcium and magnesium oxides (non-volatile basis).
- b. Available calcium hydroxide plus magnesium oxide calculated as calcium hydroxide shall be a minimum of 30%.
- c. Soluble sulfate shall not be more than 5%.
- d. Sieve analysis shall be performed in accordance with ASTM C110. The lime by-products gradation shall be as follows:

Sieve	% Retained (Max.)
No. 4 (4.75 mm)	5
No. 30 (600 μ m)	10 15
No. 100 (150 μ m)	25 30

COMMENTS AND ACTION

913.04 Lime

DISCUSSION:

Mr. Reilman introduced and presented this item stating that the Specification Section 913 revisions, shown above, are proposed by the lime by-product producers to increase their ability to provide a supply of lime by-products.

Mr. Reilman proposed to revise the sieve analysis requirements in 913.04 for lime by-products. And yes, the definition for QPL, Qualified Products List, has been incorporated into the 2022 Standard Specifications book.

Mr. Dave asked if this will affect the strength of the soil. Mr. Reilman responded that it may increase the strength and that Geotech is onboard with this revision.

Motion: Mr. Reilman Second: Mr. Dave Ayes: 9 Nays: 0 FHWA Approval: YES	Action: <input checked="" type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn
Standard Specifications Sections referenced and/or affected:	<input checked="" type="checkbox"/> 2022 Standard Specifications <input type="checkbox"/> Revise Pay Items List
Recurring Special Provision references in:	<input type="checkbox"/> Create RSP (No. ___) Effective: ____ RSP Sunset Date:
Standard Drawing affected: NONE	<input type="checkbox"/> Standard Drawing Effective:
Design Manual Sections affected: NONE	<input type="checkbox"/> Create RPD (No. ___) Effective:
GIFE Sections cross-references: NONE	<input type="checkbox"/> GIFE Update <input checked="" type="checkbox"/> SiteManager Update <input type="checkbox"/> Frequency Manual Update