INDIANA DEPARTMENT OF TRANSPORTATION
Driving Indiana's Economic Growth

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Michael R. Pence, Governor
Karl B. Browning, Commissioner

APPROVED MINUTES

November 21, 2014 Standards Committee Meeting

MEMORANDUM

December 24, 2014

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Minutes from the November 21, 2014 Standards Committee Meeting

The Standards Committee meeting was called to order by Mr. Miller at 09:03 a.m. on November 21, 2014 in the N642 Conference Room. The meeting was adjourned at 11:43 a.m.

The following committee members were in attendance:

Mark Miller, Chairman, Construction Management Director
Bob Cales, Contract Administration Division
Dave Boruff, Traffic Engineering Division
Mike Buening, Pavement Engineering
Michelle Gottschalk, Construction Technical Support
Michael Koch, Fort Wayne District Area Engineer
Greg Pankow, State Construction Engineer
Elizabeth Phillips, Bridges Division
Ron Walker, Materials Management
Peter Yao, Highway Design and Technical Support Division

Also in attendance were the following:

Paul Berebitsky, ICA
Scott Trammell, INDOT
Tom Duncan, FHWA
Mark Tidd, INDOT
Lana Podorvanova, INDOT
Steve Fisher, INDOT
Dudley Bonte, APAI
Tom Harris, INDOT
Kurt Pelz, INDOT
Joel Salinas, INDOT
Brian Crume, E&B Paving
Tommy Nantung, INDOT
Michael Prather, INDOT
Todd Shields, INDOT

The following items were listed for consideration:

A. GENERAL BUSINESS ITEMS

OLD BUSINESS

(No items were listed)

NEW BUSINESS

1. Approval of the Minutes from the September 18, 2014 meeting

DISCUSSION:

Mr. Miller requested a motion to approve the minutes from the September 18, 2014 meeting.

Motion: Mr. Cales
Second: Mr. Buening
Ayes: 9
Nays: 0

ACTION: PASSED AS SUBMITTED

2. Referencing specific Standard drawings on the plans (Ms. Phillips)

DISCUSSION:

Ms. Phillips inquired of the committee's opinion regarding referencing standard drawings on the plans. Appropriate or not? Legal implications? Mr. Miller addressed the issue of when the plans override the standard drawings. Mr. Cales mentioned the possibility of inadvertently leaving one off the list, and potential problems resulting from that. Mr. Pankow mentioned from a claims review perspective, that he would prefer they not be on the plans. Mr. Pankow also asked for more time to think about this issue.

3. Incorporation of the RSP 103-C-238 INSURANCE VERIFICATION PROCEDURE into the 2016 Standard Specifications (Mr. Miller)

(Note: Basis for Use: Required for all contracts)

103-C-238 INSURANCE VERIFICATION PROCEDURE

(Adopted 07-17-14)

The Standard Specifications are revised as follows:

SECTION 103, BEGIN LINE 343, INSERT AS FOLLOWS:

103.04 Insurance

Prior to commencing the work, the Contractor shall obtain and thereafter keep in force, the following insurance coverages provided by insurance companies acceptable to the Department and authorized to transact business under the laws of the State of Indiana. Certificates of insurance *and all endorsements* shall be filed with the Department. The Department may temporarily accept an insurance binder pending receipt of the certificate of insurance. *For insurance policies required by 103.04(a), 103.04(b) and 103.04(c), the Contractor shall provide an endorsement which adds the Department as an additional insured under the policy. Each certificate of insurance which names the State of Indiana,*

c/o Indiana Department of Transportation, as the certificate holder shall be accompanied by said endorsement which shall state, in the Additional Remarks Schedule box above the words "Certificate Holder", "The attached endorsement is part of the policies of insurance above". When Railroad's Protective Liability insurance in accordance with 103.04(d) is required, the original policy shall be submitted to the railroad company with a copy transmitted to the Department. In addition, certificates of insurance shall be provided to the railroad, on forms satisfactory to the railroad, covering the Contractor's Commercial General Liability and Business Automobile Liability insurance.

SECTION 103, BEGIN LINE 360, INSERT AS FOLLOWS:

Proof of renewal shall be furnished 15 days or more in advance of the policy expiration. If subject to cancellation, the insurance company shall provide at least 30 days prior notice, and the insurer shall immediately notify the Department in writing of such impending cancellation. *All certificates of insurance and endorsements shall contain this cancellation notification requirement.*

DISCUSSION:

Mr. Berebitsky addressed industry concerns. Mr. Tidd, from legal, will submit proposed revisions in time for incorporation into the 2016 spec book. At this time, the use of current RSP has been suspended.

4. *Committee's action on items that are under pending status for inclusion into 2016 Standard Specifications (Mr. Miller)*

SC Meeting	Item #	Sponsor	Title/Subject	Approved as:	RSP	For 2016SS Book
16-May-13	3	D. Boruff	Longitudinal Rumble Stripes, 808-MLRS-01, -02, -03	RSP	808-T-190	TBD
16-May-13	19(OB)	D. Boruff	807.13; 807.19; 920.01(d) Luminaires	RSP	807-T-193	TBD
16-May-13	1	D. Boruff	801.02; 801.15; 801.18 and 923 Traffic Control Devices	RSP	801-T-194	TBD
19-Sep-13	1	E. Phillips	Field Straightening of Steel Members	RSP	729-B-204	TBD
19-Dec-13	1(OB)	J. Keefer	801-C-XXX Temporary Construction Signs	RSP	801-C-237	TBD
20-Feb-14	1(OB)	E. Phillips	738-B-XXX Polymeric Concrete Bridge Deck Overlay	RSP	738-B-297	TBD
17-Jul-14	3	R. Walker	804-T-XXX Lane Separators	RSP	804-T-204	TBD
17-Jul-14	5	R. Walker	SECTION 217 Soils Drying	RSP	217-R-617	TBD

DISCUSSION:

Mr. Miller directed the committee's attention to the list above, and the items were acknowledged by those responsible.

5. Revised proposal sheets which incorporates the impact analysis report checklist. (Mr. Miller and Mr. Trammell)

SPECIFICATION REVISION

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED:

PROPOSED SOLUTION:

APPLICABLE STANDARD SPECIFICATIONS:

APPLICABLE STANDARD DRAWINGS:

APPLICABLE DESIGN MANUAL SECTION:

APPLICABLE SECTION OF GIFE:

APPLICABLE RECURRING SPECIAL PROVISIONS:

PAY ITEMS AFFECTED:

IMPACT ANALYSIS (attach report):

Submitted By:

Title:

Organization:

Phone Number:

Date:

APPLICABLE SUB-COMMITTEE ENDORSEMENT:

IMPACT ANALYSIS REPORT CHECKLIST

Please explain the business case as to why this item should be presented to the Standards Committee for approval.

Please answer the following questions with Yes, No or N/A.

Does this item appear in any other specification sections?

Will approval of this item affect the Approved Materials List?

Will this proposal improve:

Construction costs?
Construction time?
Customer satisfaction?
Congestion/travel time?
Ride quality?

Will this item improve safety:

For motorists?
For construction workers?

Will this proposal improve quality for:

Construction procedures/processes?
Asset preservation?
Design process?

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

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

Is this item editorial?

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

DISCUSSION:

Mr. Miller directed the committee's attention to the new proposal sheet which includes the impact analysis report checklist and will be required for all standards committee proposal items beginning with the December 2014 Standards Committee meeting.

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. 01 11/21/14 (2014 SS)	Mr. Buening	pg 08
SECTION 408	SEALING CRACKS AND JOINTS	
507.02	Materials	
507.03(a)	Routing, Cleaning and Sealing	
507.03(b)	Cleaning and Filling	
507.04(a)	Sawing, Cleaning and Sealing	
507.04(b)	Cleaning and Filling	
ACTION:	WITHDRAWN	
Item No. 02 11/21/14 (2014 SS)	Mr. Buening	pg 14
Recurring Special Provision:		
401-R-581	JOINT ADHESIVE	
ACTION:	PASSED AS REVISED	
Item No. 03 11/21/14 (2014 SS)	Mr. Pankow	pg 19
108.07	Character of Workers, Methods, and Equipment	
ACTION:	PASSED AS REVISED	
Item No. 04 11/21/14 (2014 SS)	Ms. Phillips	pg 22
Recurring Special Provision:		
724-B-145	EXPANSION JOINT SEALING SYSTEM	
ACTION:	PASSED AS REVISED	
Item No. 05 11/21/14 (2014 SS)	Mr. Pankow	pg 29
Recurring Special Provision:		
205-R-XXX	*QUALITY CONTROL TEMPORARY EROSION AND SEDIMENT CONTROL*	
ACTION:	PASSED AS REVISED	
Item No. 06 11/21/14 (2014 SS)	Mr. Pankow	pg 52
604.03(f)	Joints	
604.11	Basis of Payment	
Standard Drawing:		
604-CCSJ-01	SIDEWALK EXPANSION JOINT	
ACTION:	PASSED AS REVISED	

cc: Committee Members
FHWA
ICA

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS

REVISION TO STANDARD SPECIFICATIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED:

There are revisions needed in section 408 of the Standard Specifications. Working cracks should be routed and sealed, not routed and filled. Non-working cracks are filled, not sealed. Crack Filling materials require a correction to limit the use to AE-90S.

Also, clarification is also needed to ensure that hot-poured sealant is filled to within 1/4 inch ***below*** the surface when routing, so the joint is not over-filled. Similar discrepancies also exist in 507.

PROPOSED SOLUTION: Incorporate the necessary revisions to 408 and 507 to ensure that the standard specifications are correct and consistent with current industry practice.

APPLICABLE STANDARD SPECIFICATIONS: 408, 507

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: None

PAY ITEMS AFFECTED: 408

Submitted By: Michael Buening

Title: Area Pavement Engineer

Organization: INDOT – Pavement Division

Phone Number: 317-232-5242

Date: October 30, 2014

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Todd Shields, Bill Tompkins, Mike Prather, Mike Buening

REVISION TO STANDARD SPECIFICATIONS

SECTION 408 - SEALING CRACKS AND JOINTS

The Standard Specifications are revised as follows:

SECTION 408, BEGIN LINE 1, DELETE AND INSERT AS FOLLOWS:

SECTION 408 – SEALING *OR FILLING* CRACKS AND JOINTS

408.01 Description

This work shall consist of sealing longitudinal and transverse *working* cracks and joints *or filling non-working longitudinal cracks and joints* in existing asphalt pavement in accordance with 105.03.

~~*Working cracks are typically transverse with horizontal movement of 0.1 in. or more. Non-working cracks are typically longitudinal with horizontal movement of less than 0.1 in.*~~ *Full lane width transverse cracks and longitudinal joints shall be routed and sealed. All other cracks shall be filled.*

MATERIALS

408.02 Materials

Materials shall be in accordance with the following:

Asphalt Binder ~~for Crack Sealing~~, PG 64-22*	902.01(a)
Asphalt Emulsion for Crack ~~Sealing AE-90,~~*Filling*, AE-90S~~, AE-150~~	902.01(b)
Fine Aggregates, No. 23 or 24	904
Joint Sealing Materials	906.02

* Polypropylene fibers shall be used only in conjunction with warranted micro-surfacing.

CONSTRUCTION REQUIREMENTS

408.03 Equipment

A distributor in accordance with 409.03 shall be used when crack ~~sealing and~~ *filling with asphalt emulsion or* an indirect-heat double boiler kettle with mechanical agitator shall be used when ~~routing and~~ filling *with hot poured material. An indirect-heat double boiler kettle with mechanical agitator shall be used when routing and sealing.* Air compressors shall be capable of producing a minimum air pressure of 100 psi.

408.04 Weather Limitations

Sealing or filling operations shall not be conducted on a wet surface, when the ambient temperature is below 40°F, or when other unsuitable conditions exist, unless approved by the Engineer.

408.05 Routing and ~~Filling~~*Sealing* Cracks and Joints

Working ~~C~~cracks and joints, *1/2 in. or less in width,* shall be routed when specified, with a routing machine capable of cutting a uniform shape to form a reservoir not exceeding 3/4 in. wide with a minimum depth of 3/4 in. The operation shall be

coordinated such that routed materials do not encroach on pavement lanes carrying traffic and all routed materials are disposed of in accordance with 104.07. *Working* ~~C~~*c*racks and joints shall be ~~filled~~*sealed* with hot poured joint sealant to within 1/4 in. ~~of~~*below* the surface in accordance with the manufacturer's recommendations.

408.06 Sealing *or Filling* Cracks and Joints

Working and non-working ~~C~~*c*racks and joints shall be cleaned by blowing with compressed air or by other suitable means. Asphalt material shall be placed utilizing a "V" shaped wand tip, to allow the penetration of the materials into the cracks and joints. The cracks and joints shall be completely filled or overbanded not to exceed 5 in., or as required. All excess asphalt material shall be removed from the pavement. The ~~sealed~~*filled* cracks and joints shall be covered with sufficient fine aggregate *or other suitable material* to prevent tracking of the asphalt materials. All excess cover material shall be removed from the pavement *within 24 h, when directed*.

Application of asphalt materials shall be completed without covering existing pavement markings. When traffic is to be maintained within the limits of the section, temporary traffic control measures in accordance with 801 shall be used. Treated areas shall not be opened to traffic until the asphalt material has been absorbed.

408.07 Method of Measurement

Sealing and filling of cracks and joints in asphalt pavements will be measured by the ton of material used. Routing of cracks and joints will not be measured.

Temporary traffic control measures will be measured in accordance with 801.17.

408.08 Basis of Payment

Sealing and filling of cracks and joints in asphalt pavements will be paid for by the ton of material used for the type specified.

Temporary traffic control measures will be paid for in accordance with 801.18.

Payment will be made under:

Pay Item	**Pay Unit Symbol**
Cracks and Joints in Asphalt Pavement, *Fill*	*TON*
Cracks and Joints in Asphalt Pavement, Rout and Seal	TON
Cracks and Joints in Asphalt Pavement, Seal	TON

The cost of all materials, cover aggregate, cleaning, and all necessary incidentals shall be included in the cost of the pay items in this section.

REVISION TO STANDARD SPECIFICATIONS

SECTION 507 - PCCP RESTORATION
507.02 MATERIALS
507.03(a) ROUTING, CLEANING AND SEALING
507.03(b) CLEANING AND FILLING
507.04(a) SAWING, CLEANING AND SEALING
507.04(b) CLEANING AND FILLING

The Standard Specifications are revised as follows:

SECTION 507, BEGIN LINE 9, DELETE AS FOLLOWS:

507.02 Materials

Materials shall be in accordance with the following:

Asphalt Binder ~~for Crack Sealing~~, PG 64-22	902.01(a)
~~Asphalt Emulsion AE-90, AE-90S, AE-150~~	~~902.01(b)~~
Dowel Bars	910.01(b)10
Fine Aggregates, Size No. 23 or 24	904
Joint Sealing Materials	906.02
Rapid Setting Patch Materials	901.07

Dowel bars and dowel bar assemblies shall be in accordance with 503.04.

SECTION 507, BEGIN LINE 38, DELETE AND INSERT AS FOLLOWS:

Cracks shall be sealed with hot poured joint sealant in accordance with the manufacturer's recommendations within 1/4 in. ~~of~~*below* the surface. A distributor in accordance with 409.03 shall be used with an indirect-heat double boiler kettle and mechanical agitator. The hot poured joint sealant shall be placed utilizing a "V" shaped wand tip, to allow the penetration of the materials into the cracks.

SECTION 507, BEGIN LINE 54, INSERT AS FOLLOWS:

Cracks shall be filled with asphalt material. The cracks shall be completely filled or overbanded not to exceed 5 in., or as required. Asphalt material shall be placed utilizing a "V" shaped wand tip, to allow the penetration of the materials into the cracks. The filled cracks shall be covered with sufficient fine aggregate *or other suitable material* to prevent tracking of the asphalt material. All excess cover material shall be removed from the pavement.

SECTION 507, BEGIN LINE 80, INSERT AS FOLLOWS:

Joints shall be sealed with joint sealing materials in accordance with the sealant manufacturer's recommendations. Transverse joints shall be sealed with *hot poured joint sealant,* silicone sealant or preformed elastomeric joint sealant. Longitudinal joints shall be sealed with hot poured joint sealant or silicone sealants.

REVISION TO STANDARD SPECIFICATIONS

SECTION 507 - PCCP RESTORATION
507.02 MATERIALS
507.03(a) ROUTING, CLEANING AND SEALING
507.03(b) CLEANING AND FILLING
507.04(a) SAWING, CLEANING AND SEALING
507.04(b) CLEANING AND FILLING

SECTION 507, BEGIN LINE 90, DELETE AND INSERT AS FOLLOWS:

(b) Cleaning and Filling

Joints in PCCP shall be cleaned by blowing with compressed air or by other suitable means when specified. *Cleaning shall include removal of old sealant and backer rod.* Air compressors shall be capable of producing a minimum air pressure of 100 psi. Water blasting shall not be utilized.

Joints shall be filled with hot poured joint sealant in accordance with the manufacturer's recommendations within 1/4 in. ~~of~~*below* the surface. A distributor in accordance with 409.03 shall be used with an indirect-heat double boiler kettle and mechanical agitator. The hot poured joint sealant shall be placed utilizing a "V" shaped wand tip, to allow the penetration of the materials into the joints.

COMMENTS AND ACTION

SECTION 408 - SEALING CRACKS AND JOINTS
507.02 MATERIALS
507.03(a) ROUTING, CLEANING AND SEALING
507.03(b) CLEANING AND FILLING
507.04(a) SAWING, CLEANING AND SEALING
507.04(b) CLEANING AND FILLING

DISCUSSION:

Mr. Buening introduced and presented this item citing the need for clarification of sealing, filling, working cracks and non-working cracks, as described on the proposal sheet.

Much discussion ensued as to how to determine the difference between a working and non-working crack. The word "typically" was removed from the definitions. Mr. Prather agreed with Mr. Nantung in that working cracks normally appear as reflective cracks. The operations regarding crack filling or crack sealing will be as determined by the designers for each project. Mr. Nantung offered that cracks that are routed are sealed, and cracks that are not routed are filled. Mr. Shields offered that full lane width transverse cracks and longitudinal joints shall be routed and sealed. The other working and non-working language needs to be addressed, and will be presented at a future committee meeting. Therefore, this item was subsequently withdrawn.

Motion: Mr. Buening Second: Ms. Gottschalk Ayes: Nays: FHWA Approval:	Action: _____ Passed as Submitted _____ Passed as Revised _X_ Withdrawn
Standard Specifications Sections affected: 304.03 pg. 226; section 408 pg. 281 thru 282; 507.03 pg. 367; 507.04 pg. 368. Recurring Special Provision affected: NONE Standard Drawing affected: NONE Design Manual Sections affected: NONE GIFE Sections cross-references: NONE	_____ 2016 Standard Specifications _____ Revise Pay Items List _____ Create RSP (No._____) Effective _____ Letting RSP Sunset Date: _____ Revise RSP (No._____) Effective _____ Letting RSP Sunset Date: _____ Standard Drawing Effective _____ Create RPD (No. _____) Effective _____ Letting _____ GIFE Update

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS

REVISION TO SPECIAL PROVISIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Construction traffic traversing across a longitudinal joint with joint adhesive placed 15 minutes prior to paving operations has been observed to be more prone to tracking than when the joint adhesive is placed further in advance of paving operations.

PROPOSED SOLUTION: Require the application of joint adhesive to be made within the same day, but at least 2 hours in advance of paving operations.

APPLICABLE STANDARD SPECIFICATIONS: N/A

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: RSP 401-R-581

PAY ITEMS AFFECTED: N/A

Submitted By: Michael Buening & Michael Prather
Title: Area Pavement Engineers
Phone Number: 232-5242, 234-8250
Date: October 2014

APPLICABLE SUB-COMMITTEE ENDORSEMENT: N/A. Feedback from Greenfield District Construction personnel (attached correspondence).

REVISION TO SPECIAL PROVISIONS
401-R-581 JOINT ADHESIVE

401-R-581 JOINT ADHESIVE

(Revised XX-XX-XX)

The Standard Specifications are revised as follows:

SECTION 401, AFTER LINE 388, INSERT AS FOLLOWS:

Hot poured joint adhesive in accordance with 906 shall be applied to longitudinal joints constructed between two adjacent HMA courses in the top course of dense graded intermediate mixtures and all 4.75 mm, 9.5 mm and 12.5 mm surface mixture courses. This includes joints within the traveled way as well as between any of the following: traveled way and an auxiliary lane; traveled way and a paved shoulder; and auxiliary lane and a paved shoulder.

The material shall be heated in a jacketed, double boiler melting kettle. The kettle shall have an attached pressure feed wand system with applicator shoe.

The joint adhesive shall be applied to the face of the previously constructed edge at the joint using a wand applicator. Prior to application of the joint adhesive, the joint face shall be dry and free of loose material and foreign objects. The adhesive shall be applied on the joint face 1/8 in. thick at the temperature recommended by the manufacturer. Excess joint adhesive shall not be allowed to pool on the top of the previously constructed pavement course or the pavement to be overlaid. The application of the adhesive shall be made within the same day, but at least ~~15 minutestwo hours~~30 minutes prior to construction of the longitudinal joint.

All 9.5 mm and 12.5 mm surface mixture longitudinal joints that have the joint adhesive applied shall be sealed using SS-1h or AE-NT asphalt emulsion in accordance with 902.01(b). The sealing operation shall not begin until all density cores in accordance with 401.16 and 401.20 have been obtained and the installation of pavement corrugations, when specified in accordance with 606, has been completed.

The liquid asphalt sealant shall be a minimum width of 24 in., centered on the joint line, and shall be extended, when necessary, to provide coverage beyond the edge of the pavement corrugation. The sealant shall be applied at an application rate of 0.03 ±0.01 gal./sq yd onto a dry surface, free of any foreign or loose material, using a distributor in accordance with 409.03(a). Areas receiving greater than 0.04 gal./sq yd shall be lightly broomed to reduce the effects of excess sealant on the pavement surface. The sealant temperature at the time of application shall be at least 135°F and shall not exceed 180°F. The ambient air and pavement temperatures at the time of application shall be greater than 32°F.

Temporary pavement markings in accordance with 801.12 shall be offset a sufficient distance from the longitudinal joint so as not to obstruct the installation of the pavement corrugations or the application of the liquid asphalt sealant. The sealant shall

REVISION TO SPECIAL PROVISIONS

401-R-581 JOINT ADHESIVE

be cured a minimum of five days prior to applying the permanent pavement traffic markings in accordance with 808.

SECTION 401, AFTER LINE 771, INSERT AS FOLLOWS:

Joint adhesive will be measured by the linear foot in accordance with 109.01(a). Liquid asphalt sealant will be measured by the linear foot.

SECTION 401, AFTER LINE 785, INSERT AS FOLLOWS:

Joint adhesive will be paid for by the linear foot, complete in place. Liquid asphalt sealant will be paid for by the linear foot.

SECTION 401, AFTER LINE 789, INSERT AS FOLLOWS:

Joint Adhesive, _____ .....LFT
course type
Liquid Asphalt Sealant.....LFT

SECTION 410, AFTER LINE 312, INSERT AS FOLLOWS:

Hot poured joint adhesive in accordance with 906 shall be applied to longitudinal joints constructed between two adjacent HMA courses in the top course of dense graded intermediate mixtures and all 9.5 mm and 12.5 mm SMA surface mixture courses. This includes joints within the traveled way as well as between any of the following: traveled way and an auxiliary lane; traveled way and a paved shoulder; and auxiliary lane and a paved shoulder.

The material shall be heated in a jacketed, double boiler melting kettle. The kettle shall have an attached pressure feed wand system with applicator shoe.

The joint adhesive shall be applied to the face of the previously constructed edge at the joint using a wand applicator. Prior to application of the joint adhesive, the joint face shall be dry and free of loose material and foreign objects. The adhesive shall be applied on the joint face 1/8 in. thick at the temperature recommended by the manufacturer. Excess joint adhesive shall not be allowed to pool on the top of the previously constructed pavement course or the pavement to be overlaid. The application of the adhesive shall be made within the same day, but at least ~~15~~30 minutes prior to construction of the longitudinal joint.

SECTION 410, AFTER LINE 485, INSERT AS FOLLOWS:

Joint adhesive will be measured by the linear foot in accordance with 109.01(a).

SECTION 410, AFTER LINE 492, INSERT AS FOLLOWS:

Joint adhesive will be paid for by the linear foot, complete in place.

SECTION 410, AFTER LINE 503, INSERT AS FOLLOWS:

Joint Adhesive, _____ .....LFT
course type

REVISION TO SPECIAL PROVISIONS

401-R-581 JOINT ADHESIVE

SECTION 906, AFTER LINE 93, INSERT AS FOLLOWS:

5. Hot Poured Joint Adhesive

Joint adhesive is a hot applied asphalt material that is used to seal the longitudinal construction joint formed between the adjacent HMA pavement courses.

Joint adhesive shall be in accordance with the following:

Test	*Method*	*Test Results*
Softening Point, °F (°C)	*AASHTO T 53*	*> 170 (77)*
Ductility @ 77°F (25°C), mm	*AASHTO T 51*	*> 300*
Ductility @ 39°F (4°C), mm	*AASHTO T 51*	*> 300*
Apparent Viscosity @ 400°F (204°C), cp	*ASTM D 2669*	*4,000 – 11,000*
Asphalt Compatibility	*ASTM D 5329*	*Pass*
Cone Penetration @ 77°F (25°C), mm	*ASTM D 5329*	*50.0 – 100.0*
Flow @ 140°F (60°C), mm	*ASTM D 5329*	*< 5*
Resilience @ 77°F (25°C), %	*ASTM D 5329*	*> 30*
Tensile Adhesion @ 77°F (25°C), mm	*ASTM D 5329*	*> 500*
Flexibility @ 0°F (-18°C)	*ASTM D 3111*	*Pass*
Flash Point, °F (°C)	*AASHTO T 48*	*> 410 (210)*

The joint adhesive will be accepted by type A certification in accordance with 916 for each batch or lot of material furnished.

COMMENTS AND ACTION

401-R-581 JOINT ADHESIVE

DISCUSSION:

This item was introduced and presented by Mr. Buening who proposed to revise the language in RSP 401-R-581 requiring the joint adhesive to be applied at least 30 minutes ahead of paving operations, instead of the 2 hours originally proposed, to reduce any potential tracking issues. Industry reps concurred.

Mr. Buening also recommended that the contents of this RSP be placed into the 2016 book. The committee agreed.

Motion: Mr. Buening Second: Mr. Pankow Ayes: 9 Nays: 0 FHWA Approval: YES	Action: ____ Passed as Submitted _X_ Passed as Revised _____ Withdrawn
Standard Specifications Sections affected: NONE	_X_ 2016 Standard Specifications _____ Revise Pay Items List
Recurring Special Provision affected: 401-R-541 JOINT ADHESIVE	____ Create RSP (No._____) Effective _____Letting RSP Sunset Date:
Standard Drawing affected: NONE	_X_ Revise RSP (No. 401-R-581) Effective Feb. 01, 2015 Letting RSP Sunset Date: Sep. 01, 2015
Design Manual Sections affected: NONE	_____ Standard Drawing Effective
GIFE Sections cross-references: NONE	_____ Create RPD (No. _____) Effective _____ Letting ____ GIFE Update

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS

REVISION TO STANDARD SPECIFICATIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: There is a long-standing recurring special provision, 108-R-148 Construction Equipment in Park Areas (since May 02, 1988), the use of which has been proofed long enough and it's time to be incorporated into Standard Specifications.

PROPOSED SOLUTION: To include statements from existing recurring special provision in 108.07 of Standard Specifications and to sunset mentioned provision with an effective date of the 2016 Specifications.

APPLICABLE STANDARD SPECIFICATIONS: 108.07

APPLICABLE STANDARD DRAWINGS:

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: None

APPLICABLE RECURRING SPECIAL PROVISIONS: 108-R-148

PAY ITEMS AFFECTED:

Submitted By: Mr. Pankow

Title:

Organization:

Phone Number:

Date: October 08, 2014

APPLICABLE SUB-COMMITTEE ENDORSEMENT:

REVISION TO STANDARD SPECIFICATIONS

108.07 CHARACTER OF WORKERS, METHODS, AND EQUIPMENT

The Standard Specifications are revised as follows:

SECTION 108, AFTER LINE 303, INSERT AS FOLLOWS:

Construction equipment, which is used ~~on the work~~ in recreational areas, shall not be left parked in existing parking areas or on existing park road pavements except as may be necessary during the time construction work is in progress. All damage to such roadways or parking lot pavements caused by equipment, such as gouge marks or petroleum leakage, shall be repaired with no additional payment in accordance with the applicable requirements of 107.14 or as directed.

(Note: RSP proposed to sunset its use with 2016 Standards Specifications. Basis for Use: Required for all park contracts.)

108-R-148 CONSTRUCTION EQUIPMENT IN PARK AREAS

(Revised 05-23-13)

The Standard Specifications are revised as follows:

SECTION 108, AFTER LINE 303, INSERT AS FOLLOWS:

Construction equipment shall not be left parked in existing parking areas or on existing park road pavements except as may be necessary during the time construction work is in progress. All damage to such roadways or parking lot pavements caused by equipment, such as gouge marks or petroleum leakage, shall be repaired with no additional payment in accordance with the applicable requirements of 107.14 or as directed.

COMMENTS AND ACTION

108.07 CHARACTER OF WORKERS, METHODS, AND EQUIPMENT

DISCUSSION:

Mr. Pankow introduced and presented this item asking that the language in this RSP be incorporated into the 2016 Standard Specifications Book, as revised.

Motion: Mr. Pankow Second: Mr. Walker Ayes: 9 Nays: 0 FHWA Approval: YES	Action: ____ Passed as Submitted _X_ Passed as Revised ____ Withdrawn
Standard Specifications Sections affected: 108.07 pg 83. Recurring Special Provision affected: 108-R-148 CONSTRUCTION EQUIPMENT IN PARK AREAS Standard Drawing affected: NONE Design Manual Sections affected: NONE GIFE Sections cross-references: NONE	_X_ 2016 Standard Specifications _____ Revise Pay Items List _____ Create RSP (No._____) Effective _____ Letting RSP Sunset Date: _____ Revise RSP (No._____) Effective _____ Letting RSP Sunset Date: _____ Standard Drawing Effective _____ Create RPD (No. _____) Effective _____ Letting _____ GIFE Update

Ms. Phillips
Date: 11/21/14

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS

REVISION TO STANDARD SPECIFICATIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: RSP 724-B-145 for Expansion Joint Sealing System is outdated and in need of revision to bring the contents up to current Specification standards.

PROPOSED SOLUTION: Revise the RSP to eliminate metric equivalents, revise the language to current Chapter 19 requirements and include the pay item description.

APPLICABLE STANDARD SPECIFICATIONS: 724

APPLICABLE STANDARD DRAWINGS:

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE:

APPLICABLE RECURRING SPECIAL PROVISIONS: RSP 724-B-145

PAY ITEMS AFFECTED: 724-11939, Expansion Joint Sealing System, EACH

Submitted By: Elizabeth Phillips

Title: Bridge Standards and Policy Supervisor

Organization: Indiana Department of Transportation

Phone Number: 317-232-6775

Date: October 28, 2014

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Adhoc

REVISION TO SPECIAL PROVISIONS

724-B-145 EXPANSION JOINT SEALING SYSTEM

724-B-145 EXPANSION JOINT SEALING SYSTEM

(Revised xx-xx-xx)

Description

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

Materials

The materials for this work shall be supplied by:

Silicone Specialties, Inc.
P.O. Box 50009
Tulsa, OK 74150
Telephone (918) 587-5567
www.ssicm.com

Dow Corning Corporation
P.O. Box 994
Midland, MI 48688-0994
Telephone (517) 496-6000

Watson Bowman Acme
95 Pineview Drive
Amherst, NY 14228
Telephone (716) 691-7566
www.watsonbowman.com

~~Or Approved Equal~~

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 ~~meet~~*be in accordance with* the following:

TEST	LIMITS	TEST METHOD
Extrusion Rate	200-550 G/minute	MILS S 8802
Specific Gravity	1.23-1.35	ASTM D 1475
Nonvolative Content	93% minimum	

and as installed at 77°F ~~(25°C)~~ and 50% relative humidity, after 48 h cure:

TEST	LIMITS	TEST METHOD

REVISION TO SPECIAL PROVISIONS

724-B-145 EXPANSION JOINT SEALING SYSTEM

Skin-over time	20 minutes, max.	
Joint Elongation	600% minimum	ASTM D 3583[1,2]
Joint Modulus	3-12 psi ~~(20.7-82.7 kPa)~~	ASTM D 3583[1,2]

[1] Section 114, modified with pull rate of 2 in./minimum ~~(50 mm/minimum)~~

[2] Joint size 1/2 in. by 1/2 in. by 2 in. ~~(13 mm by 13 mm by 50 mm)~~

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 ~~meet~~*be in accordance with* the following as supplied:

TEST	LIMITS	TEST METHOD
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 ~~(24°C, +/- 1°C)~~	
Color	Black	
Gel Time	25-50 minutes	AASHTO M-200

and as cured:

TEST	LIMITS	TEST METHOD
Elongation	40-55%	ASTM D 638[1]
Tensile Strength	900 psi min. ~~(6,205 kPa min.)~~	ASTM D 638[1]
Shore Hardness at ~~25°C (~~77°F~~)~~	45	ASTM D 2240

[1] Test method Type 1, molded specimens, 0.25 in. ~~(6.4 mm)~~ thick

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

TEST	LIMITS	TEST METHOD
Compressive Strength	2,200 psi min. ~~(15,170 kPa min.)~~	ASTM C 579[1]

REVISION TO SPECIAL PROVISIONS

724-B-145 EXPANSION JOINT SEALING SYSTEM

Bond Shear Strength	900 psi min.x ~~(4,825 kPa min)~~	ASTM C 882
Abrasion Resistance, Wear Index Table H-22	1.0 maximum	ASTM C 502
Compressive Stress	350 psi min. ~~(2,415 kPa min.)~~	
Resilience	70% minimum	

[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 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 ~~is~~*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 ~~is~~*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 ~~(16°C)~~ 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, ~~the Design/Builder shall provide 1~~*one* set of the manufacturer's instructions *shall be provided* to the Engineer not less than ~~1~~*one* week prior to the beginning of joint placement.

The nosing material shall be installed when the temperature is *a minimum of* 45°F ~~(7°C)~~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 ~~must~~*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 ~~on~~ *in* accordance with the manufacturer's recommendations. If the joint opening at the time of installation is less than 1 in. ~~(25 mm)~~ or greater than 3 in. ~~(75 mm)~~, 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 expansion joint sealing system will be measured by the linear foot ~~(meter)~~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 expansion joint sealing system will be paid for at the contract unit price per linear foot ~~(meter)~~for expansion joint sealing system, complete in place.

Payment will be made under:

Pay Item	***Pay Unit Symbol***
Expansion Joint Sealing System	*EACH*

The cost of concrete removal, sealant material, nosing materials if required, backer rods, and all other materials shall be included in

REVISION TO SPECIAL PROVISIONS

724-B-145 EXPANSION JOINT SEALING SYSTEM

the *expansion joint sealing system* pay item~~ expansion joint sealing system~~.

COMMENTS AND ACTION

724-B-145 EXPANSION JOINT SEALING SYSTEM

DISCUSSION:

This item was introduced and presented by Ms. Phillips who expressed the need for the shown editorial revisions to RSP-B-145.

Mr. Koch expressed that this system is less than desirable, and suggested incorporating a warranty requirement. Ms. Phillips asked what alternatives would be available, and that this is to merely bring the language up to current spec requirements.

Mr. Walker asked about the approved materials, following Ms. Phillips' question on the "approved equal" language. Following much discussion, the "or approved equal" language has been struck out. Ms. Phillips motioned that this be approved as revised, and Ms. Gottschalk seconded that motion.

Motion: Ms. Phillips Second: Ms. Gottschalk Ayes: 9 Nays: 0 FHWA Approval: YES	Action: _____ Passed as Submitted _X_ Passed as Revised _____ Withdrawn
Standard Specifications Sections affected: NONE	_____ 2016 Standard Specifications _____ Revise Pay Items List
Recurring Special Provision affected: 724-B-145 EXPANSION JOINT SEALING SYSTEM	_____ Create RSP (No._____) Effective _____ Letting RSP Sunset Date:
Standard Drawing affected: NONE	_X_ Revise RSP (No.724-B-145) Effective Feb. 01, 2015 Letting RSP Sunset Date:
Design Manual Sections affected: NONE	_____ Standard Drawing Effective
GIFE Sections cross-references: NONE	_____ Create RPD (No. _____) Effective _____ Letting _____ GIFE Update

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS

REVISION TO SPECIAL PROVISIONS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: INDOT has had difficulty with compliance with Rule 5 on various projects. Current specifications require the designer to include adequate items and quantities in the contract. The contractors phasing of earthwork is difficult for the designer to anticipate leading to the included E&SC plan and quantities not matching field conditions.

PROPOSED SOLUTION: The proposed revision to the 205 section reflects a new approach to E&SC on INDOT projects. The contractor will be required to develop the revised SWPPP as a pay item. SWPPP to be submitted as part of the Quality Control Plan for E&SC giving the contractor more ownership in the implementation of the plan. Features to be paid using established prices for commonly used BMPs allowing their use on an 'as needed' basis without the need for negotiating a change order prior to use. Proposed revision to ITM 803 outlines the QCP expectations.

APPLICABLE STANDARD SPECIFICATIONS: 108.04 and all of 205

APPLICABLE STANDARD DRAWINGS: No Changes

APPLICABLE DESIGN MANUAL SECTION: 205,

APPLICABLE SECTION OF GIFE: Section 2, no revisions proposed.

APPLICABLE RECURRING SPECIAL PROVISIONS: If adopted these revisions will be included in a limited number of projects initially.

PAY ITEMS AFFECTED: E&SC Budget, E&SC QCP Preparation and Implementation, Mobilization and Demobilization for Surface Stabilization, Diversion Interceptor Type C will be added. The balance of the items in 205 will have an established price.

Submitted By: Greg Pankow

Title: State Construction Engineer

Organization: INDOT

Phone Number: 232-5502

Date: November 6, 2014

APPLICABLE SUB-COMMITTEE ENDORSEMENT: n/a

REVISION TO SPECIAL PROVISIONS
205-R-XXX QUALITY CONTROL TEMPORARY EROSION AND SEDIMENT CONTROL

205-R-XXX QUALITY CONTROL TEMPORARY EROSION AND SEDIMENT CONTROL

(Adopted XX-XX-XX)

The Standard Specifications are revised as follows:

SECTION 108, DELETE LINES 107 THROUGH 211.

SECTION 205, DELETE LINES 1 THROUGH 516.

SECTION 205, BEGIN LINE 1, INSERT AS FOLLOWS:

SECTION 205 - QUALITY CONTROL TEMPORARY EROSION AND SEDIMENT CONTROL

205.01 Description

This work shall consist of furnishing, installing, maintaining, and removing temporary erosion and sediment control measures in accordance with the approved contractor developed Erosion and Sediment Control Quality Control Plan.

MATERIALS

205.02 Materials

Materials shall be in accordance with the following:

Coarse Aggregate, Class F or Higher	*904*
Fertilizer	*914.03*
Filter Sock	*914.09(h)*
Geotextile	*918*
Grass Seed, Temporary	*914.02*
Manufactured Surface Protection Products	*205.04(c)*
Metal End Sections	*908.06*
Mulch	*914.05(a)*
Pipe Drains	*715.02(d)*
Plastic Net	*914.09(g)*
Revetment Riprap	*904**
Stakes	*914.09(b)*
Top Soil	*914.01*
Water	*914.09(a)*
Wire Staples	*914.09(f)*

**The minimum depth does not apply. Straw bales shall not weigh less than 35 lb. Bales shall be bound with wire or nylon twine.*

CONSTRUCTION REQUIREMENTS

205.03 General Requirements

The Contractor shall locate, install, maintain and remove temporary sediment and erosion control Best Management Practices, BMPs, for earth disturbing activity

areas, and develop a project specific Revised SWPPP in accordance with IAC 327 15-5. The SWPPP shall be developed as part of the E&SC Quality Control Plan, QCP. The SWPPP shall be developed by a professional engineer who also holds a current Certified Professional in Erosion and Sediment Control, CPESC, certification or approved equivalent. The SWPPP developer shall be familiar with the project site and develop the SWPPP in accordance with the site conditions. The SWPPP shall be revised as required. The Contractor shall furnish and install temporary sediment and erosion control best management practices in compliance with all National Pollutant Discharge Elimination System, NPDES, and surface water permits. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other Federal, State or local agencies the Contractor shall adhere to the more restrictive laws, rules, or regulations.

If a governmental agency or a local governmental authority finds a violation of NPDES or any surface water permits that were provided in the bid documents or that the BMPs are incomplete, or that the SWPPP is incomplete or that the implementation of the SWPPP is not performed or complete, full responsibility shall be borne by the Contractor to make corrections. In addition if an assessment, damage judgment or finding, agreed order, fine or any other expense for a violation of the contract requirements is leveled against the Department, the Contractor shall reimburse the ~~state~~State for that amount within 30 days. The Contractor agrees to indemnify and hold harmless the Department and will reimburse the Department for any assessments, damage judgments or finding, fine, penalty or other expense relating to this portion of the contract. The Department may withhold the amount owed from the Contractor's subsequent pay estimates. Delays caused by stop work orders from regulatory agencies, suspension of work orders from the Department, or any other delays caused by inadequate submittals or implementation will be considered Non-Excusable Delays in accordance with 108.08(c).

(a) Storm Water Quality Manager

The Contractor shall designate one person as Storm Water Quality Manager, SWQM. The SWQM shall be responsible for ensuring the preparation, submittal, and receipt of the approved QCP. The SWQM shall be responsible for the installation, maintenance, and removal of all erosion and sediment control measures and shall be in responsible charge of the weekly and post-event inspections. The inspections shall be documented in the erosion and sediment control inspection report form provided by the Engineer and available on the Department's website. The SWQM shall attend the preconstruction conference and at least one scheduling meeting per calendar month when earth disturbing activities are a significant work activity. The SQWM shall accompany personnel from IDEM or other governmental agencies, as required, during site visits by those agencies. The SWQM shall be responsible for completion of all inspection reports. The name of the SWQM shall be furnished to the Engineer at, or prior to, the preconstruction meeting. If the designated individual needs to be replaced during the contract time, the replacement shall be designated within 24 h and notification shall be furnished to the Engineer.

REVISION TO SPECIAL PROVISIONS

205-R-XXX QUALITY CONTROL TEMPORARY EROSION AND SEDIMENT CONTROL

For contracts that have had a Notice of Intent, NOI, filed per 327 IAC-15-5 or require a 401/404 or any other waterway permit, the SWQM shall have attended the ~~INDOT~~Department's Construction Storm Water Certification course, or be certified as a Certified Erosion Sediment and Stormwater Inspector, CESSWI, or CPESC by Envirocert, Inc. or an approved equal.

(b) Design

The Contractor shall prepare and implement the project QCP for all temporary erosion and sediment control measures in accordance with 327 IAC 15-5, Chapter 205 of the Indiana Department of Transportation Design Manual, the IDEM "Indiana Storm Water Quality Manual", and all other applicable contract documents. The Contractor shall incorporate into his SWPPP all included plan sheets for temporary erosion and sediment control. The QCP shall include the Contractor's Revised SWPPP and plan to comply with all known permit requirements applicable to the construction phase of the project included in the NOS, 401/404 and all other permits as well as those required by the Contractor in accordance with 107.01. The Contractor's SWPPP shall be stamped by the SWPPP developer as defined above. The SWPPP developer shall issue clarifications, and correct errors and omissions as required. The SWPPP shall address the construction phasing and include the proper sequencing of installation of temporary erosion and sediment control measures for the protection of Waters of the United States and off-site sedimentation. The plan shall address the installation, maintenance, and removal sequencing of temporary erosion and sediment control measures during construction of the proposed project and shall also include haul roads, stockpile sites, equipment storage sites, plant sites, and borrow and disposal sites as applicable. A copy of the Notice of Sufficiency, NOS, that includes operations at offsite stockpile, borrow, waste, or storage areas shall be submitted to the Engineer prior to operations at those sites. Electronic files of any plan sheets and narratives shall be provided in .pdf format.

The Contractor may elect to prepare and submit the SWPPP in multiple phases, the first phase showing location, installation, and maintenance of temporary sediment and erosion control BMPs for the existing topography of the project during clearing activities prior to earth moving activities for the remaining construction. Additional phases shall show the progression from the existing topography to the final grade. The first phase of the SWPPP may be submitted prior to the subsequent phases, however no earth moving work or any other work not shown and approved in the first phase shall begin until approval of the additional phases of the SWPPP. Each phase of the SWPPP shall be modified to meet existing field conditions as needed.

(c) QCP Preparation and Implementation

The QCP shall be prepared by or under the supervision of the SWQM and in accordance with ITM 803, Contractor Quality Control Plans. The QCP shall include a discussion of how the Contractor intends to comply with the requirements as outlined in this section.

The QCP shall be submitted to the Engineer for review. If the Contractor elects to

REVISION TO SPECIAL PROVISIONS

205-R-XXX QUALITY CONTROL TEMPORARY EROSION AND SEDIMENT CONTROL

submit the first phase of the SWPPP prior to the complete QCP, it shall be submitted 15 days prior to the beginning of clearing activities. The complete QCP including at least the SWPPP for the next phase of work shall be submitted to the Engineer at least 15 days prior to commencing earth moving activities. No earth moving activity shall begin until after the QCP has been received and approved by the Department. The cost of the QCP shall be included in the cost of E&SC QCP Preparation and Implementation.

The item E&SC Budget is included in the schedule of pay items to establish a budget to fund payment of the items listed in 205.11 with an established price. The Contractor shall provide a cost summary using the prices shown in 205.11in spreadsheet format as the cost proposal for implementing the QCP.

At a minimum the SWPPP shall include the following:

1. *Locations of all proposed top soil stockpiles.*

2. *Locations of all proposed equipment storage areas, fueling locations, construction trailers, batch plants, and designated concrete truck washout areas.*

3. *Proposed construction sequence and phasing of erosion control measures.*

4. *Locations and design flow from offsite areas that drain onto project limits. The QCP design shall include BMPs properly sized and placed to accommodate runoff from outside of the project limits and the drainage quantity from within the project limits.*

5. *Location of all construction entrances where vehicles and equipment will enter and exit the site.*

6. *Material handling and spill prevention plan.*

7. *Statements that the erosion control measures for the project shall, at a minimum, be inspected on a weekly basis and within 24 h of every 1/2 in. rain event.*

8. *Provisions to ensure that pollutants such as fuels, lubricants, asphalt, sewage, wash water, or waste from concrete mixing operations, and other harmful materials shall not be discharged into existing bodies of water.*

9. *Provisions to ensure that all applicable regulations and statutes relating to the prevention and abatement of pollution shall be complied with in the performance of the contract.*

REVISION TO SPECIAL PROVISIONS

205-R-XXX QUALITY CONTROL TEMPORARY EROSION AND SEDIMENT CONTROL

10. *Statement that all appropriate erosion control items shall be in place prior to disturbing the project site.*

When Waters of the United States are located within the project limits the following shall also be addressed in the SWPPP:

1. *A method for delineating the boundaries of the waters of the US as shown on the plans.*

2. *When work areas are located in or adjacent to bodies of water, all work in those locations shall be conducted in strict compliance with all conditions as outlined in the 401/404 permit~~(s)~~.*

The installation of temporary erosion and sediment control measures shall include those necessary or required by permits at off-site locations such as borrow and disposal areas, field office sites, batch plants, locations where the Contractor's vehicles enter and leave public roads, and other locations where work pertaining to the contract is occurring. The Contractor's SWQM shall be responsible for the installation, inspection, and maintenance of these measures. Temporary erosion control measures shall be placed as soon as practicable. Perimeter protection and sediment traps shall be installed prior to beginning earth disturbing activities. Pipe end sections and anchors shall be installed when the structure is installed. If the pipe end sections or anchors cannot be placed at the same time, temporary riprap splashpads shall be placed at the outlets of the pipes until end sections or anchors can be installed.

Adjustments of the erosion and sediment control measures shall be made to satisfy field conditions and shall be subject to the Engineer's approval. Adjustments made to meet field conditions shall be made as soon as practicable and shall be maintained as necessary.

The Contractor shall provide a stable construction entrance at the points where construction traffic will enter onto an existing road. Additional stone may be required, as directed by the Engineer. Where there is insufficient space for a stable construction entrance, other measures shall be taken to prevent the tracking of sediment onto the pavement. These temporary entrances shall be the responsibility of the Contractor to completely install, maintain, and remove.

The Contractor shall provide concrete washout facilities of adequate capacity in accordance with project requirements. The concrete washout shall be located as far from surface waters as practical, and shall be able to contain all liquid and solid material from concrete truck or mixer washing operations without contacting or contaminating the ground.

The Contractor shall employ dust control measures in accordance with 107.08(b).

(d) Permanent Erosion Control Features

Permanent erosion control measures shall be incorporated into the work at the earliest practicable time.

205.04 Temporary Surface Stabilization

Non-vegetated areas shall be temporary stabilized if the area remains inactive for more than seven days or as directed by the Engineer. The area will be considered inactive when no meaningful work toward accomplishing a pay item has been performed at a site of disturbed soil.

(a) Seed

Temporary seeding shall be placed on disturbed areas that are expected to be inactive for more than seven days, or as directed. Seed shall be placed either by drilling in, spraying in a water mixture, or by use of a mechanical method which places the seed in direct contact with the soil. Where inaccessible to mechanical equipment, or where the area to be seeded is small, a hand operated cyclone seeder or other approved equipment may be used. Seed shall not be covered more than 1/2 in. Seed may be distributed by a drill seeder, cyclone seeder, hand or other approved equipment which allows for even distribution of the seed. If as a result of a rain event, the prepared seed bed becomes crusted or eroded, or ruts, or depressions exist, the soil shall be reworked until it is smooth. Reworked areas shall be re-seeded. All seeded areas shall be mulched within 24 h after seeding.

Seed mixture T shall be used for surface stabilization and temporary ground cover. Temporary cover mixtures shall be placed as directed and be subject to seasonal limitations as defined herein. This mixture is not intended to be used as a permanent seed mixture. This mixture shall not be used to satisfy the requirements of the warranty bond.

The mix shall be spray mulched where the slope is steeper than 3:1. From June 16 through August 31, mulching alone shall be used to stabilize the soil.

1. Spring Mix

Spring mix shall be used from January 1 through June 15. This mixture shall be applied at the rate of 150 lb/ac. The mix shall consist of oats.

2. Fall Mix

Fall mix shall be used from September 1 through December 31. This mixture shall be applied at the rate of 150 lb/ac. This mix shall consist of winter wheat.

Where directed, fertilizer shall be spread uniformly over the area to be seeded and shall be applied at 1/2 the rate shown in 621.05(a) unless otherwise directed. Fertilizer shall only be applied during the active growing season March through November.

REVISION TO SPECIAL PROVISIONS

205-R-XXX QUALITY CONTROL TEMPORARY EROSION AND SEDIMENT CONTROL

(b) Mulch

Mulch shall be applied uniformly in a continuous blanket at the rate of 2.5 t/ac. If seeded, mulch shall be placed within 24 h after seeding. The percent of moisture in the mulch shall be determined in accordance with 621.14(c).

Mulch shall be punched into the soil so that it is partially covered. The punching operation shall be performed longitudinally to the slope. The tools used for punching purposes shall be disks that are notched and have a minimum diameter of 16 in. The disks shall be flat or uncupped. Disks shall be placed a minimum of 8 in. apart. Shaft or axle sections of disks shall not exceed 8 ft in length.

The disk for punching shall be constructed so that weight may be added or hydraulic force may be used to push puncher into the ground. An even distribution of mulch shall be incorporated into the soil.

On a slope of 3:1 or steeper but flatter than 2:1, or where specified, temporary mulch stabilization shall also be used. Unless otherwise specified, the following types may be used.

1. Type A

The mulch shall be held in place by means of commercially produced water borne mulch binder product. The product shall be manufactured and used in accordance with all applicable State and Federal regulations. Such product shall be applied in accordance with the manufacturer's written instructions. A copy of the written instructions shall be supplied to the Engineer prior to the seeding work. The product shall include a coverage indicator to facilitate visual inspection for evenness of application. If the mulch fails to stay in place, the Contractor shall repair all damaged areas.

2. Type B

The mulch shall be held in place with binder twine fastened down with wooden pegs not less than 6 in. long spaced 4 ft apart. The twine shall be placed parallel to and also at 60° to the pavement edge in both directions. The distance between the intersections of the diagonal strands measured along the strands shall be 12 ft. The strand parallel to the pavement shall cross the diagonal strands at their intersections to form equilateral triangles of 12 ft on a side.

3. Type C

The mulch shall be held in place with a polymeric plastic net. The plastic net shall be unrolled such that it lays out flat, evenly, and smoothly, without stretching the material. The plastic net shall be held in place by means of wire staples. The wire staples shall be driven at a 90° angle to the plane of the soil slope. Staples shall be spaced not more than 4 ft apart with rows alternately spaced. The plastic net shall be secured along the top and bottom of the soil slope with staples spaced not more than 1 ft on center. The ends and edges of the plastic net shall be overlapped approximately 4 in. and stapled.

Overlaps running parallel to the slope shall be stapled 1 ft on center and overlaps running perpendicular to the slope shall be stapled at least 3 ft on center. The plastic net shall be placed with the length running from top of slope to toe of slope, or the plastic net shall be placed with the length running horizontally or parallel to the contour.

On a slope of 2:1 or steeper, or where specified, a manufactured surface protection product shall be used.

(c) Manufactured Surface Protection Products

The following manufactured surface protection products may be used for covering an area that has not been seeded. Soil cover shall not be used to cover seeded areas. Prior to placing the manufactured surface protection product, the area to be covered shall be free of all rocks or clods of over 1 1/2 in. in diameter, and all sticks or other foreign material, which prevent the close contact of the blanket with the seed bed.

After the area has been properly shaped, fertilized, and seeded, the manufactured surface protection product shall be laid out flat, evenly, and smoothly, without stretching the material.

1. Excelsior Blanket

An excelsior blanket may be used as mulch for seeding where seeding is specified or where erosion control blanket is specified. Excelsior blankets shall be placed within 24 h after seeding operations have been completed. Excelsior blankets shall be installed in accordance with the manufacturer's recommendation.

2. Straw Blanket

A straw blanket may be used as mulch for seeding where mulched seeding is specified or where erosion control blanket is specified. Straw blankets shall be placed within 24 h after seeding. The straw blanket shall be unrolled over the designated area so that the plastic mesh is on top and the straw fibers are snugly and uniformly in contact with the soil surface. The rolls shall be butted together and stapled in place. The staples shall be driven through the blanket at a 90° angle to the plane of the ground surface. Each staple shall anchor the plastic mesh. The staples shall be spaced per the manufacturer's recommendation.

For placement on a slope, the straw blankets shall be placed with the length running from the top of slope to the toe of slope and shall extend a minimum of 3 ft over the crown of the slope. The blanket shall be stapled in accordance with the manufacturer's recommendation.

For placement in ditch lines, the straw blanket shall be unrolled parallel to the centerline of the ditch. The blanket shall be placed so that there are no longitudinal seams within 24 in. of the bottom centerline of the ditch. In a ditch line, the blanket shall be stapled in accordance with the manufacturer's recommendation with a minimum of six staples across the upstream end of each roll.

3. Rolled Erosion Control Products

Where directed, the Contractor shall install, or with approval of the Engineer, the Contractor may use degradable rolled erosion control products, RECP, including netting, open weave textile, and erosion control blankets.

Unless soil infilling is required, seed shall first be applied in accordance with 621. If soil infilling is required, RECP shall be first installed and then seed applied and brushed or raked 1/4 to 3/4 in. of topsoil into voids in the RECP filling the full product thickness. Staples of at least 6 in. in length shall be used to secure the RECP. The RECP shall be unrolled parallel to the primary direction of flow and placed in direct contact with the soil surface. RECP shall not bridge over surface inconsistencies. Edges of adjacent RECP shall be overlapped by 2 to 4 in. Staples shall be placed to prevent seam separation in accordance with the manufacturer's recommendations.

4. Geotextile

Where directed or as shown on the SWPPP, disturbed soil shall be covered with geotextile. The covering shall be placed over the exposed soil in a shingle like fashion with a 2 ft minimum overlap covering all loose or disturbed soil. The geotextile, if new, shall be in accordance with 918.02. The geotextile used for soil covering need not be new but shall not have holes or unrepaired rips or tears. All repairs shall be made in accordance with the manufacturer's recommendation.

205.05 Concentrated Flow Protection

(a) Check Dam

Check dams and modified check dams shall be constructed as shown on the plans. Geotextile for check dams shall be in accordance with 616 unless otherwise specified. Temporary revetment riprap shall be in accordance with 616. No. 5 and No. 8 filter stone shall be in accordance with 904.

(b) Check Dam, Traversable

Traversable check dams shall be composed of straw bales, 8 in. minimum diameter fiber rolls, or 8 in. minimum diameter socks filled with straw, ground wood chips, shredded bark, or other approved material for site specific conditions. Rolls and socks may be stacked in a triangle pattern as shown on the plans. Check dams shall be staked as shown on the plans or as directed by the manufacturer. Check dams shall be configured to eliminate gaps between sections. Straw bales shall be placed such that the bindings are parallel to and not in contact with the ground.

(c) Diversion Interceptors

Grading for diversion interceptors shall be in accordance with 203 with the exception that compaction requirements will not apply. The Contractor shall identify, in the SWPPP, the construction areas which shall utilize diversion type A or B. Slope drains shall be provided at the low points of the diversion interceptor. If required in the SWPPP,

perimeter diversion, type C shall be installed prior to earth moving activities and shall be immediately stabilized. Type A or B shall be stabilized if anticipated to be left in place for more than seven calendar days. Stabilization methods shall be as shown in the SWPPP or as directed by the Engineer.

(d) Sediment Traps

Sediment Traps shall be constructed with revetment riprap, filter stone and geotextile.

(e) Sediment Basins

Embankment construction shall be in accordance with 203. Temporary Revetment riprap used for overflow protection shall be in accordance with 904, unless otherwise specified. Sediment basins shall be constructed as shown on the plans, or as directed. Sediment basins shall be designed to provide a minimum storage volume to contain the runoff from a 10 year 24 h storm event.

(f) Slope Drains

Slope drain pipes shall be lengthened as required due to the construction of the embankment.

(g) Vegetative Filter Strips

Designated vegetative filter strips shall not be disturbed. Small rills that form shall be repaired. Fertilizer shall be applied as directed.

(h) Splashpads

Splashpads shall be constructed with revetment riprap with geotextile.

(i) Inlet Protection

All deck and curb drains shall have sediment control measures when the structure or road is to be used for hauling operations or adjacent to disturbed areas. Copies of all current manufacturers' installation manuals shall be provided prior to installation.

205.06 Perimeter Protection

(a) Silt Fence

Shipping, handling and storage shall be in accordance with the manufacturer's recommendations. The silt fence material shall be in accordance with 918.04. The silt fence material will be rejected if it has defects, tears, punctures, flaws, deterioration, or damage incurred during manufacture, transportation, storage, or installation. Each roll shall be labeled or tagged to provide product identification.

Joints shall be made from the ends of each section of fence wrapped around a wood stake and joined together or other method recommended by the manufacturer. Copies of all current manufacturer manuals shall be provided prior to installation.

(b) Filter Berm

A filter berm shall be installed as shown on the plans or in the SWPPP. The filter berm may be constructed of organic mulch, filter sock, or No. 5 and No. 8 filter stone.

205.07 Maintenance

Temporary erosion and sediment control measures shall be inspected, at a minimum, once every seven days and after a 1/2 in. rain event. Inspections shall be documented and records shall be maintained by the Contractor, to be submitted to the Engineer on the next business day following the inspection. The temporary protection measures shall be returned to working conditions within 48 h after inspection or as directed. The Contractor shall rebuild or repair damaged temporary erosion and sediment control measures.

(a) Silt Fence

If the fence fabric tears, starts to decompose, or becomes ineffective, the affected portion shall be replaced. Deposited sediment shall be removed once it reaches 1/2 the height of the fence at its lowest point. Once the contributing drainage area has been stabilized, the Contractor shall remove the fence and sediment deposits, grade the site to blend with the surrounding area, and stabilize the graded area.

(b) Sediment Basin

Sediment shall be removed once it has accumulated to ½ the design volume. The filter stone around the riser pipe shall be replaced if the sediment pool does not drain within 72 h following a stormwater runoff event.

(c) Filter Berm

Accumulated sediment shall be removed once it reaches 1/4 of the height of the filter berm. The filter berm shall be inspected to ensure that it is holding its shape and allowing adequate flow. Eroded and damaged areas shall be repaired.

(d) Inlet Protection

Accumulated sediment shall be removed once identified and after each storm event. Flushing with water will not be allowed. The sediment shall not be allowed to re-enter the paved area or storm drains. Curb inlet inserts shall be cleaned in accordance with the manufacturer's recommendations.

(e) Sediment Traps

Following each storm event, the Contractor shall repair slope erosion and piping holes as required. Sediment shall be removed once it has accumulated to 1/2 design volume. The Contractor shall replace the coarse aggregate filter stone if the sediment pool does not drain within 72 h following a stormwater runoff event.

(f) Concrete Washout

The containment system shall be inspected for leaks, spills, and tears, and shall be repaired or replaced as necessary. The Contractor shall ensure that each containment

system maintains adequate capacity. Solidified waste concrete shall be disposed of in accordance with 202.

(g) Check Dams

Sediment shall be removed once it reaches 1/2 the height of the check dam. Sediment shall be removed and disposed of in accordance with 201.03 and 203.08. The Contractor shall rebuild or repair each damaged check dam to maintain the design height, cross section, and erosion control function.

205.08 Quality Adjustments

If maintenance deficiencies are not remedied within 48 h after identifying them in the inspection or as directed, the Contractor may be assessed damages for failure to maintain the required temporary erosion and sediment control. For each day, during which the following units of temporary erosion and sediment control are in an unsatisfactory condition, a quality adjustment, in accordance with 109, will be assessed as shown for each day, per unsatisfactory unit.

If conditions do not allow the Contractor access to the location of the erosion or sediment control features using normal equipment and maintenance has been directed, the Contractor may propose a written alternate schedule, within 48 h, to bring the erosion and sediment control features back into compliance. Damages may be assessed based on compliance with the approved schedule.

(a) Silt Fence: $100.00 per each contiguous 100 ft section or portion thereof
(b) Check Dam: $100.00 per check dam
(c) Sediment Basin: $100.00 per basin
(d) Sediment Trap: $100.00 per trap
(e) Inlet Protection Devices: $100.00 per unit
(f) Failure to inspect site per 327 IAC requirements: $100.00 per required inspection
(g) Failure to temporary stabilize non-vegetated areas: $100.00 per acre or portion thereof
(h) Failure to correct identified deficiencies not defined above: $100 per day per measure

Silt fence will be considered unsatisfactory if the fence material has an exposed cut or tear exceeding 1 ft in length, a seam has separated or the retained sediment exceeds 1/2 of the height of the fence.

Check dams, sediment basins and sediment traps will be considered unsatisfactory if they no longer perform their function, or the retained sediment exceeds 1/2 of the design volume.

Inlet protection devices will be considered unsatisfactory if they no longer perform their function, or the accumulated sediment exceeds 1/2 of the capacity of the device.

205.09 Removal

Temporary erosion and sediment control measures shall remain in place until directed to be removed. The Contractor shall remove and dispose of all excess silt accumulations, dress the area, and vegetate all bare areas in accordance with the contract requirements. Use or disposal of temporary erosion and sediment control measures shall be as directed.

205.10 Method of Measurement

Temporary Silt fence and check dams, traversable will be measured by the linear foot. Temporary Sediment basins will be measured by each. Temporary Revetment riprap check dams, temporary sediment traps, and splashpads will be measured by the ton. Temporary filter stone will be measured by the ton. Temporary mulch will be measured by the ton. Temporary mulch stabilization will be measured by the square yard. Temporary seeding will be measured by the pound. Temporary geotextile used as a manufactured surface protection product will be measured by the square yard, and only once for the maximum square yardage in place at one time, regardless of the number of times the material is moved. Removal of sediment will be measured by the cubic yard. Temporary revetment riprap will be measured by the ton. Temporary slope drains will be measured by the linear foot, and only once for the maximum footage in place at one time, per drain location regardless of the number of times the material is moved. Temporary Inlet protection will be measured per each unit installed. Temporary Filter berms will be measured by the linear foot complete in place. Filter sock will be measured by the linear foot, complete in place. Concrete washouts will not be measured separately. No. 2 stone for stable construction entrances will be measured by the ton. Revetment riprap and filter stone used in sediment basins will be measured by the ton. Fertilizer will be measured by the ton. Manufactured surface protection product, type will be measured by the square yard. Mobilization and demobilization for surface stabilization will be measured per each trip as provided in the SWPPP, or as directed, to the project site. Standard metal end sections will be measured by each.

Diversion interceptors type A and B, and interceptor ditches will not be measured for payment. Diversion interceptors type C will be measured by the linear foot.

BMPs used at the off-site locations designated in 205.03 will not be measured for payment.

Excavation for detention ponds, temporary sediment traps and temporary sediment basins will be measured as common excavation in accordance with 203.27.

Weekly Inspections will be measured by each for inspections conducted after the contract completion date. E&SC QCP Preparation and Implementation will not be measured.

205.11 Basis of Payment

The accepted quantities of silt fence will be paid for at the established unit price per linear foot, complete in place. Temporary mulch will be paid at the established unit price by the ton. Temporary mulch stabilization will be paid for at the established unit price by the square yard. Temporary seeding will be paid for at the established unit price per pound. Temporary geotextile will be paid at the established unit price by the square yard. Temporary check dams, revetment riprap, temporary sediment trap and splashpads will be paid for at the established unit price by the ton. Temporary filter stone will be paid for at the established unit price by the ton. Temporary check dams, traversable will be paid for at the established unit price by the linear foot. Temporary revetment riprap will be paid for at the established unit price by the ton. Temporary filter berms will be paid at the established unit price by the linear foot. Temporary entrances utilized by the Contractor for borrow and waste areas will not be paid for directly. Temporary slope drains will be paid for at the established unit price by the linear foot. Removal of sediment will be paid for at the established unit price per cubic yard. Temporary inlet protection will be paid for at the established unit price per each unit installed. Filter sock will be paid for at the established unit price by the linear foot. Diversion Interceptors, type C will be paid by the linear foot at the established unit price. No. 2 stone for stable construction entrances will be paid for at the established unit price by the ton. Revetment riprap and filter stone used in sediment basins will be paid for at the established unit price by the ton. Fertilizer will be paid for at the established unit price by the ton. Manufactured surface protection product type, will be paid for at the established unit price by the square yard. Payment for mobilization and demobilization for surface stabilization will be paid at the established unit price per each and will be made for the initial movement to the project site for each occurrence as provided in the SWPPP, or as directed, so that temporary seeding, mulching or other surface stabilization is performed. Payment for standard metal end sections will be at the established unit price per each.

The accepted quantities of excavation for detention ponds, temporary sediment traps and temporary sediment basins will be paid for as common excavation in accordance with 203.28

Weekly Inspections will be paid at the established unit price by each for inspections conducted after the contract completion date. No payment will be made for inspections during the time when Liquidated Damages in accordance 108.09 are assessed.

The Department will pay for those items listed in 205.11 with Established Prices in the quantities installed and as shown in the department approved QCP at the established price. The Department will include the pay item E&SC Budget, with an amount, in the proposal to pay for BMP work. The fixed amount shown in the proposal is

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205-R-XXX QUALITY CONTROL TEMPORARY EROSION AND SEDIMENT CONTROL

included in the Total Bid Amount. This fixed amount is the Department's estimate of the total cost of the BMP work required to be performed for the contract. If the BMP work exceeds this amount, the BMP work will be paid at the pre-determined prices. Other BMPs required to implement the QCP will be considered in accordance with 104.03.

The item E&SC QCP Preparation and Implementation will be paid as a Lump Sum. The item will be considered 60% complete when approved by the Engineer. 60% of the bid price will be paid when the QCP is approved. The balance will be paid as the plan is implemented. 5% of the bid price will be paid in each subsequent progress payment until 100% of the bid price has been reached.

BMPs required for permit compliance will be considered in accordance with 104.03.

The Department will pay to replace BMPs that have failed during a rain event at the unit price shown in 205.11 if those BMPs had been adequately designed based on the watershed, installed correctly, and maintained when needed.

Items shown with an Established Price will be paid at the price shown. If any of the following items are shown in the schedule of pay items the bid item and price will prevail over the established price.

Payment will be made under:

Pay Item	***Pay Unit Symbol***	***Established Price***
Diversion Interceptor Type C	*LFT*	*$20.00*
E&SC Budget	*DOL*	
E&SC QCP Preparation and Implementation	*LS*	
Fertilizer	*TON*	*$725.00*
Filter Sock	*LFT*	*$5.00*
Manufactured Surface Protection Product, _____ type	*SYS*	*$1.25*
Mobilization and Demobilization for Surface Stabilization	*EACH*	*$650.00*
No. 2 Stone	*TON*	*$25.00*
Sediment, Remove	*CYS*	*$20.00*
Splashpad	*TON*	*$55.00*
Standard Metal End Section	*EACH*	*$340.00*
Temporary Check Dam, Revetment Riprap	*TON*	*$50.00*
Temporary Check Dam, Traversable	*LFT*	*$15.00*
Temporary Filter Berm	*LFT*	*$15.00*
Temporary Filter Stone	*TON*	*$40.00*
Temporary Geotextile	*SYS*	*$2.50*
Temporary Inlet Protection	*EACH*	*$100.00*

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Temporary Mulch	*TON*	*$400.00*
Temporary Mulch Stabilization, _____ type	*SYS*	*$0.25*
Temporary Revetment Riprap	*TON*	*$50.00*
Temporary Sediment Basin	*EACH*	*$3,000.00*
Temporary Sediment Trap	*TON*	*$40.00*
Temporary Seed	*LBS*	*$2.50*
Temporary Silt Fence	*LFT*	*$2.00*
Temporary Slope Drain	*LFT*	*$20.00*
Temporary Underdrain Outlet Pipe	*LFT*	*$5.00*
Weekly Inspection	*EACH*	*$400.00*

The payment for temporary silt fence includes trenching, backfilling, posts, fencing, and all necessary incidentals.

The costs for diversion interceptor types A and B and interceptor ditches shall be included in the cost of the earth moving items.

The payment for temporary check dams, traversable includes stakes, trenching, backfilling, posts, and all necessary incidentals.

The payment for temporary sediment basin includes all costs involved with construction of the basin except for the excavation, which ~~is~~ will be paid as common excavation in accordance with 203.28, and the use of revetment riprap and filter stone, which are separate pay items.

The payment for temporary sediment trap is to include all costs involved with construction of the trap except for the excavation, which will be paid as common excavation in accordance with 203.28.

The payment for temporary slope drain includes~~,~~ anchors and all incidentals necessary to perform the work.

The cost of materials, installation, inspection, maintenance, and removal of temporary erosion and sediment control measures at off-site locations designated in 205.03 will not be measured for payment.

Except for the removal of sediments, the payment for items in this section includes materials, installation, maintenance, removal and proper disposal of temporary erosion and sediment control items.

The cost of constructing, maintaining, and removal of the construction entrance, other than those constructed by the Contractor for borrow and waste sites, shall be included in the cost of No. 2 stone. No direct payment will be made for construction entrances for borrow and waste sites.

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Costs associated with concrete washout shall be included in the costs of the concrete pay items.

Payment for sediment removal includes costs associated with temporary filter stone replacement due to maintenance and sediment removal.

Costs associated with the weekly and post-event inspections and all other inspections conducted prior to the contract completion date are to be included in the costs of the other pay items of this section.

BACKUP 01

ADDITION TO ITM No. 803: 14.0 EROSION AND SEDIMENT CONTROL (DRAFT)

14.0 EROSION AND SEDIMENT CONTROL QCP.

14.1 Reference

14.1.1 IDEM Indiana Storm Water Manual

14.1.2 327 IAC 15-5,

14.1.3 Chapter 205 of the Indiana Department of Transportation Design Manual,

14.1.4 ASTM Standards - None

14.1.5 ITM Standards - None

14.2 Quality Control Technician. The Contractor shall designate one person as Storm Water Quality Manager (SWQM).

14.2.1 The SWQM shall be responsible for the preparation, submittal, and ensuring receipt of the approval of the QCP.

14.2.2 The SWQM shall be responsible for obtaining all other necessary permits including the wetland inspection and archaeological record check and field survey in accordance with 203.08, and for all environmental inspections.

14.2.3 The SWQM shall be responsible for the installation, maintenance, and removal of all erosion and sediment control measures and shall conduct weekly and post-event inspections.

14.2.4 The SQWM shall accompany personnel from IDEM or other governmental agencies, as required, during site visits by those agencies.

14.2.5 The SWQM shall be responsible for completion of all inspection reports.

14.3 QCP Preparation and Implementation. At a minimum the QCP shall include the SWPPP including all revisions to the SWPPP and the following:

14.3.1 A discussion of how changes in earth moving sequencing will be accommodated.

14.3.2 A list of expected materials that may be present on the site during construction operations, and a description of how these materials will be handled to

minimize the potential that the materials can enter the storm water runoff from the site.

14.3.3 Discussion of monitoring and maintenance plan for erosion control measures.

14.3.4 A discussion of the methods to be utilized to prevent pollutants such as fuels, lubricants, asphalt, sewage, wash water, or waste from concrete mixing operations, and other harmful materials from being discharged into existing bodies of water.

14.3.5 Discussion of how the contractor intends to accommodate the potential for erosion and movement of sediment as the earth disturbing activities progress from the existing topography to the final grades.

When Waters of the United States are located within the project limits the following shall be addressed in the QCP:

14.3.6 Method of ensuring compliance with all conditions as outlined in the 401/404 permit(s).

14.3.7 Statement that all waterways are to be cleared as soon as practicable of false-work, temporary piling, debris, or other obstructions placed during construction operations.

14.3.8 Provisions to ensure that any water from aggregate washing or other operations containing sediment shall be treated by filtration, a settling basin, or other means sufficient to reduce the sediment content.

14.4 Updates to the QCP. Adjustments of the erosion and sediment control measures shall be made to satisfy field conditions and shall be subject to the Engineer's approval. Adjustments made to meet field conditions shall be made as soon as practicable and shall be maintained as necessary.

14.5 Response to Inspection Deficiencies. Statement on how the contractor intends to repair or provide maintenance of any noted deficiencies.

14.6 Environmental Compliance. Provisions to comply with Indiana Bat tree clearing and fish spawning requirements shall be included in the plan.

BACKUP 01

ADDITION TO ITM No. 803: 14.0 EROSION AND SEDIMENT CONTROL (DRAFT)

QUALITY CONTROL PLAN FOR STORM WATER MANAGEMENT

REVISED STORM WATER POLLUTION PREVENTION PROTECTION PLAN (SWPPP) CHECKLIST

CONTRACT NO. _____ DATE _____

CONTRACTOR _____

REVISED SWPPP SIGNATURE PAGE

- ☐ Submitted ~~14~~ *15* days prior to work
- ☐ Revised SWPPP signed and dated by the Storm Water Quality Manager

STORM WATER QUALITY MANAGER

- ☐ Name
- ☐ INDOT certification and qualifications
- ☐ Telephone number
- ☐ Duties
- ☐ Signature on all inspection reports
- ☐ Employer
- ☐ ~~*~~ Notification of replacement within ~~7 days~~*24 hours*

OPERATIONS

- ☐ Phasing
- ☐ Attendance at progress meetings/communications plan
- ☐ Revised erosion and sediment control plan submitted to ~~IDEM and~~ INDOT-~~ES~~
- ☐ Stockpile planning
- ☐* Borrow/waste site location
- ☐ Equipment storage sites/fueling locations
- ☐ Material handling and spill prevention plan
- ☐* Indiana Bat tree clearing plan
- ☐* Fish spawning plan
- ☐ Location of construction entrances
- ☐* Asphalt/Concrete plant site locations
- ☐* Contractor initiated changes (including staging areas, haul roads, etc.)
- ☐* Obtaining additional required permits (borrow sites, waste sites, temporary crossings, etc.)
- ☐ Conformance with all applicable regulations and statutes

BACKUP 01

ADDITION TO ITM No. 803: 14.0 EROSION AND SEDIMENT CONTROL (DRAFT)

INSTALLATION

- ☐ Describe perimeter protection features (silt fence, filter berm, etc.)
- ☐ Describe surface protection features (seed, mulch, erosion control blankets, geotextiles, etc.)
- ☐* Describe concentrated flow protection features (check dams, slope drains, inlet protection, etc.)
- ☐* Methods used for the protection of water bodies
- ☐* Methods used for concrete washout facilities
- ☐ Installation of storm water management features on inactive areas (more than 7 days)
- ☐* Method and timeliness of surface roughening (203.09)
- ☐ Methods for protection against tracking of sediment onto pavement
- ☐ Methods for the installation of permanent features

INSPECTION

- ☐ Inspections documented on current INDOT form
- ☐ Identify individual performing the inspections
- ☐ Conduct weekly (minimum) inspections
- ☐ Conduct inspections within 24 hours of all ≥ ½ inch rainfall events
- ☐ Inspection reports to Engineer by next business day
- ☐ Attendance of Storm Water Quality Manager at all environmental inspections

MAINTENANCE

- ☐ Control devices returned to working condition within 48 hours after inspection, or as directed
- ☐ Containment methods of fuels, lubricants, asphalt or other harmful fluids
- ☐ Treatment methods for water containing sediment from aggregate washing or other operations
- ☐ Procedures for necessary repairing/rebuilding of control devices

REMOVAL

- ☐ Discuss proposed plan and procedures for obtaining Notice of Termination
- ☐ Final inspections
- ☐ 70% permanent uniform vegetative density throughout contract
- ☐ Method of transition to permanent features
- ☐* Methods used to minimize sediment disturbance in water bodies on removal of features

**only if applicable*

COMMENTS AND ACTION

205-R-XXX QUALITY CONTROL TEMPORARY EROSION AND SEDIMENT CONTROL

DISCUSSION:
Mr. Pankow introduced this item which was presented by Mr. Miller explaining that the intention is that we would like to the Contractor to develop the QCP. Borrowing the model from Ohio, unit prices are shown in the list of pay items as to how items will be paid, including the revised SWPPP. Mr. Harris commented that the Stormwater Quality Manager will need to participate in the training.
Mr. Miller stated that we can have people trained and the requirements in place by January 2017.
Mr. Cales asked how the pricing will work, and Mr. Pankow explained that there will be a budget for these items to be drawn from. Additional specific items should be spelled out by the designer. Mr. Cales asked if "dummy items" will be needed in Sitemanager, as with design-build contracts. Mr. Pankow and Mr. Miller responded that no, they will not be necessary, since those dollar values are already shown and are included inside the budget amount.
Mr. Miller expressed that there will be a learning curve associated with this process.
Mr. Miller stated that this RSP will not be on all contracts, but only on those that are approved by Mr. Miller and Mr. Wright.
Mr. Koch commented that the SWPPP is required to be posted somewhere on site.
Ms. Phillips expressed concern over language relating to the SWPPP vs. the revised SWPPP, and if the language should say "the revised SWPPP" instead of just the SWPPP. Ms. Phillips also expressed concern over some other minor editorial issues pertaining to capitalizing the word State, and whether or not we need to say "to the Engineer" when the Contractor is required to submit documentation.
With regard to QA adjustments, Mr. Miller stated that it will take some trial projects to determine if those are necessary or if this language should be revised for future use. Minor editorial revisions were incorporated. This RSP will be utilized on "As Selected" projects, as mentioned above. The acronyms contained herein have been addressed, as requested by Mr. Duncan, and will be defined in the spec book.

Motion: Mr. Pankow
Second: Mr. Cales
Ayes: 9
Nays: 0
FHWA Approval: YES

Action:
_____ Passed as Submitted
_X_ Passed as Revised
_____ Withdrawn

Standard Specifications Sections affected:

108.04 pg 79 thru 81; SECTION 205 pg 172 thru 183.

Recurring Special Provision affected:

NONE

Standard Drawing affected:

NONE

Design Manual Sections affected:

NONE

GIFE Sections cross-references:

NONE

_____ 2016 Standard Specifications

_X_ Revise Pay Items List

_X_ Create RSP (No. 205-R-261 (corrected on 02-02-15))
Effective Feb. 01, 2015 Letting
RSP Sunset Date:

_____ Revise RSP (No._____)
Effective _____ Letting
RSP Sunset Date:

_____ Standard Drawing
Effective

_____ Create RPD (No. _____)
Effective _____ Letting

_____ GIFE Update

Mr. Pankow
Date: 11/21/14

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS

REVISION TO STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Payment of Joint Material indicated in section 604 should be incidental to the payment of the items within that section.

PROPOSED SOLUTION: Include the payment of the joint materials as incidental to the items included within section 604.

APPLICABLE STANDARD SPECIFICATIONS: 604.03(f), 604.11

APPLICABLE STANDARD DRAWINGS: E 604-CCSJ-01

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE:

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: 604-06367, Joint Material, LFT

Submitted By: Greg Pankow

Title: State Construction Engineer

Organization: Indiana Department of Transportation

Phone Number: 317-232-5502

Date: 10/1/2014

APPLICABLE SUB-COMMITTEE ENDORSEMENT:

REVISION TO STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

SECTION 604 - SIDEWALKS, CURB RAMPS, STEPS, AND HANDRAILS
604.03(f) JOINTS
604.11 BASIS OF PAYMENT

The Standard Specifications are revised as follows:

SECTION 604, BEGIN LINE 91, DELETE AND INSERT AS FOLLOWS:

(f) Joints

The type and location of joints and the size of preformed joint filler shall be as shown on the plans.

All concrete joints shall be finished with a 1/4 in. radius.

Preformed 1/2 in. joint filler shall be placed around all appurtenances, such as manholes and utility poles which extend into and through the sidewalk, and between the sidewalk and any fixed structure, such as a building or bridge. The preformed joint filler shall extend for the full depth of the sidewalk or curb ramp, and shall be flush with the surface of the adjacent concrete. ~~*The top of the silicone joint sealant shall be recessed 1/4 in. from the surface of the adjacent concrete.*~~

SECTION 604, BEGIN LINE 260, DELETE AND INSERT AS FOLLOWS:

604.11 Basis of Payment

The accepted quantities of concrete sidewalk will be paid for at the contract unit price per square yard for sidewalk, concrete. HMA for sidewalk will be paid for at the contract unit price per ton, complete in place. Bed course material will be paid for at the contract unit price per ton. Concrete steps will be paid for at the contract unit price per cubic yard for steps, concrete. Reconstructed sidewalk and re-laid sidewalk will be paid for at the contract unit price per square yard for sidewalk, reconstruct, or sidewalk, re-lay. ~~Joint material will be paid for at the contract unit price per linear foot, complete in place.~~

The accepted quantities of curb ramps will be paid for at the contract unit price per square yard for curb ramp, concrete, per the type, complete in place.

Hand rails will be paid for at the contract unit price per linear foot.

Curb and curb and gutter will be paid for in accordance with 605.10.

Reinforcing bars, if used, will be paid for in accordance with 703.08. Curb, if directed to be replaced, will be paid for in accordance with 605.10.

Payment will be made under:

Pay Item	**Pay Unit Symbol**
Bed Course Material	TON
Curb Ramp, Concrete, _____ (type)	SYS

REVISION TO STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

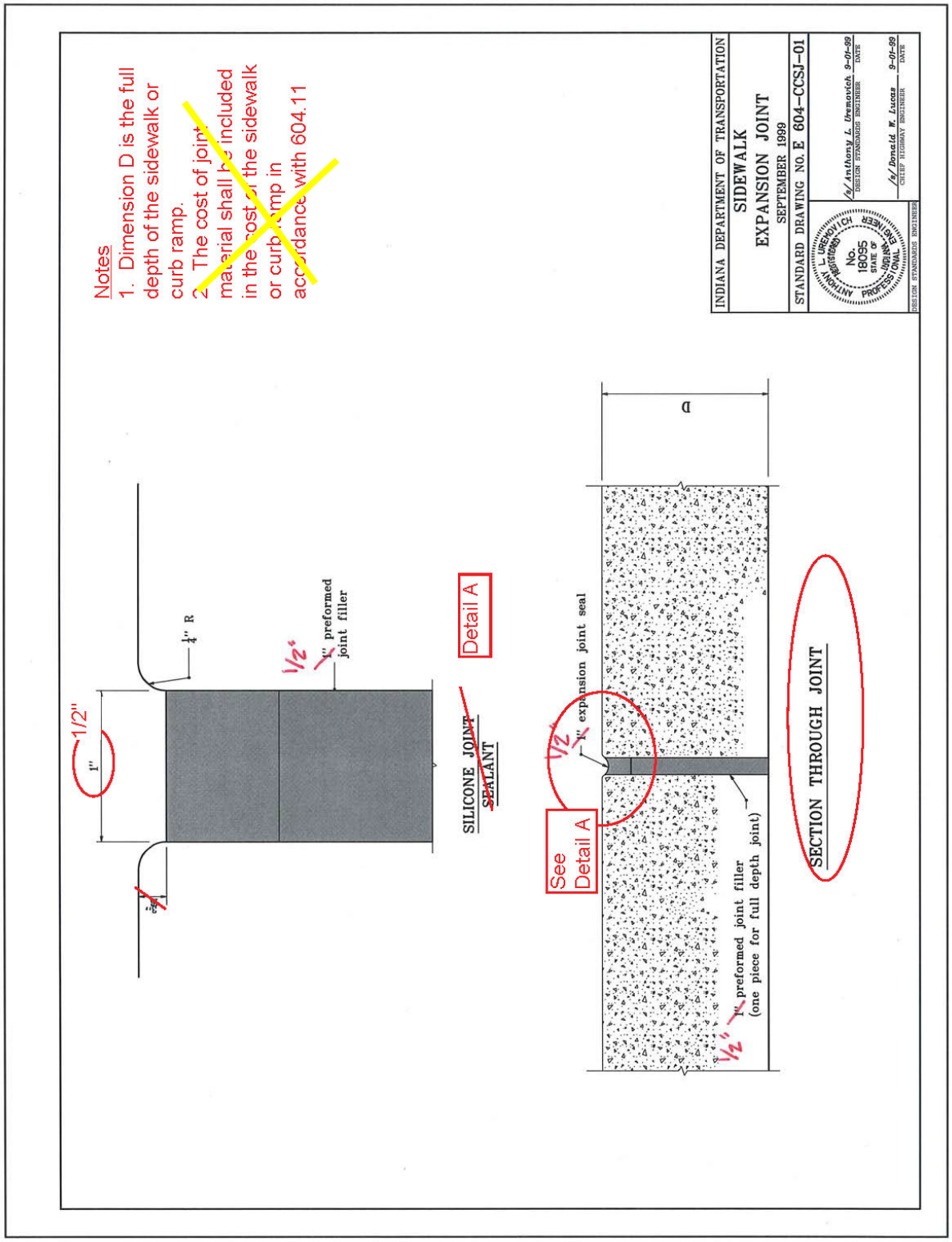
SECTION 604 - SIDEWALKS, CURB RAMPS, STEPS, AND HANDRAILS
604.03(f) JOINTS
604.11 BASIS OF PAYMENT

Hand Rail, _____ ..... LFT
type
HMA for Sidewalk ..... TON
~~Joint Material ..... LFT~~
Sidewalk, Concrete ..... SYS
Sidewalk, Concrete, Reconstruct ..... SYS
Sidewalk, Concrete, Re-Lay ..... SYS
Steps, Concrete ..... CYS

The cost of excavation, backfill, *joint material,* and necessary incidentals shall be included in the cost of the pay items in this section.

REVISION TO STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

604-CCSJ-01 SIDEWALK EXPANSION JOINT (WITH MARKUPS)



REVISION TO STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

604-CCSJ-01 SIDEWALK EXPANSION JOINT (SHOWN FINAL DRAFT AS PLAN DETAIL)

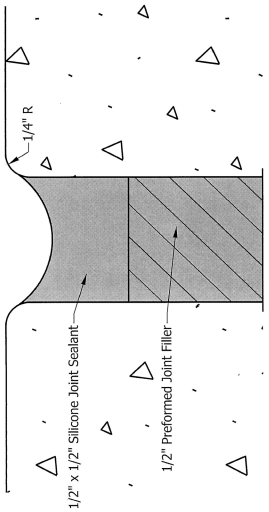
Eff. for Lettings on or After 02-01-15

INDIANA DEPARTMENT OF TRANSPORTATION

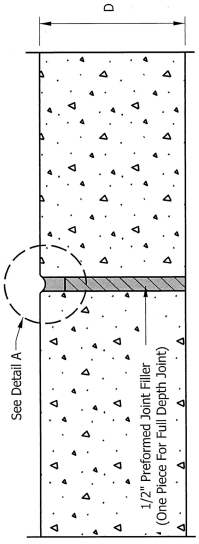
Sidewalk Expansion Joint

NOTES:

1. Dimension D is equal to the sidewalk or curb ramp.



DETAIL A



SIDEWALK EXPANSION JOINT

E 604-R-620d 1 of 1

COMMENTS AND ACTION

604.03(f) JOINTS
604.11 BASIS OF PAYMENT
604-CCSJ-01 SIDEWALK EXPANSION JOINT

DISCUSSION:

Mr. Pankow introduced this item stating that the joint material should be incidental to the 604 pay items and not be paid for separately. Also presented are minor editorial revisions to Standard Drawing 604-CCSJ-01.

Mr. Koch led a discussion as to when to use preformed filler or silicone joint sealant. Ms. Phillips agreed that the language should be revised for clarification. The group agreed to the need to add 906.02 to the Materials section of 604.02. It was also agreed to revise this proposal to only show revisions which remove the pay item for joint material, remove note 2 from the drawing, and the rest may be addressed at a future date.

Motion: Mr. Pankow Second: Ms. Gottschalk Ayes: 9 Nays: 0 FHWA Approval: YES	Action: ___ Passed as Submitted _X_ Passed as Revised ___ Withdrawn
Standard Specifications Sections affected: 604.03(f) pg 394 and 395; 604.11 pg 368 and 399. Recurring Special Provision affected: NONE Standard Drawing affected: 604-CCSJ-01 SIDEWALK EXPANSION JOINT Design Manual Sections affected: NONE GIFE Sections cross-references: NONE	_X_ 2016 Standard Specifications _X_ Revise Pay Items List _X_ Create RSP (No. 604-R-620) Effective Feb. 01, 2015 Letting RSP Sunset Date: Sep. 01, 2015 _____ Revise RSP (No._____) Effective _____ Letting RSP Sunset Date: _X_ Standard Drawing Effective Sept.01, 2015 _X_ Create RPD (No. 604-R-620d) Effective Feb. 01, 2015 Letting _____ GIFE Update