



## INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue  
Room N758 CM  
Indianapolis, Indiana 46204

[www.in.gov/indot](http://www.in.gov/indot)

**Eric Holcomb, Governor**  
**Mike Smith, Commissioner**

# FINAL DRAFT MINUTES

## November 17, 2023, Standards Committee Meeting

*(Changes to the Agenda by the Action of the Committee  
shown as highlighted in yellow)*

December 11, 2023

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Minutes from the November 17, 2023, Standards Committee Meeting

The Standards Committee meeting was called to order by Mr. Pankow, Chair, at 09:00 a.m. on Friday, November 17, 2023, which was held virtually via *Teams* (Microsoft application). The meeting was adjourned at 09:50 a.m.

The following committee members were in attendance:

Pankow, Gregory, Chairman, Director, Construction Management  
Boruff, Dave, Traffic Engineering  
Dave, Kumar, Pavement Engineering  
Koch, Mike, District Construction, Fort Wayne District  
Nelson, Mike\*, Division of Materials and Tests  
Novak, Joseph, Construction Management  
Orton, Mark, Highway Engineering  
Pelz, Kurt, Construction Technical Support  
Rearick, Anne, Bridge Management  
White, Peter, Bridge Engineering  
Wooden, John, Division of Contract Administration

*\*Proxy for Reilman, Jim*

Also, the following attendees were present:

Awwad, Nathan, INDOT  
Barney, Bruce, INDOT  
Bazlamit, Subhi M, INDOT  
Blanchard, Jacob, INDOT  
Britt, Ethan, Contech ES  
Coffin, Delaney, INDOT  
Couch, Gregory, INDOT  
Cruz, Elena, INDOT

Jacobs, David, INDOT  
Korff, Jon, INDOT  
Lamkin, Sara, INDOT  
Leckie, John, IRMCA  
Logman, Greg, INDOT  
Perugu, Kshitija, INDOT  
Podorvanova, Lana, INDOT  
Russell, Melissa, INDOT

Duncan, Thomas, FHWA  
Fisher, Steve, INDOT  
Galetka, Jason, INDOT  
Hailat, Mahmoud, INDOT  
Hauser, Derrick, INDOT

Sharp, Matthew, INDOT  
Shi, Runfa, INDOT  
Thornton, Donald, INDOT  
Trammell, Scott, INDOT

The following items were discussed during the meeting:

**A. GENERAL BUSINESS**

OLD BUSINESS (No items were listed)

NEW BUSINESS

1. Approval of the Minutes from the [October 19, 2023](#) meeting

Mr. Pankow requested a motion to approve the Minutes from the October 19, 2023 meeting.

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

**ACTION:** PASSED AS SUBMITTED

2. Approval of the *Schedule of the Standards Committee meetings, proposals submittals, and distributions of the Agendas and the Minutes in 2024* (Mr. Trammell) ..... [pg. 4](#)

**B. CONCEPTUAL PROPOSAL**

(No items were listed)

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

OLD BUSINESS

[Item No. 6 \(08/17/23\)](#) [Mr. Novak](#) [pg. 5](#)

2024 Standard Specifications:

702.28 Basis of Payment

**ACTION:** PASSED AS REVISED

NEW BUSINESS

[Item No. 1](#) [Mr. Reilman](#) [pg. 10](#)

Recurring Special Provision:

704-B-XXX LIGHTWEIGHT CONCRETE FOR FLOOR SLABS

**ACTION:**

**PASSED AS REVISED**

Item No. 2 Mr. Novak pg. 16

2024 Standard Specifications:

205.03(g)

Inspections

**ACTION:**

**PASSED AS SUBMITTED**

Item No. 3 Mr. White pg. 20

Recurring Plan Details:

~~724-B-147d~~

~~ALTERNATE SS JOINT (proposed to delete)~~

**ACTION:**

**PASSED AS SUBMITTED**

Item No. 4 Mr. Novak pg. 25

2024 Standard Specifications:

704.04

Placing Reinforcement and Concrete

Standard Drawings:

E 609-RCBA-04

REINFORCED CONCRETE BRIDGE APPROACH  
SECTION, PAVEMENT LEDGE, AND BAR BENDING  
DETAILS

**ACTION:**

**WITHDRAWN**

Item No. 5 Mr. Reilman pg. 32

2024 Standard Specifications:

715.02

Materials

907.16

Thermoplastic Pipe Requirements

907.17

Corrugated Polyethylene Drainage Tubing and Pipe

908.01

~~Blank~~ *Metal Pipe Requirements*

**ACTION:**

**PASSED AS SUBMITTED**

cc: Committee Members  
FHWA  
ICI

**Schedule of the Standards Committee meetings, proposals submittals, and distributions of the Agendas and the Minutes in 2024**

Standards Committee Meeting Date	Agenda Items Due <sup>(1)</sup>	Agenda Distributed and Published	First Draft Minutes Distributed	Comments Due for Draft Minutes	Final Draft Minutes Distributed	Approved Minutes Published
on a 3rd Thursday of the month	(- 24 days)	(- 17 days)	(+ 6 days)	(+ 13 days)	(+ 21 days)	(+ 35 - 42 days)
January 18, 2024	December 25, 2023	January 2, 2024	January 24, 2024	January 31, 2024	February 8, 2024	February 22, 2024
February 15, 2024	January 22, 2024	January 29, 2024	February 21, 2024	February 28, 2024	March 7, 2024	March 28, 2024
March 21, 2024	February 26, 2024	March 4, 2024	March 27, 2024	April 3, 2024	April 11, 2024	April 25, 2024
April 18, 2024	March 25, 2024	April 1, 2024	April 24, 2024	May 1, 2024	May 9, 2024	May 30, 2024
May 16, 2024	April 22, 2024	April 29, 2024	May 22, 2024	May 29, 2024	June 6, 2024	June 27, 2024
June 20, 2024	May 28, 2024	June 3, 2024	June 26, 2024	July 3, 2024	July 11, 2024	July 25, 2024
July 18, 2024	June 24, 2024	July 1, 2024	July 24, 2024	July 31, 2024	August 8, 2024	August 29, 2024
August 15, 2024	July 22, 2024	July 29, 2024	August 21, 2024	August 28, 2024	September 5, 2024	September 26, 2024
September 19, 2024	August 26, 2024	September 3, 2024	September 25, 2024	October 2, 2024	October 10, 2024	October 31, 2024
October 17, 2024	September 23, 2024	September 30, 2024	October 23, 2024	October 30, 2024	November 7, 2024	November 27, 2024
November 22, 2024	October 28, 2024	November 4, 2024	November 26, 2024	December 4, 2024	December 12, 2024	December 27, 2024
December 19, 2024	November 25, 2024	December 2, 2024	December 26, 2024	January 2, 2025	January 9, 2025	January 30, 2025

**Notes:** Agenda items must be submitted by the due date shown, and be accompanied by a Proposal sheet.

The **February\*** meeting is the last opportunity for the approval of the Standard Drawings effective on September 1, 2024.

Shaded dates are exceptions to the regular schedule. **CEPDS. Move to Friday, Nov 22.**

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The basis of payment for foundation seal and excavation for foundation seal is lacking clarity. A recent claim on the subject brought this to the attention of Construction Management.

PROPOSED SOLUTION: Clarify the basis of payment language in 702.28 to account for an increased cofferdam size and a corresponding increased foundation seal size due to constructability concerns allowed for in 206.09. Also clarify the basis of payment language to account for payment of foundation seal and foundation seal excavation when it is added to a contract due to adverse dewatering site conditions.

APPLICABLE STANDARD SPECIFICATIONS: 702.28

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: 408-2.12

APPLICABLE SECTION OF GIFE: 5.6

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: 702-51046 Concrete, Foundation Seal

APPLICABLE SUB-COMMITTEE ENDORSEMENT: none

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: All Contracts with the Cofferdam pay item (206-51235).

IMPACT ANALYSIS (attach report):

Submitted By: Joe Novak

Title: State Construction Engineer

Organization: INDOT

Phone Number: 317-501-7805

Date: 10/25/23

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? 206.09

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

Will this proposal improve:

Construction costs? No

Construction time? No

Customer satisfaction? No

Congestion/travel time? No

Ride quality? No

Will this proposal reduce operational costs or maintenance effort? No

Will this item improve safety:

For motorists? No

For construction workers? Yes

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? No

Design process? No

Will this change provide the contractor more flexibility? Yes

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

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

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

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

REVISION TO 2024 STANDARD SPECIFICATIONS

SECTION 702 – STRUCTURAL CONCRETE

702.28 Basis of Payment

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 702, BEGIN LINE 1353, DELETE AND INSERT AS FOLLOWS:

If a foundation seal is constructed as shown on the plans, it will be paid for at the contract price per cubic yard for concrete, foundation seal. *If a foundation seal is added to the contract, ~~If ordered to be done, or allowed to be done,~~ payment will be made at a unit price per cubic yard equal to 75% of the contract unit price per cubic yard for class B concrete in footings. The excavation for the foundation seal will be paid for at the contract unit price per cubic yard for the class of excavation specified for the footing. ~~If the foundation seal is constructed as shown on the plans~~ Unless otherwise provided, the pay quantity for excavation for foundation seal will be equal to the theoretical volume bounded by the bottom of the proposed footing, the bottom of the ~~approved excavation~~ **approved excavation foundation seal**, and vertical planes 18 in. outside the neat line of the footing and parallel thereto, regardless of the quantity actually removed. ~~If design of the structure requires sheeting to be outside these limits, the limits will be extended to 6 in. beyond the neat lines required by the design of the structure~~ *If a foundation seal is added to the contract, the pay quantity for excavation for foundation seal will be equal to the theoretical volume bounded by the bottom of the proposed footing, the bottom of the ~~approved excavation~~ **approved excavation foundation seal**, and the inside face of sheeting as detailed on the approved cofferdam working drawings with no allowance for sheeting corrugation. If the Contractor chooses to increase the planned cofferdam footprint in size due to constructability concerns in accordance with 206.09 or chooses to construct a rectangular cofferdam around a U-shaped abutment in lieu of following the outline of the footing, the maximum allowable increase in the pay quantity for excavation for foundation seal above the theoretical shall not exceed 25%. The pay quantity for the foundation seal will be equal to the ~~allowable pay quantity for~~ **the** excavation volume described above.**

COMMENTS AND ACTION

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702.28 Basis of Payment

DISCUSSION:

This item was introduced and presented by Mr. Novak who stated that the basis of payment for foundation seal and excavation for foundation seal lacks clarity. A recent claim on the subject brought this to the attention of Construction Management.

Mr. Novak proposed to clarify the basis of payment language in 702.28 to account for an increased cofferdam size and a corresponding increased foundation seal size due to constructability concerns allowed for in 206.09. And also clarify the basis of payment language to account for payment of foundation seal and foundation seal excavation when it is added to a contract due to adverse dewatering site conditions.

Mr. Koch stated that payment for excavation can become confusing when the word is also used to define the limits of payment. 'Approved excavation' and 'bottom of the proposed footing' could be the same. Could the language in line 1360 shown in SS be changed to 'approved foundation seal', instead of 'approved excavation'?

Mr. Koch also asked, for a planned seal, is the intent to pay for a class of excavation from the bottom of the proposed FOUNDATION SEAL to the TOP of the approved excavation to 18 in. outside neat line? Or from the bottom of the proposed footer to the bottom of the approved FOUNDATION SEAL to 18 in. outside neat line? Should the additional excavation be defined by the bottom of proposed footer to the bottom of the approved FOUNDATION SEAL to the 18 in. outside neat line? Or would it simplify the cost of excavation considerable to pay for 100% of class B concrete and include the cost of excavation (for added situation)? Similarly add the cost of excavation to 'concrete foundation seal'.

Following much discussion by Mr. Novak, Mr. Koch and Mr. Blanchard, the resulting revisions are as shown above.

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



COMMENTS AND ACTION

702.28 Basis of Payment

[continued]

<p>Motion: Mr. Novak          Second: Mr. Koch          Ayes: 10          Nays: 0          FHWA Approval: <b>YES</b></p>	<p><b>Action:</b></p> <p><input type="checkbox"/> Passed as Submitted  <input checked="" type="checkbox"/> Passed as Revised  <input type="checkbox"/> Withdrawn</p>
<p>2024 Standard Specifications Sections:          702.28 pg. 648.</p> <p>Recurring Special Provisions or Plan          Details:          NONE</p> <p>Standard Drawing affected:          NONE</p> <p>Design Manual Chapter:          408-2.12</p> <p>GIFE Section:          5.6</p>	<p><input checked="" type="checkbox"/> 2026 Standard Specifications          Revise Pay Items List          Notification to Designers if change is <u>not</u>          addressed by RSP</p> <p><input checked="" type="checkbox"/> Create RSP (No. <b>702-R-xxx</b>)          Effective: <b>June 1, 2024</b></p> <p><input type="checkbox"/> Revise RSP (No. __)          Effective:</p> <p><input type="checkbox"/> Standard Drawing          Effective:</p> <p><input type="checkbox"/> Create RPD (No. __)          Effective:</p> <p><input checked="" type="checkbox"/> GIFE Update  <input type="checkbox"/> Frequency Manual Update  <input type="checkbox"/> SiteManager Update</p>

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Occasionally there is a need for the use of lightweight concrete in some scenarios such as for the rehabilitation of historical bridges. However, the standard specifications do not allow for the use of lightweight concrete.

PROPOSED SOLUTION: Create an RSP for lightweight concrete for use in concrete floor slabs when it is deemed necessary by INDOT.

APPLICABLE STANDARD SPECIFICATIONS: 704

APPLICABLE STANDARD DRAWINGS: none

APPLICABLE DESIGN MANUAL SECTION: Chapter 405

APPLICABLE SECTION OF GIFE: none

APPLICABLE RECURRING SPECIAL PROVISIONS: create new 704 RSP

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: INDOT-IRMCA working committee (8-31-23) and INDOT Bridge Design

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: As approved by the Bridge Design Director.

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman

Title: State Materials Engineer

Organization: INDOT

Phone Number: (317) 522-9692

Date: 10/20/23

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No

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

Will this proposal improve:

Construction costs? Yes

Construction time? N/A

Customer satisfaction? Yes

Congestion/travel time? N/A

Ride quality? N/A

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

Will this item improve safety:

For motorists? N/A

For construction workers? N/A

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? Yes

Design process? Yes

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

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

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

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

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

REVISION TO SPECIAL PROVISIONS

704-B-XXX LIGHTWEIGHT CONCRETE FOR FLOOR SLABS (proposed new)

(Note: Proposed changes shown highlighted gray.)

Changes to the Standard Specifications shown in this recurring special provision apply only to the bridge identified on the plans as requiring lightweight concrete to be used in the bridge deck.)

704-B-XXX LIGHTWEIGHT CONCRETE FOR FLOOR SLABS

(Adopted xx-xx-23)

The Standard Specifications are revised as follows:

SECTION 505, BEGIN LINE 24, INSERT AS FOLLOWS:

\*\* If slag *or lightweight* aggregate is used, the method and procedure for the test shall be in accordance with ASTM C173.

SECTION 702, BEGIN LINE 92, INSERT AS FOLLOWS:

The relative yield of the concrete shall be determined in accordance with 505. The concrete when produced shall provide a relative yield of  $1.00 \pm 0.02$ . When the relative yield is outside the tolerances, adjustments to the batch weights shall be made. *When lightweight concrete is used, the plastic unit weight shall not exceed the CMD target unit weight by more than 2.5 lb/cu ft. Otherwise, the lightweight concrete will be deemed a failed material and an investigation will be conducted by the Department's Division of Materials and Tests to determine if the final in-place unit weight is less than 120 lb/cu ft at a minimum of 28 days of age.* The minimum amount of cement shall be used for the desired class of concrete. The cement content shall not be increased more than 60 lb/cu yd. The relative yield of the concrete shall be maintained as stated above. If Type IP or Type IP-A cements are to be used in the structural concrete, the cement content shall be increased by a multiplier of 1.06 times the minimum amount of cement required or the desired increased cement content for the specified class of concrete.

SECTION 704, BEGIN LINE 9, INSERT AS FOLLOWS:

**704.02 Materials**

Materials shall be in accordance with the following:

Castings .....	910.05
Concrete, Class C .....	702
Joint Materials .....	906
Profile Wall PVC Pipe .....	907.22
Reinforcing Bars .....	910.01
Smooth Wall PVC Pipe.....	907.23

**(a) Lightweight Concrete**

*Lightweight concrete shall be achieved by replacing a portion or all of the concrete coarse aggregate with lightweight aggregate in accordance with AASHTO M 195. The lightweight coarse aggregate shall be either expanded clay, expanded shale, or expanded slate and the gradation shall be in accordance with 904.03(e) size No. 91.*

**1. Concrete Mix Properties**

REVISION TO SPECIAL PROVISIONS

704-B-XXX LIGHTWEIGHT CONCRETE FOR FLOOR SLABS (proposed new)

The CMD shall be in accordance with 702.05 with the following exceptions:

Maximum unit weight (equilibrium) .....	120 lb/cu ft
Maximum unit weight (wet) .....	124 lb/cu ft
Minimum cement content .....	564 lb/cu yd
Maximum cement content .....	700 lb/cu yd
Minimum compressive strength .....	4,000 psi

The coarse aggregate stockpile shall be soaked continuously for a minimum of 72 h immediately prior to placement of the concrete or the trial batch demonstration.

**(b) Trial Batch**

A trial batch shall be produced to verify that the lightweight CMD complies with the physical properties specified. Wet unit weight, equilibrium unit weight in accordance with ASTM C567, air content in accordance with ASTM C173, slump, yield, and both 7-day and 28-day compressive strengths shall all be performed by the Contractor's ACI-Certified Concrete Field Testing Technician, Grade I. The equilibrium unit weight shall be determined when the lightweight concrete is a minimum of 90 days old. The Engineer will also perform all tests done by the Contractor, except equilibrium unit weight, and report share the results to-with the Contractor. All cylinders shall be 6 in. by 12 in. and cured in accordance with 505.01(a) and Section 10.1 of AASHTO R 100. Compressive strength will be based on the average of two cylinders. A minimum of six cylinders, which includes two spare cylinders, shall be made for determining compressive strength at 7 and 28 days of age. A minimum of three cylinders shall be made for determining the equilibrium unit weight. The equilibrium unit weight shall be based on the average of a minimum of two cylinders.

SECTION 704, BEGIN LINE 149140, DELETE AND INSERT AS FOLLOWS:

Just before the concrete has taken the initial set, the ends of slabs, exposed edges, and transverse construction joints shall be rounded to a 1/4 in. radius. Longitudinal construction joints shall not be edged unless otherwise directed. The surface shall be tined in the transverse direction in accordance with the following. Tining shall consist of transverse grooves that are between 3/32 and 1/8 in. in width, between 1/8 and 3/16 in. in depth, and be spaced as follows: 5/8 in., 1 in., 7/8 in., 5/8 in., 1 1/4 in., 3/4 in., 1 in., 1 in., 1 in., 3/4 in., 7/8 in., 1 3/4 in., 7/8 in., 3/8 in., 1 in., 1 in., 1 1/4 in., 1 1/2 in., 7/8 in., 3/4 in., 7/8 in., 1 in., 7/8 in., 1 in. The grooving pattern shall be repeated across the bridge floor. The grooves shall be formed in the plastic concrete without tearing the surface and without bringing pieces of the coarse aggregate to the top of the surface. Machine grooving or grinding shall not be performed on the bridge floor.

Smoothness shall be in accordance with 502.20. If, after the above requirements have been met, portions of the floor are not entirely satisfactory, the removal and replacement of such portions may be ordered to secure a satisfactory floor. Such removal and replacement shall be done with no additional payment.

REVISION TO SPECIAL PROVISIONS

704-B-XXX LIGHTWEIGHT CONCRETE FOR FLOOR SLABS (proposed new)

~~After final smoothness checking, the surface shall be longitudinally grooved in accordance with 722.11 tined in the transverse direction in accordance with the following. Tining shall consist of transverse grooves that are between 3/32 and 1/8 in. in width, between 1/8 and 3/16 in. in depth, and be spaced as follows: 5/8 in., 1 in., 7/8 in., 5/8 in., 1 1/4 in., 3/4 in., 1 in., 1 in., 1 in., 1 in., 3/4 in., 7/8 in., 1 3/4 in., 7/8 in., 3/8 in., 1 in., 1 in., 1 1/4 in., 1 1/2 in., 7/8 in., 3/4 in., 7/8 in., 1 in., 7/8 in., 1 in. The grooving pattern shall be repeated across the bridge floor. The grooves shall be formed in the plastic concrete without tearing the surface and without bringing pieces of the coarse aggregate to the top of the surface. Machine grooving or grinding shall not be performed on the bridge floor.~~

SECTION 704, BEGIN LINE 161, INSERT AS FOLLOWS:

~~Opening to traffic and acceptance shall be in accordance with the applicable provisions of 702.24. based on the average of two 6 in. by 12 in. cylinders tested for compressive strength in accordance with 704.02(b).~~

**704.07 Method of Measurement**

Concrete floor slab will be measured by the cubic yard in accordance with 702.27. However, no allowance will be made for variations in beam fillet depths, coping depths, or diaphragm depths, which are deemed necessary due to the beam camber, as constructed, which varies from that shown on the plans. Reinforcing bars will be measured in accordance with 703.07. Castings will be measured in accordance with 702.27.

~~Longitudinal grooving will be measured in accordance with 722.15. Transverse tining will not be measured.~~

**704.08 Basis of Payment**

The accepted quantities of concrete floor slab will be paid for at the contract unit price per cubic yard for concrete, C, superstructure, *lightweight*. Reinforcing bars will be paid for in accordance with 703.08. Castings will be paid for in accordance with 702.28.

~~Longitudinal grooving will be paid for in accordance with 722.16.~~

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit Symbol</b>
Concrete, C, Superstructure .....	CYS
Concrete, C, Superstructure, Lightweight.....	CYS

The cost of forms, curing, finishing *including transverse tining*, preformed expansion joints within structure limits, slab bridge floor drains, and necessary incidentals shall be included in the cost of the pay items. *The cost of manufacturing, testing, transportation, handling, and all other costs associated with furnishing lightweight concrete in accordance with this specification shall be included in the cost of the pay items.*

COMMENTS AND ACTIONS

704-B-XXX LIGHTWEIGHT CONCRETE FOR FLOOR SLABS

DISCUSSION:

Mr. Nelson, sitting in for Mr. Reilman, introduced and presented this item explaining that occasionally there is a need for the use of lightweight concrete in some scenarios such as for the rehabilitation of historical bridges. However, the standard specifications do not allow for the use of lightweight concrete.

Mr. Nelson proposed to create an RSP for lightweight concrete for use in concrete floor slabs when it is deemed necessary by the Department.

Mr. Koch inquired about the proposed language in 704.05. Further discussion by Mr. Reilman, Mr. Nelson, Mr. Koch and Mr. White, the above shown revisions were made to provide clarification of this proposal's intent.

Mr. Jacobs asked if compression strength is part of the acceptance testing. Mr. Nelson said that cylinders taken from the trial batch determines the quality and compressive strength, as shown above. Language was added for clarification.

Mr. Nelson revised his motion, which was seconded by Mr. Boruff.

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

<p>Motion: Mr. Nelson                  Second: Mr. Dave                  Ayes: 10                  Nays: 0                  FHWA Approval: <b>YES</b></p>	<p><b>Action:</b></p> <p><input type="checkbox"/> Passed as Submitted  <input checked="" type="checkbox"/> Passed as Revised  <input type="checkbox"/> Withdrawn</p>
<p>2024 Standard Specifications Sections:                  704 pg(s). 653 – 657.</p> <p>Recurring Special Provisions or Plan                  Details:                  Proposed new</p> <p>Standard Drawing affected:                  NONE</p> <p>Design Manual Chapter:                  405</p> <p>GIFE Section:                  NONE</p>	<p>2026 Standard Specifications</p> <p><input checked="" type="checkbox"/> Revise Pay Items List                  Notification to Designers if change is <u>not</u>                  addressed by RSP</p> <p><input checked="" type="checkbox"/> Create RSP (No. <b>704-B-xxx</b>)                  Effective: <b>June 1, 2024</b></p> <p><input type="checkbox"/> Revise RSP (No. __)                  Effective:</p> <p><input type="checkbox"/> Standard Drawing                  Effective:</p> <p><input type="checkbox"/> Create RPD (No. __)                  Effective:</p> <p><input type="checkbox"/> GIFE Update  <input checked="" type="checkbox"/> Frequency Manual Update  <input checked="" type="checkbox"/> SiteManager Update</p>

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: It has come to our attention that there is language in the 205 section that leads to some confusion about the requirement for inspections for contracts with only a waterway permit. The intent of the current specifications is to only conduct formal inspections of INDOT sites when required by the CSGP.

PROPOSED SOLUTION: This proposal removes the conflicting language from 205.03(g).

APPLICABLE STANDARD SPECIFICATIONS: 205.03(g)

APPLICABLE STANDARD DRAWINGS: None

APPLICABLE DESIGN MANUAL SECTION: 205

APPLICABLE SECTION OF GIFE: 3.1, No changes required.

APPLICABLE RECURRING SPECIAL PROVISIONS: None

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: N/A

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: All contracts with a 205 item.

IMPACT ANALYSIS (attach report): Yes

Submitted By: Joe Novak

Title: State Construction Engineer

Division: Construction Management

E-mail: jnovak@indot.in.gov

Date: 10/24/2023



IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No

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

Will this proposal improve:

Construction costs? Yes

Construction time? No

Customer satisfaction? No

Congestion/travel time? No

Ride quality? No

Will this proposal reduce operational costs or maintenance effort? No

Will this item improve safety:

For motorists? No

For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? No

Design process? No

Will this change provide the contractor more flexibility? Yes

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

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

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

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

REVISION TO 2024 STANDARD SPECIFICATIONS

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SECTION 205 – STORMWATER MANAGEMENT

205.03(g) Inspections

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 205, BEGIN LINE 241, DELETE AS FOLLOWS:

**(g) Inspections**

Inspection shall be required on all work areas associated a CSGP. This shall include drainage areas within contract limits leading to BMPs, areas of land-disturbance, and areas with impacts or potential impacts to protected resources. For contracts that have multiple work sites, inspections shall only be required for areas operating under a CSGP or a waterway permit.

FINAL DRAFT MINUTES

COMMENTS AND ACTION

205.03(g) Inspections

DISCUSSION:

This item was introduced and presented by Mr. Novak who stated that there is language in the 205 section that leads to some confusion about the requirement for inspections for contracts with only a waterway permit. The intent of the current specifications is to only conduct formal inspections of Department sites when required by the CSGP.

Mr. Novak proposed to remove the conflicting language from 205.03(g), as shown.

Mr. Couch concurred with this proposal and the reasoning behind it.

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

<p>Motion: Mr. Novak                  Second: Mr. Koch                  Ayes: 10                  Nays: 0                  FHWA Approval: <b>YES</b></p>	<p><u>Action:</u></p> <p><input checked="" type="checkbox"/> Passed as Submitted  <input type="checkbox"/> Passed as Revised  <input type="checkbox"/> Withdrawn</p>
<p>2024 Standard Specifications Sections:                  205.03(g) pg. 199.</p> <p>Recurring Special Provisions or Plan                  Details:                  NONE</p> <p>Standard Drawing affected:                  NONE</p> <p>Design Manual Chapter:                  NONE</p> <p>GIFE Section:                  NONE</p>	<p><input checked="" type="checkbox"/> 2026 Standard Specifications  <input type="checkbox"/> Revise Pay Items List  <input type="checkbox"/> Notification to Designers if change is <u>not</u>                  addressed by RSP</p> <p><input checked="" type="checkbox"/> Create RSP (No. <b>205-R-xxx</b>)                  Effective: <b>June 1, 2024</b></p> <p><input type="checkbox"/> Revise RSP (No. __)                  Effective:</p> <p><input type="checkbox"/> Standard Drawing                  Effective:</p> <p><input type="checkbox"/> Create RPD (No. __)                  Effective:</p> <p><input type="checkbox"/> GIFE Update  <input type="checkbox"/> Frequency Manual Update  <input type="checkbox"/> SiteManager Update</p>

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The Alternate SS Joint, as shown on recurring plan detail RPD 724-B-147d, has experienced early failures at several locations.

PROPOSED SOLUTION: Eliminate RPD 724-B-147d

APPLICABLE STANDARD SPECIFICATIONS: Section 724, no changes required

APPLICABLE STANDARD DRAWING: 724-BSSJ, no changes required

APPLICABLE DESIGN MANUAL CHAPTER: IDM Chapter 404, no changes required

APPLICABLE SECTION OF GIFE: 5.20, no changes required

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: RPD 724-B-147d, to be deleted

PAY ITEMS AFFECTED: No current pay items specific to Alternate SS Joints

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad hoc committee including INDOT Bridge Asset Engineers and INDOT Standards and Policy Division.

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: N/A

IMPACT ANALYSIS (attach report):

Submitted By: Pete White

Title: Design Manager

Division: INDOT Bridge Engineering

E-mail: [pewwhite@indot.in.gov](mailto:pewwhite@indot.in.gov)

Date: October 25, 2023

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No

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

Will this proposal improve:

Construction costs? No

Construction time? No

Customer satisfaction? Yes

Congestion/travel time? No

Ride quality? No

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? No

For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? No

Asset preservation? Yes

Design process? NO

Will this change provide the contractor more flexibility? No

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

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

Is this proposal needed for compliance with:

Federal or State regulations? No

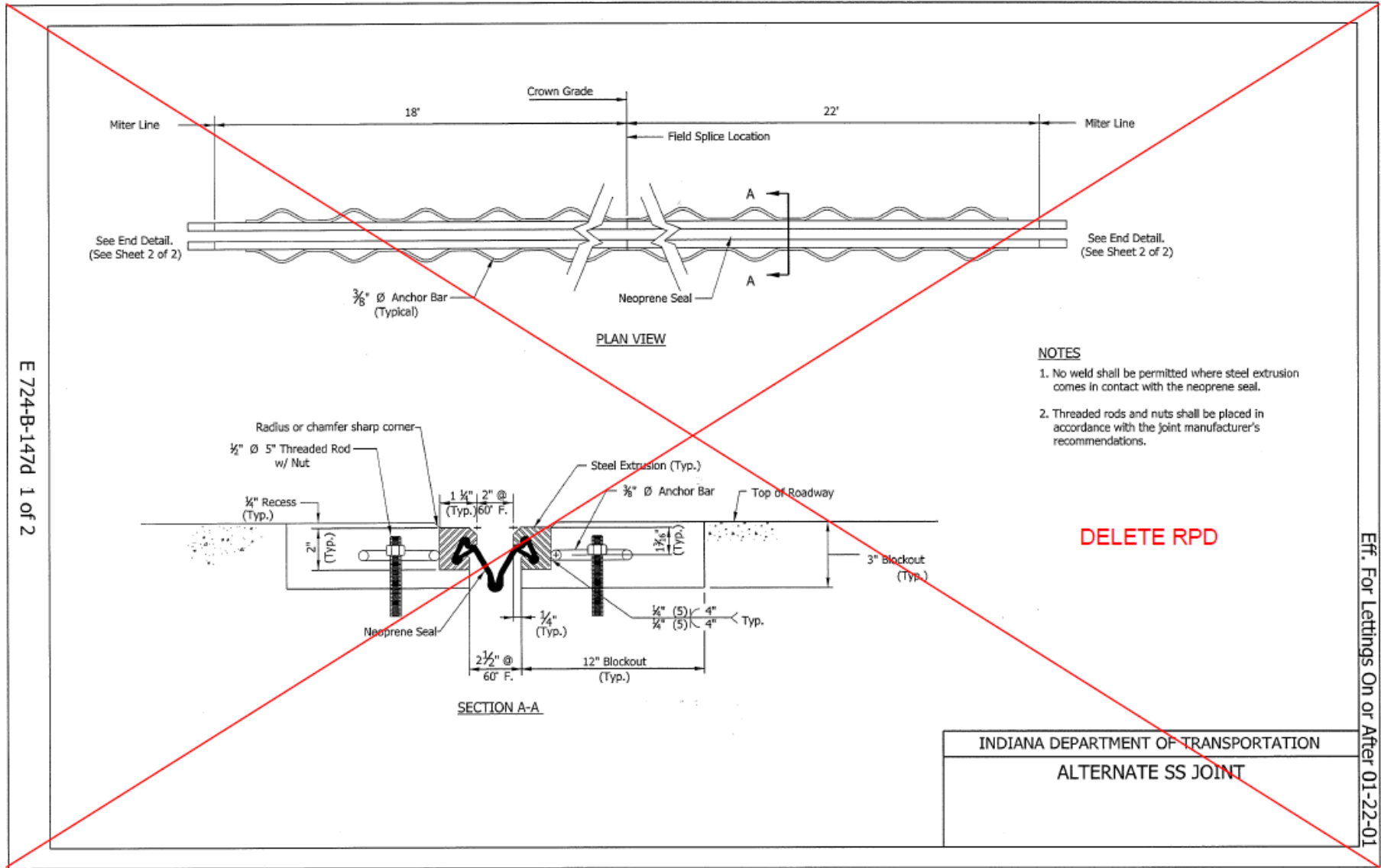
AASHTO or other design code? No

Is this item editorial? No

Provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: This joint type has proven to have a short service life and shouldn't be used on future projects.

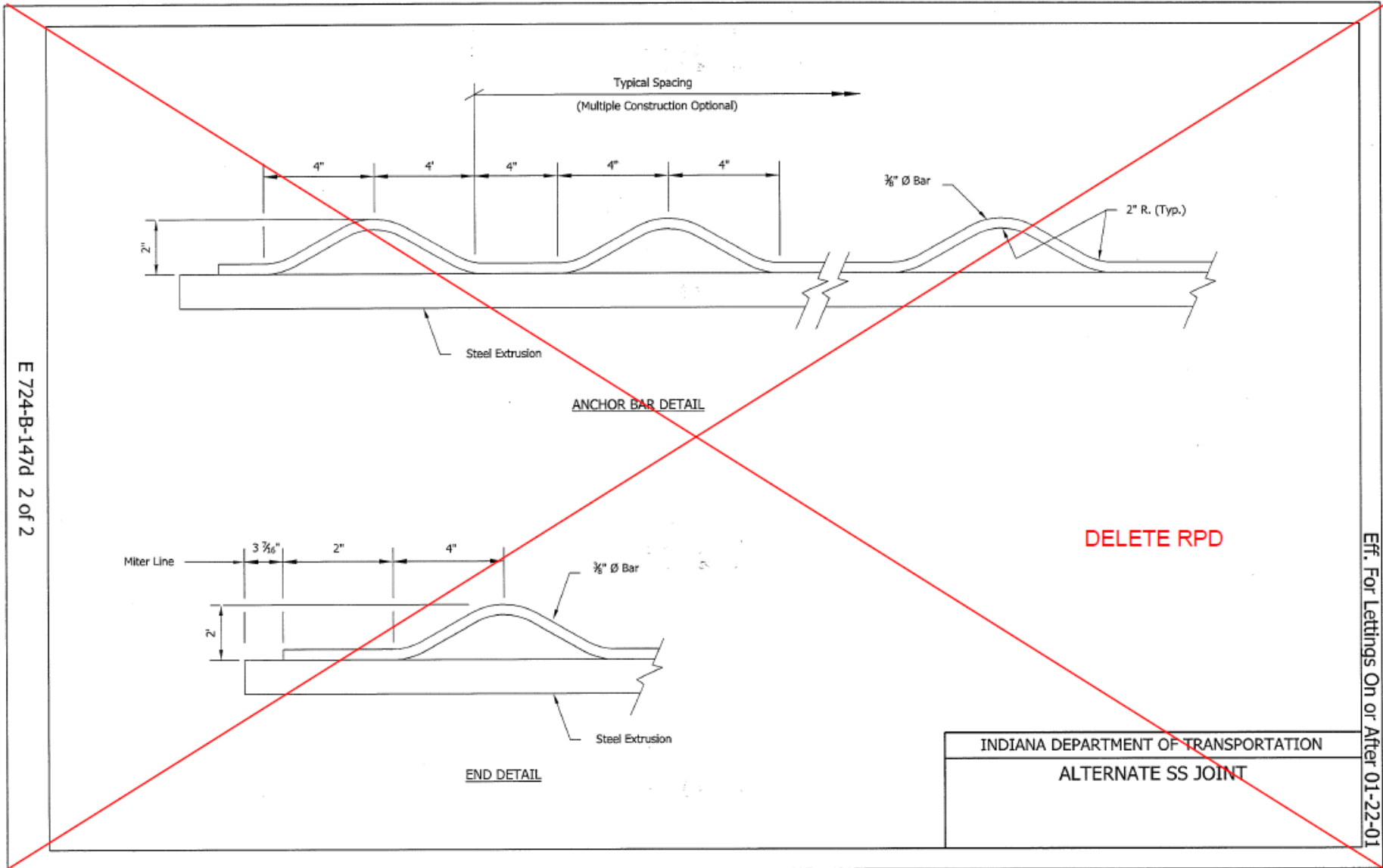
REVISION TO RECURRING PLAN DETAILS

724-B-147d ALTERNATE SS JOINT (proposed to delete)



REVISION TO RECURRING PLAN DETAILS

724-B-147d ALTERNATE SS JOINT (proposed to delete)



E 724-B-147d 2 of 2

Eff. For Lettings On or After 01-22-01

COMMENTS AND ACTION

724-B-147d ALTERNATE SS JOINT (proposed to delete)

DISCUSSION:

Mr. White introduced and presented this item explaining that the Alternate SS Joint, as shown on recurring plan detail RPD 724-B-147d, has experienced early failures at several locations.

Mr. White therefore proposed to eliminate RPD 724-B-147d.

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

<p>Motion: Mr. White                  Second: Mr. Orton                  Ayes: 10                  Nays: 0                  FHWA Approval: <b>YES</b></p>	<p><b>Action:</b>  <input checked="" type="checkbox"/> Passed as Submitted  <input type="checkbox"/> Passed as Revised  <input type="checkbox"/> Withdrawn</p>
<p>2024 Standard Specifications Sections:                  724 pg(s). 806 – 810                  no changes required.</p>	<p><input type="checkbox"/> 2026 Standard Specifications  <input type="checkbox"/> Revise Pay Items List  <input type="checkbox"/> Notification to Designers if change is <u>not</u>                  addressed by RSP</p>
<p>Recurring Special Provisions or Plan                  Details:                  724-B-147d (proposed to delete)</p>	<p><input type="checkbox"/> Create RSP (No. __)                  Effective:</p>
<p>Standard Drawing affected:                  724-BSSJ, no changes required</p>	<p><input type="checkbox"/> Revise RSP (No. __)                  Effective:</p>
<p>Design Manual Chapter:                  404, no changes required</p>	<p><input type="checkbox"/> Standard Drawing                  Effective:</p>
<p>GIFE Section:                  5.20, no changes required</p>	<p><input checked="" type="checkbox"/> Discontinue RPD (No. <b>724-B-147d</b>)                  Sunset: <b>May 31, 2024</b></p>
	<p><input type="checkbox"/> GIFE Update  <input type="checkbox"/> Frequency Manual Update  <input type="checkbox"/> SiteManager Update</p>



PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED:

Prior to [Construction Memo 07-23](#), concrete bridge decks and approaches could be poured continuously. Since after the memo, bridge decks and approaches were required to be poured separately due to the random cracking occurring around the 1-A joint, both during and after the pour. This caused the need for repairs that are both costly for the Contractor and detrimental to the expected life of the concrete.

As construction techniques and methods improved over the years, Industry Leadership expressed interest again in pouring the bridge deck and approaches monolithically together. As a result, the Department facilitated a pilot program for the past two years to review the impacts of the continuous deck pours. The pilot projects concluded that this method promotes a smoother ride between the deck and approach transition and eliminates two cold joints. Further, this method is quicker and more cost effective.

PROPOSED SOLUTION:

A specification change would allow the Designer of Record to review the Contractor's bridge deck pour sequence and determine if the structure can be poured monolithically. Determining factors include pouring the first span in less than 3.5 hours and the skew of the structure to be less than or equal to 45 degrees. A Design Memo is planned to be published to convey changes to the IDM and Bridge Design Aid 404-01. Furthermore, the revised Standard Drawings, E 609-RCBA-04, includes the requirements for an embedded steel angle component, that will keep the preformed expansion joint filler in place at the 1-A joint location across the structure. Further, A Construction Memo is planned to be published to supersede CM 07-23.

In addition, this specification change would be the first phase of a two phased plan to promote a smooth transition between the bridge deck and approaches. Starting in spring of 2024, the Department plans to start phase two where a smoothness requirement spec would be introduced to ensure rideability performance.

APPLICABLE STANDARD SPECIFICATIONS: SS 704.04

APPLICABLE STANDARD DRAWINGS: E 609-RCBA-04

APPLICABLE DESIGN MANUAL SECTION: IDM 404-2.06(02) Transverse Construction Joint

APPLICABLE SECTION OF GIFE: NA

APPLICABLE RECURRING SPECIAL PROVISIONS: NA

PAY ITEMS AFFECTED: NA

[continued]

APPLICABLE SUB-COMMITTEE ENDORSEMENT: NA

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE:  
Required for all contracts with a 704-51002 Concrete, C, Superstructure pay item.

IMPACT ANALYSIS (attach report): Yes

Submitted By: Joe Novak

Title: State Construction Engineer

Division: Construction Management

E-mail: [jnovak@indot.in.gov](mailto:jnovak@indot.in.gov)

Date: 10/1/2023

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No

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

Will this proposal improve:

Construction costs? Yes

Construction time? Yes

Customer satisfaction? No

Congestion/travel time? No

Ride quality? Yes

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? No

For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? No

Design process? No

Will this change provide the contractor more flexibility? Yes

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

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

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

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

REVISION TO 2024 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

SECTION 704 - CONCRETE FLOOR SLABS  
704.04 Placing Reinforcement and Concrete

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 704, BEGIN LINE 34, DELETE AND INSERT AS FOLLOWS:

**704.04 Placing Reinforcement and Concrete**

Applicable provisions of 703 shall apply to placing reinforcing bars. No concrete shall be placed until the reinforcement is entirely and securely in place and has been inspected and approved. Walkways shall be in accordance with 702.20(a). Placing of reinforcement during placing of concrete will not be allowed without prior written approval. Splices, when allowed, shall be at locations of least tension in the steel.

The concrete deck pour sequence and procedure shall be submitted for approval a minimum of 14 days prior to the planned deck pour. The submittal shall include the following information:

- (a) the contract number
- (b) the Contractor's name
- (c) the bridge file number
- (d) the Contractor's proposed pour sequence
- (e) the Contractor's proposed pour rate
- (f) the approved concrete mix design
- (g) the delivery time from the concrete batching location to the jobsite.

Bridge approaches shall not be poured continuous with deck pours. *An exception will be considered when the bridge skew is less than or equal to 45 degrees and approved as part of the Contractor's concrete deck pour sequence. If the Contractor elects to pour the bridge approaches and deck continuously, the Contractor shall include the method of identifying type I-A joint locations as a part of the concrete deck pour sequence submittal.*

If, during the pour, the approved pour rate is not achieved, placement of transverse construction joints may be directed as shown on the plans. Placement of concrete shall be continuous between joints. Horizontal joints will not be allowed.

Floor drains shall be placed in gutters at locations shown on the plans and fastened securely before placing the surrounding concrete. The tops of the floor drains shall be no more than 1/2 in. below the adjacent gutter grade. The drains shall be constructed so drainage water is not discharged against portions of the structure.

Expansion joints shall be constructed as shown on the plans and the material shall be in accordance with 906.01.

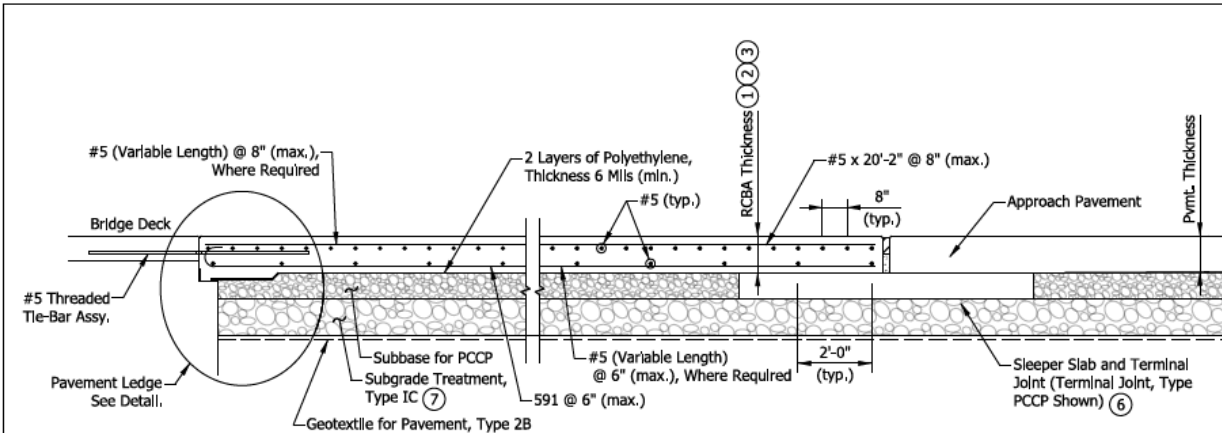
REVISION TO 2024 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

E 609-RCBA-04 REINFORCED CONCRETE BRIDGE APPROACH SECTION, PAVEMENT LEDGE, AND BAR BENDING DETAILS (shown markups)

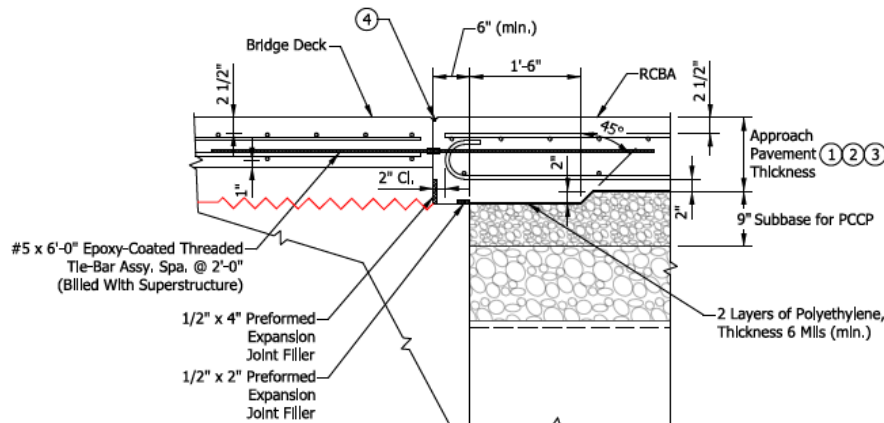
NOTES:

- ① See plans for approach pavement thickness.
- ② For HMA approach pavement:  
RCBA = 10 in. If design year AADT < 1000  
RCBA = 12 in. If design year AADT ≥ 1000
- ③ For PCCP approach pavement:  
RCBA = 12 in. If pavement thickness < 12 in.  
RCBA = Same as pavement thickness, if pavement thickness ≥ 12 in.
- ④ See Standard Drawing series E 609-BRJT for joint type I-A details.
5. See Standard Drawing series E 703-BRST for reinforcing-bar bending details and notes.
- ⑥ When shown on the plans, see Standard Drawing series E 503-BATJ for terminal joint and sleeper slab details.
- ⑦ When the RCBA is constructed without a terminal joint, subgrade treatment shall be omitted and geotextile shall be placed under subbase for PCCP.
- ⑧ When the RCBA is poured continuous with the bridge deck, a contiguous angle shall be mechanically fastened to the full length of the pavement ledge using galvanized or stainless steel fasteners.

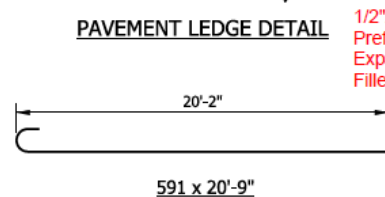
Preformed Expansion Joint Filler shall be secured to the angle and pavement ledge as shown. The angle material shall be ASTM A709, Grade 36 and galvanized in accordance with ASTM A123. When the RCBA is poured after the pavement ledge has been constructed, the angle shall be omitted and the Preformed Expansion Joint Filler shall be secured to the pavement ledge and bridge deck as shown.



SECTION THROUGH APPROACH



PAVEMENT LEDGE DETAIL

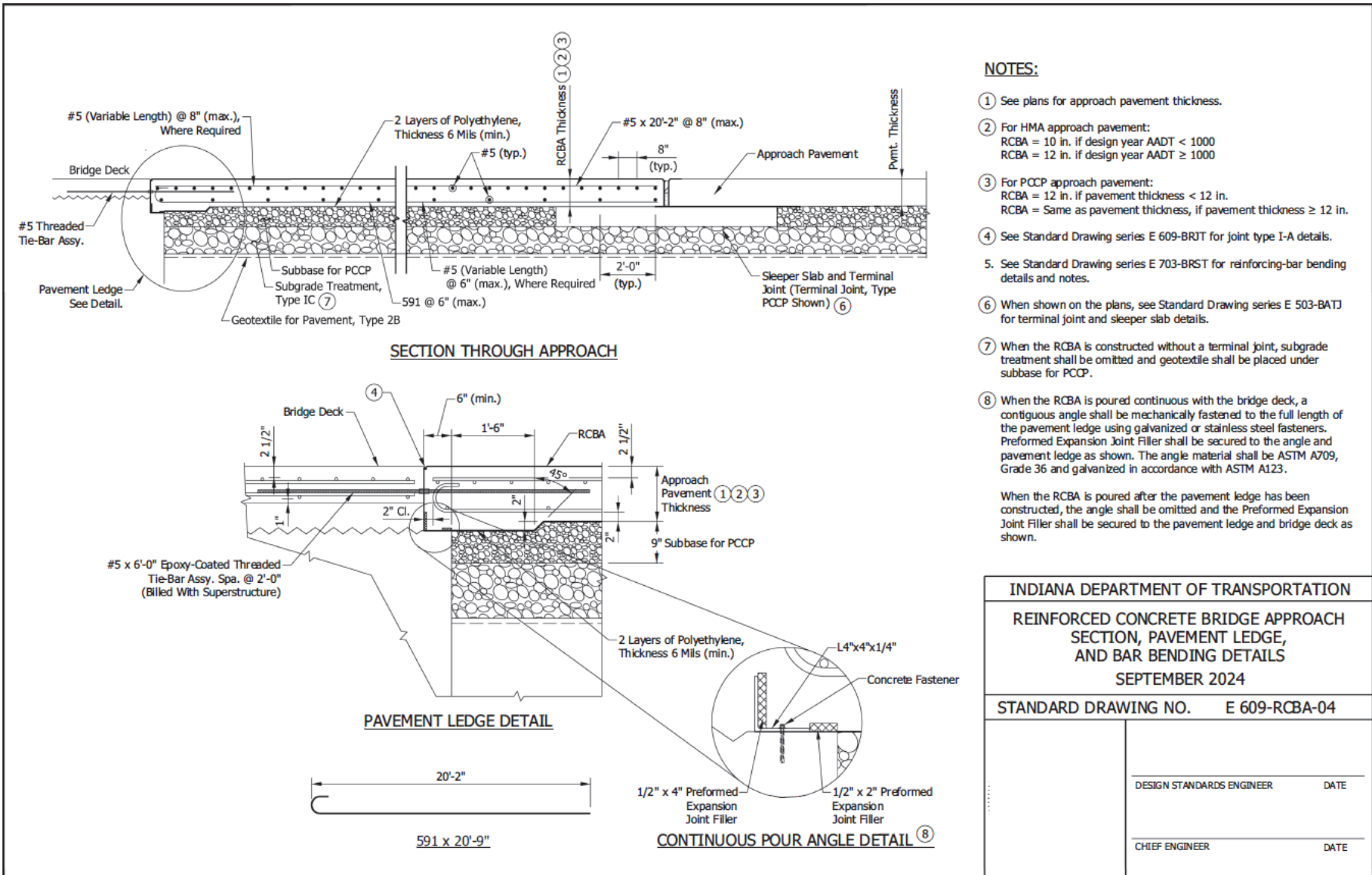


CONTINUOUS POUR ANGLE DETAIL

INDIANA DEPARTMENT OF TRANSPORTATION	
REINFORCED CONCRETE BRIDGE APPROACH SECTION, PAVEMENT LEDGE, AND BAR BENDING DETAILS	
SEPTEMBER <del>2023</del> 2024	
STANDARD DRAWING NO. E 609-RCBA-04	
	Subhi Bazlamit 6/15/2022 DESIGN STANDARDS ENGINEER DATE
	06/27/2022 CHIEF ENGINEER DATE

REVISION TO 2024 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

E 609-RCBA-04 REINFORCED CONCRETE BRIDGE APPROACH SECTION, PAVEMENT LEDGE, AND BAR BENDING DETAILS (draft)



INDIANA DEPARTMENT OF TRANSPORTATION	
REINFORCED CONCRETE BRIDGE APPROACH SECTION, PAVEMENT LEDGE, AND BAR BENDING DETAILS	
SEPTEMBER 2024	
STANDARD DRAWING NO.	E 609-RCBA-04
DESIGN STANDARDS ENGINEER	DATE
CHIEF ENGINEER	DATE

COMMENTS AND ACTION

704.04 Placing Reinforcement and Concrete

E 609-RCBA-04 REINFORCED CONCRETE BRIDGE APPROACH SECTION, PAVEMENT LEDGE, AND BAR BENDING DETAILS

DISCUSSION:

This item was introduced and presented by Mr. Novak who stated that prior to Construction Memo 07-23, concrete bridge decks and approaches could be poured continuously, as explained on the proposal sheet.

Citing the need for further review, Mr. Novak moved to withdraw this item, which will be presented again at a future date.

<p>Motion: Mr. Second: Mr. Ayes: Nays: FHWA Approval:</p>	<p><b>Action:</b></p> <p><input type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input checked="" type="checkbox"/> Withdrawn</p>
<p>2024 Standard Specifications Sections: 704.04 pg. 654. Recurring Special Provisions or Plan Details: NONE</p> <p>Standard Drawing affected: E 609-RCBA-04 REINFORCED CONCRETE BRIDGE APPROACH SECTION, PAVEMENT LEDGE, AND BAR BENDING DETAILS</p> <p>Design Manual Chapter: NONE</p> <p>GIFE Section: TBD</p>	<p>2026 Standard Specifications <input type="checkbox"/> Revise Pay Items List <input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP</p> <p><input type="checkbox"/> Create RSP (No. ___) Effective:</p> <p><input type="checkbox"/> Revise RSP (No. ___) Effective:</p> <p><input type="checkbox"/> Standard Drawing Effective:</p> <p><input type="checkbox"/> Create RPD (No. ___) Effective:</p> <p><input type="checkbox"/> GIFE Update <input type="checkbox"/> Frequency Manual Update <input type="checkbox"/> SiteManager Update</p>

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Testing difficulty and inefficiency of process for base metal samples.

PROPOSED SOLUTION: Create an alternative route of approval for Corrugated Metal Pipe, align with Corrugated Thermoplastic Pipe

APPLICABLE STANDARD SPECIFICATIONS: 715, 907, 908

APPLICABLE STANDARD DRAWINGS: None

APPLICABLE DESIGN MANUAL SECTION: NA

APPLICABLE SECTION OF GIFE: NA

APPLICABLE RECURRING SPECIAL PROVISIONS: create new 715 RSP

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: ad hoc: Jon Korff, Jim Reilman

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE:  
All contracts with 715 or 717 pay items.

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman for Jonathan Korff

Title: State Materials Engineer

Division: Division of Materials and Tests

E-mail: jreilman@indot.IN.gov

Date: 11/6/23



IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No

Will approval of this item affect the Qualified Products List (QPL)? Yes

Will this proposal improve:

Construction costs? N/A

Construction time? N/A

Customer satisfaction? Yes

Congestion/travel time? N/A

Ride quality? N/A

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? N/A

For construction workers? N/A

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? Yes

Design process? N/A

Will this change provide the contractor more flexibility? Yes

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

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

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

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

REVISION TO STANDARD SPECIFICATIONS

- SECTION 715 – PIPE CULVERTS, AND STORM AND SANITARY SEWERS
- 715.02 Materials
- SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS
- 907.16 Thermoplastic Pipe Requirements
- 907.17 Corrugated Polyethylene Drainage Tubing and Pipe
- SECTION 908 – METAL PIPE
- 908.01 ~~Blank~~ Metal Pipe Requirements

(Note: Proposed changes shown highlighted gray and previously approved changes (see July 20, 2023 SC meeting) – shaded and are in special provision [715-R-614](#) eff. 12-01-2023.)

The Standard Specifications are revised as follows:

SECTION 715, BEGIN LINE 41, DELETE AND INSERT AS FOLLOWS:

**(a) Type 1 Pipe**

Type 1 pipe shall be used for culverts under mainline pavement and public road approaches and shall be in accordance with the following:

Clay Pipe, Extra Strength.....	907.08
Corrugated Aluminum Alloy Pipe and Pipe-Arches.....	908.04 <sup>B</sup>
Corrugated Polyethylene Pipe, Type S .....	* <sup>A</sup>
Corrugated Polypropylene Pipe .....	* <sup>A</sup>
Corrugated Steel Pipe and Pipe-Arches .....	908.02 <sup>B</sup>
Non-Reinforced Concrete Pipe, Class 3.....	907.01
Polymer Precoated Galvanized Corrugated Steel Pipe and Pipe-Arches.....	908.08 <sup>B</sup>
Profile Wall Polyethylene Pipe, Closed.....	* <sup>A</sup>
Profile Wall Polyethylene Pipe, Ribbed.....	* <sup>A</sup>
Profile Wall PVC Pipe .....	* <sup>A</sup>
Reinforced Concrete Horizontal Elliptical Pipe.....	907.03
Reinforced Concrete Pipe .....	907.02
Smooth Wall Polyethylene Pipe.....	* <sup>A</sup>
Smooth Wall PVC Pipe.....	* <sup>A</sup>
Spiral Rib Steel Pipe .....	908.02 <sup>B</sup>
Structural Plate Pipe and Pipe-Arches .....	908.09 <sup>B</sup>

<sup>A</sup> All thermoplastic pipes shall be from the QPL of Thermoplastic Pipe and Liner Pipe Sources in accordance with 907.16.

<sup>B</sup> All metal pipes shall be from the QPL of Metal Pipe Sources in accordance with 908.01.

**(b) Type 2 Pipe**

Type 2 pipe shall be used for storm sewers and shall be in accordance with the following:

Clay Pipe, Extra Strength.....	907.08
Corrugated Polyethylene Pipe, Type S .....	* <sup>A</sup>
Corrugated Polypropylene Pipe .....	* <sup>A</sup>
Fully Bituminous Coated and Lined Corrugated Steel Pipe and Pipe-Arches.....	908.07 <sup>B</sup>

## REVISION TO STANDARD SPECIFICATIONS

## SECTION 715 – PIPE CULVERTS, AND STORM AND SANITARY SEWERS

## 715.02 Materials

## SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS

## 907.16 Thermoplastic Pipe Requirements

## 907.17 Corrugated Polyethylene Drainage Tubing and Pipe

## SECTION 908 – METAL PIPE

908.01 ~~Blank~~ Metal Pipe Requirements

Non-Reinforced Concrete Pipe, Class 3.....	907.01
Polymer Precoated Galvanized Corrugated Steel Pipe and Pipe-Arches Type IA and Type IIA.....	<del>908.08</del> <sup>B</sup>
Profile Wall Polyethylene Pipe, Closed .....	* <sup>A</sup>
Profile Wall Polyethylene Pipe, Ribbed.....	* <sup>A</sup>
Profile Wall PVC Pipe .....	* <sup>A</sup>
Reinforced Concrete Horizontal Elliptical Pipe.....	907.03
Reinforced Concrete Pipe .....	907.02
Smooth Wall Polyethylene Pipe.....	* <sup>A</sup>
Smooth Wall PVC Pipe.....	* <sup>A</sup>

<sup>A</sup> All thermoplastic pipes shall be from the QPL of Thermoplastic Pipe and Liner Pipe Sources in accordance with 907.16.

<sup>B</sup> All metal pipes shall be from the QPL of Metal Pipe Sources in accordance with 908.01.

**(c) Type 3 Pipe**

Type 3 pipe shall be used for culverts under all drives and field entrances. All Type 1 pipe materials are acceptable.

**(d) Type 4 Pipe**

Type 4 pipe shall be used for drain tile and longitudinal underdrains and shall be in accordance with the following:

Clay Pipe**.....	907.08
Corrugated Polyethylene Drainage Tubing.....	* <sup>A</sup>
Corrugated Polyethylene Pipe, Type S**.....	* <sup>A</sup>
Corrugated Polyethylene Pipe, Type SP.....	* <sup>A</sup>
Drain Tile**.....	907.10
Non-Reinforced Concrete Pipe .....	907.01
Perforated Clay Pipe**.....	907.09
Perforated PVC Semicircular Pipe.....	* <sup>A</sup>
Profile Wall PVC Pipe .....	* <sup>A</sup>

<sup>A</sup> All thermoplastic pipes shall be from the QPL of Thermoplastic Pipe and Liner Pipe Sources in accordance with 907.16.

\*\* These materials shall be used for drain tiles only.

**(e) Type 5 Pipe**

Type 5 pipe shall be used for broken-back pipe runs where coupled or jointed pipe is desirable and shall be in accordance with the following:

Corrugated Aluminum Alloy Pipe and Pipe-Arches.....	<del>908.04</del> <sup>B</sup>
Corrugated Polyethylene Pipe, Type S .....	* <sup>A</sup>

## REVISION TO STANDARD SPECIFICATIONS

## SECTION 715 – PIPE CULVERTS, AND STORM AND SANITARY SEWERS

## 715.02 Materials

## SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS

## 907.16 Thermoplastic Pipe Requirements

## 907.17 Corrugated Polyethylene Drainage Tubing and Pipe

## SECTION 908 – METAL PIPE

908.01 ~~Blank~~ Metal Pipe Requirements

Corrugated Polypropylene Pipe .....	* <sup>A</sup>
Corrugated Steel Pipe and Pipe-Arches .....	908.02 <sup>B</sup>
Fully Bituminous Coated and Lined Corrugated Steel Pipe and Pipe-Arches .....	908.07 <sup>B</sup>
Polymer Precoated Galvanized Corrugated Steel Pipe and Pipe-Arches .....	908.08 <sup>B</sup>
Profile Wall Polyethylene Pipe, Closed .....	* <sup>A</sup>
Profile Wall Polyethylene Pipe, Ribbed.....	* <sup>A</sup>
Profile Wall PVC Pipe .....	* <sup>A</sup>
Smooth Wall Polyethylene Pipe.....	* <sup>A</sup>
Smooth Wall PVC Pipe.....	* <sup>A</sup>
Spiral Rib Steel Pipe .....	908.02 <sup>B</sup>

\*<sup>A</sup> All thermoplastic pipes shall be from the QPL of Thermoplastic Pipe and Liner Pipe Sources in accordance with 907.16.

<sup>B</sup> All metal pipes shall be from the QPL of Metal Pipe Sources in accordance with 908.01.

SECTION 907, BEGIN LINE 216, DELETE AND INSERT AS FOLLOWS:

### 907.16 Thermoplastic Pipe Requirements

A QPL of ~~Thermoplastic Pipe~~ and ~~Liner Pipe~~ *Sources* will be maintained by the Department. The QPL will specify the manufacturer and thermoplastic pipe designation. All of these materials shall comply with the applicable AASHTO or ASTM requirements listed in the following table and will only be accepted from qualified manufacturers. The manufacturer is defined as the plant which produces the thermoplastic pipe. The manufacturer shall become qualified by establishing a history of satisfactory quality control of these materials as evidenced by the test results performed by the manufacturer's testing laboratory.

Summary of Thermoplastic Pipe Specification Requirements				
Pipe Material	Standard Specification	AASHTO	ASTM	Manufacturer Requirement
Corrugated Polyethylene Drainage Tubing	907.17(a)	M 252		ITM 806, Procedure O
Corrugated Polyethylene Pipe	907.17(b)	M 294*		ITM 806, Procedure O
Corrugated Polypropylene Pipe	907.19	M 330		ITM 806, Procedure O
Perforated PVC Semicircular Pipe	907.18		D3034	ITM 806, Procedure A
Profile Wall HDPE Liner Pipe	907.25(b)		F894	ITM 806, Procedure A or 916, Type A Certification

## REVISION TO STANDARD SPECIFICATIONS

## SECTION 715 – PIPE CULVERTS, AND STORM AND SANITARY SEWERS

## 715.02 Materials

## SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS

## 907.16 Thermoplastic Pipe Requirements

## 907.17 Corrugated Polyethylene Drainage Tubing and Pipe

## SECTION 908 – METAL PIPE

908.01 ~~Blank~~ Metal Pipe Requirements

Profile Wall PVC Liner Pipe	907.25(c)		F949	ITM 806, Procedure A or 916, Type A Certification
Profile Wall PVC Pipe	907.22 907.24(c)	M 304		ITM 806, Procedure O
Profile Wall Polyethylene Pipe	907.20		F894	ITM 806, Procedure A
<del>Schedule 40</del> PVC Plastic Pipe, Schedule 40	907.24(b)		D1785 or <del>D2665</del>	916, Type C Certification
<i>Slotted Vane Drain Pipe</i>	<i>908.14</i>	<i>M 278</i>	<i>F679</i>	<i>ITM 806, Procedure A</i>
Smooth Wall Polyethylene Pipe	907.21 907.24(d)		F714	ITM 806, Procedure A
Smooth Wall PVC Pipe	907.23 907.24(e)	M 278	F679	ITM 806, Procedure A
Solid Wall HDPE Liner Pipe	907.25(a)		F714	ITM 806, Procedure Q or 916, Type A Certification
Type PSM PVC Pipe and Fittings	907.24(a)		D3034	ITM 806, Procedure A
* Pipe in accordance with AASHTO M 294 shall be manufactured with virgin materials.				

SECTION 908, BEGIN LINE 3, DELETE AND INSERT AS FOLLOWS:

**908.01 ~~Blank~~ Metal Pipe Requirements**

*A QPL of Metal Pipe Sources will be maintained by the Department. The QPL will specify the manufacturer and pipe designation. All of these materials shall comply with the applicable AASHTO or ASTM requirements listed in the following table and will only be accepted from qualified manufacturers. The manufacturer is defined as the plant which produces the metal pipe, pipe-arch, or arch. The manufacturer shall establish and maintain a history of satisfactory quality control of these materials. This history will be based on achieving and maintaining a "Compliant" status with the AASHTO PEAS program in accordance with ITM 806, Procedure O.*

<i>Summary of Metal Pipe Specification Requirements</i>				
<i>Pipe Material</i>	<i>Standard Specification</i>	<i>AASHTO</i>	<i>ASTM</i>	<i>Manufacturer Requirement</i>
<i>Cast Iron Soil Pipe</i>	<i>908.10</i>		<i>A74</i>	<i>Buy America Certification</i>
<i>Corrugated Aluminum Alloy Pipe and Pipe-Arches</i>	<i>908.04</i>	<i>M 196</i>		<i>ITM 806, Procedure O</i>

## REVISION TO STANDARD SPECIFICATIONS

## SECTION 715 – PIPE CULVERTS, AND STORM AND SANITARY SEWERS

## 715.02 Materials

## SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS

## 907.16 Thermoplastic Pipe Requirements

## 907.17 Corrugated Polyethylene Drainage Tubing and Pipe

## SECTION 908 – METAL PIPE

908.01 ~~Blank~~ Metal Pipe Requirements

<i>Corrugated Steel Pipe and Pipe-Arches</i>	<i>908.02</i>	<i>M 36</i>		<i>ITM 806, Procedure O</i>
<i>Fully Bituminous Coated Corrugated and Lined Steel Pipe and Pipe-Arches</i>	<i>908.07</i>	<i>M 36</i>		<i>ITM 806, Procedure O</i>
<i>Polymer Precoated Galvanized Corrugated Steel Culvert Pipe and Pipe-Arches</i>	<i>908.08</i>	<i>M 245</i>		<i>ITM 806, Procedure O</i>
<i>Slotted Drain Pipe</i>	<i>908.14</i>	<i>pipe: M 36</i>	<i>grate: A36, Grade 36</i>	<i>ITM 806, Procedure O</i>
<i>Steel Pipe</i>	<i>908.11</i>		<i>A139, grade B or A53 Type E, grade B</i>	<i>ITM 806, Procedure O</i>
<i>Structural Plate Pipe, Pipe-Arches, and Arches; Aluminum Alloy</i>	<i>908.09(b)</i>	<i>M 219</i>		<i>ITM 806, Procedure O</i>
<i>Structural Plate Pipe, Pipe-Arches, and Arches; Steel</i>	<i>908.09(a)</i>	<i>M 167 and LRFD Bridge Construction Specifications</i>		<i>ITM 806, Procedure O</i>

**908.02 Corrugated Steel Pipe and Pipe-Arches**

Corrugated steel pipe and pipe-arches shall be type I, IA, IR, II, or IIA in accordance with AASHTO M 36.

COMMENTS AND ACTION

- 715.02 Materials
- 907.16 Thermoplastic Pipe Requirements
- 907.17 Corrugated Polyethylene Drainage Tubing and Pipe
- 908.01 ~~Blank~~ Metal Pipe Requirements

DISCUSSION:

Mr. Nelson, sitting in as proxy for Mr. Reilman, assisted by Mr. Korff, introduced and presented this item stating that there has been testing difficulty and inefficiency of process for base metal samples.

Mr. Nelson proposed to create an alternative route of approval for Corrugated Metal Pipe, which will align with Corrugated Thermoplastic Pipe, as explained by Mr. Korff.

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

<p>Motion: Mr. Nelson          Second: Mr. White          Ayes: 10          Nays: 0          FHWA Approval: <b>YES</b></p>	<p><b>Action:</b></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Passed as Submitted</li> <li><input type="checkbox"/> Passed as Revised</li> <li><input type="checkbox"/> Withdrawn</li> </ul>
<p>2024 Standard Specifications Sections:           NONE</p> <p>Recurring Special Provisions or Plan Details:          715-R-764 PIPE CULVERTS, AND STORM AND SANITARY SEWERS</p> <p>Standard Drawing affected:          NONE</p> <p>Design Manual Chapter:          NONE</p> <p>GIFE Section:          NONE</p>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> 2026 Standard Specifications</li> <li><input type="checkbox"/> Revise Pay Items List</li> <li><input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP</li> <li><input checked="" type="checkbox"/> Create RSP (No. <b>715-R-xxx</b>)              Effective: <b>June 1, 2024</b></li> <li><input type="checkbox"/> Revise RSP (No. __)              Effective:</li> <li><input type="checkbox"/> Standard Drawing              Effective:</li> <li><input type="checkbox"/> Create RPD (No. __)              Effective:</li> <li><input type="checkbox"/> GIFE Update</li> <li><input checked="" type="checkbox"/> Frequency Manual Update</li> <li><input checked="" type="checkbox"/> SiteManager Update</li> </ul>