INDIANA DEPARTMENT OF TRANSPORTATION
100 North Senate Avenue
Room N758 CM
Indianapolis, Indiana 46204
www.in.gov/indot
Mike Braun, Governor
Lyndsay Quist, Commissioner

APPROVED MINUTES

November 19, 2025, Standards Committee Meeting

December 24, 2025

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Minutes from the November 19 Standards Committee Meeting

The November Standards Committee meeting was called to order by Mr. Pankow, Chair, at 9:00 a.m. on Wednesday, November 19, and was held virtually via *Teams* (Microsoft application). The meeting was adjourned at 10:11 a.m. The next meeting is scheduled for Friday, **December 19, 2025.**

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
Novak, Joseph, Construction Management
Orton, Mark, Highway Engineering
Pelz, Kurt, Construction Technical Support
Reilman, Jim, Materials and Tests
White, Peter, Bridge Engineering
Duncan, Steve*, Contract Administration
Rearick, Anne, Asset Management
**Proxy* for Wooden, John

Also, the following attendees were captured by *Teams*:

Awwad, Nathan E., INDOT
Nelson, Mike, INDOT

Duncan, Thomas, FHWA
Evans, Kollene, INDOT
Fegan, Roland, INDOT
Fox, Gary, INDOT
Galetka, Jason, INDOT
Harding, Matthew, INDOT
Harris, Tom, INDOT
Jacobs, David L, INDOT
Leckie, John, IRMCA
Mueller, Bart, INDOT
Nunley, Cindy, INDOT
Pepenella, Keith, INDOT
Podorvanova, Lana, INDOT
Russell, Melissa, INDOT
Siddiki, Nayyar Zia, INDOT
Smart, Steve, County Materials
Smith, Charles, INDOT
Susong, John, Rinker Pipe
Thornton, Donald, INDOT
Trammell, Scott, INDOT

The following items were discussed:

A. GENERAL BUSINESS

OLD BUSINESS *(No items were listed)*

NEW BUSINESS

1. *Approval of the Minutes from the October 16 meeting*

Mr. Pankow requested a motion to approve the Minutes from the October 16, 2025 meeting.

Motion: Mr. Pelz
Second: Mr. Koch
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 2026** (Mr. Trammell)*.....pg. 5

B. CONCEPTUAL PROPOSAL

(No items were listed)

C. STANDARD SPECIFICATIONS, DRAWINGS, AND SPECIAL PROVISIONS PROPOSAL

OLD BUSINESS *(No items were listed)*

NEW BUSINESS

Item No. 1	Mr. Reilman	pg. 6

2026 Standard Specifications:

702.05	Proportioning
707.04(c)	Concrete

ACTION: PASSED AS REVISED

Item No. 2	Mr. Reilman	pg. 10

2026 Standard Specifications:

SECTION 215 CHEMICAL MODIFICATION OF SOILS

ACTION: WITHDRAWN

Item No. 3	Mr. Reilman	pg. 18

2026 Standard Specifications:

SECTION 217 SOILS DRYING WITH CHEMICAL MODIFIERS

ACTION: PASSED AS SUBMITTED

Item No. 4	Mr. White	pg. 24

Recurring Special Provisions:

619-B-330 *SPECIAL PARTIAL COATING SYSTEM*

ACTION: PASSED AS SUBMITTED

Item No. 5	Mr. White	pg. 30

Recurring Special Provision:

729-B-331 *HEAT STRAIGHTENING WITH SPECIAL PARTIAL COATING*

ACTION: PASSED AS SUBMITTED

Item No. 6	Mr. Reilman	pg. 35

2026 Standard Specifications:

715.02	Materials
715.09	Backfiling
~~907.04~~	~~Precast Concrete Manholes, Inlets, and Catch Basins~~ (Note: proposed changes to 907.04 have been recalled)
907.21	Smooth Wall Polyethylene Pipe
907.16	Thermoplastic Pipe Requirements
907.23	Smooth Wall PVC Pipe
907.18	Perforated PVC Semicircular Pipe
907.24	Pipe for Outlets
907.20	Profile Wall Polyethylene Pipe
907.25	Thermoplastic Liner Pipe

2026 Standard Drawings:

E 715-PHCL-01, 20, 21, 22, 23, and 24 PIPE HEIGHT OF COVER LIMITS

E 715-PIPE-01	PIPE CLASSIFICATION TABLES
ACTION:	PASSED AS REVISED

Item No. 7 — Mr. Reilman — pg. 62

2026 Standard Specifications:

203.20(b)	Shale, Shale and Soft Rock Mixtures, or Soft Rock
203.20(c)	Shale and Thinly Layered Limestone
ACTION:	WITHDRAWN

Item No. 8 — Mr. Reilman — pg. 67

2026 Standard Specifications:

701.02	Materials
913.06	Bentonite Grout

Recurring Special Provision:

204-R-727	GEOTECHNICAL INSTRUMENTATION
ACTION:	PASSED AS SUBMITTED

Item No. 9 — Mr. Reilman — pg. 72

2026 Standard Specifications:

701.13	Cut-Off Lengths
712.03	General Requirements
712.04	Caps
911.02	Treated Lumber
ACTION:	PASSED AS SUBMITTED

Item No. 10 — Mr. Reilman — pg. 77

2026 Standard Specifications:

722.10	Placing and Finishing
722.12	Curing
ACTION:	PASSED AS SUBMITTED

cc: Committee Members
FHWA
ICI

INDOT Standards Committee Schedule of Meetings, Submittals, and Distributions for **2026**

Standards Committee Meeting Date	Agenda Items Due [1]	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)
12/~~18~~19/2025	11/24/2025	12/1/2025	12/24/2025	12/31/2025	1/8/2026	1/29/2026
1/15/2026	12/22/2025	12/29/2025	1/21/2026	1/28/2026	2/5/2026	2/19/2026
2/19/2026	1/26/2026	2/2/2026	2/25/2026	3/4/2026	3/12/2026	4/2/2026
3/19/2026	2/23/2026	3/2/2026	3/25/2026	4/1/2026	4/9/2026	4/23/2026
4/16/2026	3/23/2026	3/30/2026	4/22/2026	4/29/2026	5/7/2026	5/28/2026
5/21/2026	4/27/2026	5/4/2026	5/27/2026	6/3/2026	6/11/2026	7/2/2026
6/18/2026	5/26/2026	6/1/2026	6/24/2026	7/1/2026	7/9/2026	7/23/2026
7/16/2026	6/22/2026	6/29/2026	7/22/2026	7/29/2026	8/6/2026	8/27/2026
8/20/2026	7/27/2026	8/3/2026	8/26/2026	9/2/2026	9/10/2026	10/1/2026
9/17/2026	8/24/2026	8/31/2026	9/23/2026	9/30/2026	10/8/2026	10/29/2026
10/15/2026	9/21/2026	9/28/2026	10/21/2026	10/28/2026	11/5/2026	11/25/2026
11/20/2026	10/27/2026	11/2/2026	11/24/2026	12/2/2026	12/10/2026	12/31/2026
12/17/2026	11/23/2026	11/30/2026	12/23/2026	12/30/2026	1/7/2027	1/28/2027

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, 2026.*

Shaded dates are exceptions to the regular schedule. November meeting moved to Friday due to CEPDS.

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The Department no longer believes it is necessary to require a set retarding admixture in 702 Class C Concrete.

PROPOSED SOLUTION: Delete the requirement for a set retarding admixture in Class C concrete.

APPLICABLE STANDARD SPECIFICATIONS: 702, 707

APPLICABLE STANDARD DRAWINGS: None

APPLICABLE DESIGN MANUAL SECTION: None

APPLICABLE SECTION OF GIFE: None

APPLICABLE RECURRING SPECIAL PROVISIONS: create new 702 RSP

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad Hoc: Michael Nelson, Jim Reilman

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

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman

Title: State Materials Engineer

Organization: INDOT

Phone Number: (317) 522-9692

Date: 10/21/25

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No
Will approval of this item affect the Approved Materials List? No
Will this proposal improve:

- Construction costs? N/A
- Construction time? Yes
- Customer satisfaction? N/A
- Congestion/travel time? N/A
- Ride quality? N/A

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

Will this item improve safety:

- For motorists? N/A
- For construction workers? N/A

Will this proposal improve quality for:

- Construction procedures/processes? N/A
- Asset preservation? N/A
- Design process? N/A

Will this change provide the contractor more flexibility? 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 2026 STANDARD SPECIFICATIONS

SECTION 702 – STRUCTURAL CONCRETE
702.05 Proportioning
SECTION 707 – PRECAST CONCRETE AND PRECAST PRESTRESSED CONCRETE STRUCTURAL MEMBERS
707.04(c) Concrete

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 702, BEGIN LINE 137, DELETE AS FOLLOWS:

Powdered admixtures shall be measured by weight. Paste or liquid admixtures shall be measured by weight or volume. All admixtures shall be within 3% of the amount required. When admixtures are used in small quantities in proportion to the cement, as is the case for air-entraining admixtures, mechanical dispensing equipment shall be provided.

~~Class C concrete shall contain a retarding admixture when either the air temperature is above 70°F or the concrete temperature is above 80°F, or if retardation is required due to the structure design, or due to the proposed pour sequence such as for the requirements for floor slab pours set out in 704.04. Air-entraining cements will not be allowed in Class C concrete.~~

If the contract requires stay-in-place metal forms for the bridge deck or if the Contractor elects to use such forms, the bridge deck concrete shall incorporate Class AP coarse aggregate instead of Class A.

SECTION 707, BEGIN LINE 143, DELETE AS FOLLOWS:

Chemical admixture types B, C, and E will only be allowed with prior written permission. Chemical admixture Type C and portland cement Type III shall not be used in the same concrete mixture. ~~Air-entraining cement will not be allowed.~~ The cement content of the mixed concrete shall be sufficient to obtain the specified minimum 28-day compressive strength. The total of portland cement and other cementitious materials shall be a minimum of 564 lb/cu yd and shall not exceed 850 lb/cu yd. Silica fume may be added in an amount not to exceed 5% of the total cementitious material.

COMMENTS AND ACTION

702.05 Proportioning
707.04(c) Concrete

DISCUSSION:

This item was introduced and presented by Mr. Reilman, who explained that the Department no longer believes it is necessary to require a set retarding admixture in 702 Class C Concrete.

Mr. Reilman proposed deleting the requirement for a set retarding admixture in Class C concrete.

Mr. Koch asked if the limitation of 'air entrained cement' needs to remain for 702? If not required or relevant, does 707's language remain viable? Mr. Reilman responded that Prestress Services commented that AE cement is not used. Therefore, a revision to 707.04 as been added and as shown in these minutes.

Mr. Reilman revised his motion, which was seconded by Mr. White.

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

Motion: Mr. Reilman Second: Mr. White Ayes: 10 Nays: 0 FHWA Approval: YES	**Action:** ___ Passed as Submitted _X_ Passed as Revised ___ Withdrawn
2026 Standard Specifications Sections: 702.05, pg. 627. Recurring Special Provisions or Plan Details: NONE Standard Drawing affected: NONE Design Manual Chapter: NONE GIFE Section: NONE	_X_ 2028 Standard Specifications ___ Revise Pay Items List ___ Notification to Designers if change is not addressed by RSP _X_ Create RSP (No. 702-R-813) Effective: June 1, 2026 ___ Revise RSP (No.___) Effective: ___ Standard Drawing Effective: ___ Create RPD (No. ___) Effective: ___ GIFE Update ___ Frequency Manual Update ___ AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Coal ash is no longer in use and minor editorial revisions were needed.

PROPOSED SOLUTION: The removal of all mentions of coal ash along with some editorial changes.

APPLICABLE STANDARD SPECIFICATIONS: 215

APPLICABLE STANDARD DRAWING: None

APPLICABLE DESIGN MANUAL CHAPTER: None

APPLICABLE SECTION OF GIFE: NA

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: Yes

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad Hoc committee consisting of Nayyar Siddiki, Samuel Clawson, and Jim Reilman

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

IMPACT ANALYSIS (attach report): Yes

Submitted By: Jim Reilman and Nayyar Siddiki

Title: State Material Engineer

Division: Materials and Test

E-mail: Jreilman@INDOT.IN.GOV

Date: 10/16/2025

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? N/A
Customer satisfaction? Yes
Congestion/travel time? N/A
Ride quality? N/A

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? N/A

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

Is this proposal needed for compliance with:

Federal or State regulations? N/A
AASHTO or other design code? N/A

Is this item editorial? Yes

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

The Standard Specifications are revised as follows:

SECTION 215, BEGIN LINE 1, DELETE AND INSERT AS FOLLOWS:

SECTION 215 – CHEMICAL MODIFICATION OF SOILS

215.01 Description

This work shall consist of the modification of soils by uniformly mixing portland cement, ~~coal ash,~~ or lime with soil to aid in strength gain and achieving the workability of soils.

MATERIALS

215.02 Materials

Materials shall be in accordance with the following:

~~Coal Ash, Class C .....901.02~~
Lime .....913.04(b)
Portland Cement, Type I.....901.01(b)
Portland-Limestone Cement, Type IL .....901.01(b)
Water 913.01
Note: Quicklime or portland cement may be used dry or as a slurry.

Soils for chemical modification shall meet the following requirements.

Soil Property	Test Method	Requirement
Maximum Dry Density	AASHTO T 99	≥ 90 pcf
Organic Material	AASHTO T 267	≤ 6%
Sulfate Content	ITM 510	≤ 1,000 ppm

215.03 Testing and Mix Design

The Contractor shall be responsible for the mix design. The mix design shall be performed by a Qualified Geotechnical Consultant in accordance with the Department's Design Procedures for Soil Modification or Stabilization.

The quantities for hydrated lime, quicklime, or portland cement shall be based on 5.0% of the maximum dry density of the soils. The quantities for lime by-products shall be based on 6.0% of the maximum dry density of the soils. ~~The quantities for coal ash Class C shall be based on 12.0% of the maximum dry density of the soils. Class F coal ash shall not be used.~~

If hydrated lime, quick lime, lime by-products or portland cement are used, test results and the geotechnical consultant recommendations shall be submitted to the Engineer prior to use. ~~If coal ash is used, the test results and the geotechnical consultant recommendations shall be submitted to the Engineer and to the Department's Geotechnical Engineering Division for approval at least three business days prior to use.~~ If the modifier as bid is not appropriate for the soils encountered, portland cement shall be used. Portland cement, ~~coal ash,~~ lime, and lime by-products

shall be selected from the Department's QPLs of Cement Sources, Pozzolan Sources, and Soil Modifiers, respectively.

The quantity of chemical modifier may be adjusted for different soil types. ~~However, t~~*T*he source ~~or type~~ of chemical modifier ~~shall not~~*may* be changed during the progress of the work without ~~approval~~*another mix design, if the chemical modifier is from the QPL. If the type of chemical modifier is changed during progress of the work, a new mix design* ~~is~~*shall be required*. ~~A change in source or type shall require a new mix design.~~

215.04 Storage and Handling

The chemical modifier shall be stored and handled in accordance with the manufacturer's recommendations.

215.05 Weather Limitations

The chemical soil modification shall be performed when the soil has a minimum temperature of 45°F, measured 4 in. below the surface, and with the air temperature rising. The chemical modifier shall not be mixed with frozen soils or with soil containing frost. Chemical soil modification shall only be performed in areas which are going to be paved during the same construction season.

215.06 Preparation of Soils

The soils shall be prepared in accordance with 207.03. All aggregates which are larger than approximately ~~3~~*1 1/2* in. encountered before or after mixing the soils and chemical modifiers shall be removed.

215.07 Spreading of Chemical Modifiers

Where Type A-6 or Type A-7 soils are used or encountered, the surface shall be scarified to the specified depth prior to distribution of the chemical modifier. The chemical modifier shall be distributed uniformly by a cyclone, screw-type, or pressure manifold type distributor. If a slurry is used, the surface shall be scarified prior to the distribution of the slurry. The chemical modifier shall not be applied when wind conditions create problems in adjacent areas or create a hazard to traffic on any adjacent roadway. The spreading of ~~the chemical modifier~~*lime* shall be limited to an amount which can be incorporated into the soil within the same day of work. *When the cement is spread, mixing and compaction shall be before cementation occurs.* If weather causes stoppage of work or exposes the chemical modifier to washing or blowing, additional chemical modifier may be spread when the work resumes.

215.08 Mixing

The chemical modifier, soil, and water when necessary, shall be thoroughly mixed by rotary speed mixers. The mixing shall continue until a homogenous layer of the required thickness has been obtained. One hundred percent of the material, exclusive of rock particles, shall pass a 1 in. (25 mm) sieve and at least 60% shall pass a No. 4 (4.75 mm) sieve. The mixing depth shall be 14 in. The gradation test shall be performed in accordance with ITM 516.

The chemically modified soil mixture shall be at least 1% above the optimum moisture content during mixing and compaction. Water shall not be added to the chemically modified soil

when the moisture content of the soil exceeds 3% above optimum moisture. Water shall be added during mixing only.

215.09 Compaction

Compaction of the mixture shall begin as soon as practicable after mixing and shall be in accordance with 207.03 as applicable. Compaction after mixing shall be as follows:

(a) For portland cement modified soils, mixing shall be completed within 1 h of portland cement placement and grading and final compaction shall be completed within 3 h after mixing.

~~(b) Coal ash modified soils shall be compacted within 4 h.~~

(~~c~~*b*) Lime modified soils shall be compacted within 24 h.

Acceptance of chemically modified soils will be determined in accordance with ITM 508 or ITM 509. *The frequency of LWD or DCP testing will be three tests for each 1,400 cu yds of chemically modified soils.* Testing of the chemically modified soils will begin a minimum of 24 h after compaction.

Acceptance of chemically modified soils will be determined by averaging three LWD tests obtained at random stations determined in accordance with ITM 802. The deflection shall be equal to or less than the allowable average deflection shown in the table below.

Material Type	Allowable Average Deflection, (mm)	Maximum Deflection at a Single Test Location (mm)
Cement Modified Soils	0.27	0.31
Lime Modified Soils	0.30	0.35

For measuring the compaction with a DCP, three random test locations will be determined in accordance with ITM 802. Blow counts of 15 and above will be used to determine the average for the top 6 in. of a 14 in. lift. Blow counts of 14 and above will be used to determine the average for the bottom 8 in. of a 14 in. lift. Blow counts of 18 and above will be used to determine the average for the 8 in. lift. Locations with test results less than the specified minimum blow counts will be retested and shall be reworked if the minimum blow count is not obtained. ~~The frequency of LWD or DCP testing will be three tests for each 1,400 cu yds of chemically modified soils.~~

The chemically modified soil lift shall meet the following requirements for compaction:

(a) The average DCP blow count shall not be less than 17 for the top 6 in. of a 14 in. lift.

(b) The average DCP blow count shall not be less than 16 for the bottom 8 in. of a 14 in. lift.

(c) Moisture tests for chemically modified soils mixture shall be performed in accordance with ITM 506 every 4 h during chemical and soils mixing.

(d) One gradation test shall be performed for each 2,500 cu yds of chemically modified soil in accordance with 215.08 and ITM 516.

Construction traffic or equipment will not be allowed on the treated soils until the soil meets the compaction test requirements.

215.10 Curing

Moisture content shall be maintained at *least* 1% above the optimum moisture content ~~for the first 48 h after~~*during* mixing.

215.11 Proofrolling

Proofrolling shall be performed in accordance with 203.26.

215.12 Method of Measurement

The accepted quantity of chemically modified soils, for the material specified, will be measured by the square yard, complete in place. All removal and replacement required to modify the soils below the specified depth will be measured in accordance with 203.27(b).

215.13 Basis of Payment

The accepted quantity of chemically modified soils, for the material specified, will be paid for by the square yard, complete in place.

~~Coal ash, when used, will be paid for as lime.~~

All removal and replacement required to modify the soils below the specified depth will be paid for in accordance with 203.28.

Adjustment of materials for chemical modification that exceeds the limits of 215.03 will be included in a change order for materials only and paid for as chemical modifier adjustments. If mix design test results show that the chemical modifier as bid by the Contractor is not appropriate and the strength of the modified soil can not be achieved, a price adjustment will be made for the use of portland cement. The price adjustment will be calculated at a cost equal to the difference in the invoice cost of the chemical modifier found to be appropriate for use and the invoice or quoted delivered cost of the chemical modifier as bid by the Contractor. This adjustment will be included in a change order and will be paid for as chemical modifier adjustments. ~~Coal ash will not be considered for price adjustment.~~ Payment for chemical modifier adjustments will be made for direct delivered material costs incurred by the Contractor in accordance with 109.05.

Payment will be made under:

Pay Item	**Pay Unit Symbol**

Chemical Modification, Soils, _____ material ..... SYS

The cost of performing the laboratory tests, providing a qualified geotechnical consultant, scarification of the soil, spreading and mixing of the chemical modifier and soil, compaction of the resultant mixture, shaping the soil, work required due to adjustments of modifier proportioning, additional modification required due to weather conditions, correction of deficient areas, water required for the modification process, modified soil trimming, moisture testing, gradation testing, proofrolling, and all operations needed to meet the requirements of this specification shall be included in the cost of the pay items of this section.

COMMENTS AND ACTION

SECTION 215 – CHEMICAL MODIFICATION OF SOILS

DISCUSSION:

Mr. Reilman introduced and presented this item stating that coal ash is no longer in use and minor editorial revisions are needed.

Mr. Reilman proposed the removal of all mentions of coal ash along with some editorial changes.

With regard to the last paragraph in 215.03, Mr. Koch stated that the former negatively written sentence now reads a bit clunky. Strike 'however'?
As for the revision to 215.06, Mr. Koch asked if it really feasible to reduce stone size? I cannot imagine anyone picking 2 in. stones.
Mr. Clawson responded that the reduction was made due to the requirements of unconfined strength testing (AASHTO 208) and the requirement of 215.08 where the 100% passing top sieve is 1 in. We have also edited the other section to hopefully be less clunky. The revisions are as shown above.
Mr. Koch mentioned that the updated language includes type IL cement which has the same spec reference as type I yet is a different product. It would seem that a change from type I to IL would necessitate a revised mix design. If so, we would need to amend the proposed language further. Mr. Clawson responded that the limestone used in type IL has been limited, so based on research, it should not affect the strength.

Following much discussion, this item was withdrawn pending further review.

Motion: Mr. Reilman Second: Mr. Dave Ayes: Nays: FHWA Approval:	**Action:** ___ Passed as Submitted ___ Passed as Revised _X_ Withdrawn
2026 Standard Specifications Sections: 215 pg(s). 248 - 252. Recurring Special Provisions or Plan Details: NONE Standard Drawing affected: NONE Design Manual Chapter: NONE GIFE Section: NONE	___ 2028 Standard Specifications ___ Revise Pay Items List ___ Notification to Designers if change is not addressed by RSP ___ Create RSP (No.___) Effective: ___ Revise RSP (No.___) Effective: ___ Standard Drawing Effective: ___ Create RPD (No. ___) Effective: ___ GIFE Update ___ Frequency Manual Update ___ AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Coal ash is no longer in use and minor editorial revisions were needed.

PROPOSED SOLUTION: The removal of all mentions of coal ash along with some editorial changes.

APPLICABLE STANDARD SPECIFICATIONS: 217

APPLICABLE STANDARD DRAWING: None

APPLICABLE DESIGN MANUAL CHAPTER: None

APPLICABLE SECTION OF GIFE: NA

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: Yes

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad Hoc committee consisting of Nayyar Siddiki, Samuel Clawson, and Jim Reilman

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

IMPACT ANALYSIS (attach report): Yes

Submitted By: Jim Reilman and Nayyar Siddiki

Title: State Material Engineer

Division: Materials and Test

E-mail: Jreilman@INDOT.IN.GOV

Date: 10/16/2025

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? N/A
Customer satisfaction? Yes
Congestion/travel time? N/A
Ride quality? N/A

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? N/A

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

Is this proposal needed for compliance with:

Federal or State regulations? N/A
AASHTO or other design code? N/A

Is this item editorial? Yes

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

The Standard Specifications are revised as follows:

SECTION 217, BEGIN LINE 1, DELETE AND INSERT AS FOLLOWS:

SECTION 217 – SOILS DRYING WITH CHEMICAL MODIFIERS

217.01 Description

This work shall consist of drying soils by uniformly mixing ~~coal ash or~~ lime with soil to aid in achieving the workability of soils as shown on the plans or as directed.

MATERIALS

217.02 Materials

Materials shall be in accordance with the following:

~~Coal ash .....901.02~~
Lime .....913.04(b)
Water 913.01

~~Soils containing organic content greater than 6% by dry weight, or having a maximum dry density of less than 95 pcf, or with soluble sulfate content greater than 1,000 ppm, shall not be used. The maximum dry density shall be determined in accordance with AASHTO T 99, the organic content shall be determined in accordance with AASHTO T 267, and the sulfate content shall be determined in accordance with ITM 510.~~

Soils for drying shall meet the following requirements.

Soil Property	*Test Method*	*Requirement*
Maximum Dry Density	*AASHTO T 99*	*≥ 90 pcf*
Organic Material	*AASHTO T 267*	*≤ 6%*
Sulfate Content	*ITM 510*	*≤ 1,000 ppm*

CONSTRUCTION REQUIREMENTS

217.03 Testing and Mix Design

The Contractor shall be responsible for all tests required to determine the chemical modifier type and the relationship between the soils, chemical modifier, and moisture content. The modifier selection, laboratory testing, and mix design shall be performed by a qualified geotechnical consultant in accordance with the Department's Design Procedures for Soil Modification or Stabilization.

Chemical modifier, mix design, test results, and the geotechnical consultant recommendations shall be submitted to the Engineer and to the Department's Geotechnical Engineering Division for approval at least three business days prior to use. ~~Coal ash and l~~*L*ime shall be selected from the Department's QPLs of ~~Pozzolan Sources and~~ Soil Modifiers~~, respectively~~.

The quantity of chemical modifier may be adjusted for different soil types and moisture content.

217.04 Storage and Handling

The chemical modifier shall be stored and handled in accordance with 215.04.

217.05 Weather Limitations

The chemical soil treatment shall be performed when the soil has a minimum temperature of 35°F, measured 4 in. below the surface, and with the air temperature rising. The chemical modifier shall not be mixed with frozen soils or with soil containing frost. When the soil temperature is expected to fall below 35°F prior to the next lift being placed, chemically treated soils shall be protected from freezing by placing a minimum of 12 in. thick soil.

217.06 Preparation of Soils

The preparation of the soil shall be in accordance with 215.06. The maximum loose lift shall be no more than 12 in.

217.07 Spreading of Chemical Modifiers

The specified quantity of chemical modifier shall be spread on the surface. The chemical modifier shall be distributed uniformly by a cyclone, screw-type, or pressure manifold type distributor. Where Type A-7 soils are encountered, the soil shall be scarified prior to spreading the chemical modifier.

The chemical modifier shall not be applied when wind conditions create problems in adjacent areas or create a hazard to traffic on any adjacent roadway. The spreading of the chemical modifier shall be limited to an amount which can be incorporated into the soil within the same day of work. The chemical modifier spreading rate shall be adjusted to the current soil moisture content. If weather causes stoppage of work or exposes the chemical modifier to washing or blowing, additional chemical modifier may be spread when the work resumes. Any materials wasted or disturbed by the Contractor's actions shall be repaired or replaced at no additional cost.

217.08 Mixing

The chemical modifier, soil, and water when necessary, shall be thoroughly mixed by rotary speed mixers. The mixing shall continue until a homogenous layer of the required thickness has been obtained. One hundred percent of the material, exclusive of rock particles, shall pass a 1 in. (25 mm) sieve and at least 60% shall pass a No. 4 (4.75 mm) sieve. The mixing depth shall not exceed 12 in.

217.09 Compaction

The moisture content of the mixture shall be at the optimum moisture content or above the optimum moisture content as determined by the mix design in accordance with 21~~5~~7.03. Moisture content will be determined in accordance with ITM 506. Aeration or drying by further mixing may be done to obtain the required moisture content. Compaction of the mixture shall begin as soon as practical. Compaction shall be in accordance with 203 or 207.03, as applicable.

Acceptance of chemically modified soils will be performed on the finished grade with a DCP in accordance with ITM 509. The chemically treated soil lift shall meet the following requirements for compaction:

(a) A minimum DCP blow count of 20 for 12 in. of in place modification.

(b) A minimum of two passing DCP tests for each 1,000 lft or less of chemically treated soil for each two-lane pavement section.

(c) A minimum of one gradation test shall be performed every 2,500 lft for each two-lane pavement section.

(d) A minimum of one moisture test shall be performed for every 4 h of lime soils mixing. ~~A moisture test shall be performed if soil changes.~~

During embankment construction, placing of the second 12 in. lift is allowed when the first lift meets the blow counts requirements of 203.23. A third lift will not be allowed until the first lift complies with 217.09(a).

Construction traffic or equipment will be allowed after the minimum DCP blow count is obtained. Construction traffic or equipment shall be routed in one direction so that the chemically modified soil does not pump or rut.

217.10 Method of Measurement

The accepted quantity for drying soils will be measured by the ton of chemical modifier complete in place. Soils required to construct the fill will be measured in accordance with 203.

217.11 Basis of Payment

The accepted quantity of chemically modified soils will be paid for by the ton of chemical modifier used for drying. Soils required to construct the fill will be paid for in accordance with 203.

Payment will be made under:

Pay Item	**Pay Unit Symbol**
Drying Soils for Embankment	TON

The cost of performing the laboratory tests, providing a qualified geotechnical consultant, scarification of in-situ soil, spreading, pulverization, mixing of the chemical modifier and soil, moisture compaction of the resultant mixture, shaping the grade, work required due to adjustments of modifier proportioning, correction of deficient areas, water required for the modification process, and all operations needed to meet the requirements of this specification shall be included in the cost of the pay item of this section.

COMMENTS AND ACTION

SECTION 217 – SOILS DRYING WITH CHEMICAL MODIFIERS

DISCUSSION:

This item was introduced and presented by Mr. Reilman who stated that coal ash is no longer in use and minor editorial revisions were needed.

Mr. Reilman proposed the removal of all mentions of coal ash along with some editorial changes, as shown.

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

Motion: Mr. Reilman
Second: Mr. Dave
Ayes: 10
Nays: 0
FHWA Approval: YES

2026 Standard Specifications Sections:
217, pg(s). 255 - 258.

Recurring Special Provisions or Plan Details:
NONE

Standard Drawing affected:
NONE

Design Manual Chapter:
NONE

GIFE Section:
NONE

Action:

X Passed as Submitted
___ Passed as Revised
___ Withdrawn

X 2028 Standard Specifications
___ Revise Pay Items List
___ Notification to Designers if change is not addressed by RSP

X Create RSP (No. 217-R-812)
Effective: June 1, 2026

___ Revise RSP (No.__)
Effective:

___ Standard Drawing
Effective:

___ Create RPD (No. __)
Effective:

___ GIFE Update
___ Frequency Manual Update
___ AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: There are instances where a bridge with a relatively new coating system needs to have portions repainted, such as repairs due to impact damage. The standard partial painting system is a two-coat system that might not provide the full service life of the full three-coat system. The standard three-coat system can't be used as a partial painting system because the inorganic primer of the three-coat system isn't compatible with older existing primers.

PROPOSED SOLUTION: A new special partial painting system will provide a three-coat system with an organic primer that's compatible with existing primers.

APPLICABLE STANDARD SPECIFICATIONS: 619

APPLICABLE STANDARD DRAWING: N/A

APPLICABLE DESIGN MANUAL CHAPTER: 17-5.11 (No changes required. Use of this coating system will be limited.)

APPLICABLE SECTION OF GIFE: Section 5.24

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: N/A

PAY ITEMS AFFECTED: New pay items proposed.

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad-hoc committee including Jim Reilman

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

IMPACT ANALYSIS (attach report):

Submitted By: Pete White

Title: Design Manager

Division: INDOT Bridge Engineering

E-mail: pewhite@indot.in.gov

Date: October 21, 2025

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, acceptable materials listed on the RSP.
Will this proposal improve:

Construction costs? No
Construction time? No
Customer satisfaction? No
Congestion/travel time? No
Ride quality? No

Will this proposal reduce operational costs or maintenance effort? No

Will this item improve safety:

For motorists? No
For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? No
Asset preservation? Yes
Design process? Yes

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:

619-X-XXX SPECIAL PARTIAL COATING SYSTEM

(Adopted xx-xx-25)

The Standard Specifications are revised as follows:

SECTION 619, BEGIN LINE 438, INSERT AS FOLLOWS:

619.09 Coating Systems

Every component of a coating system shall be from the same manufacturer and shall be compatible with each other. Coatings shall be applied in accordance with the manufacturer's recommendations. The dry film thickness of a coating will be measured with a calibrated film thickness gauge in accordance with SSPC PA 2. All coatings shall have a dry film thickness not less than 80% of the required dry film thickness.

(a) Structural Steel Coating System

The coating system shall consist of an inorganic zinc primer with a dry film thickness of 3 mil, an epoxy intermediate coat with a dry film thickness of 4 mil, and a polyurethane finish coat with a dry film thickness of 3 mil for the coating of steel bridges and other structural steel.

(b) Partial Coating System

The coating system shall consist of an organic zinc primer with a dry film thickness of 3 mil and a finish coat with a dry film thickness of 3 mil. The finish coat shall be either a waterborne finish coat or a polyurethane finish coat for coating of steel bridges and other structural steel within the limits shown on the plans.

(c) Special Partial Coating System

The special partial coating system applied to the existing steel within the limits shown on the plans shall consist of an organic zinc primer with a dry film thickness of 3 mil, an epoxy intermediate coat with a dry film thickness of 4 mil, and a polyurethane finish coat with a dry film thickness of 3 mil for the coating of steel bridges and other structural steel. The special partial coating system shall be Carbozinc 859, Carboguard 893, Carbothane 134HS. Other systems will be considered for inclusion following submission in accordance with ITM 606 and ITM 607.

If any new steel is being provided, the coating system applied to the new steel shall be the Structural Steel Coating System in accordance with 619.09(a).

SECTION 619, BEGIN LINE 673, INSERT AS FOLLOWS:

619.13 Coating Existing Steel Bridges

The surfaces to be cleaned and coated shall include the surfaces of all steel members of the superstructure, substructure, floor beams, stringers, plates, castings, bearing assemblies, ornamental handrails, lattice work, and other steel appurtenances *within the limits shown on the plans*. When shear connectors have been specified, the top of the top flange shall not be coated.

If the contract specifies clean steel bridge, the bridge steel shall be cleaned in accordance with 619.08(a) and either 619.08(e) or 619.08(i). The structural steel coating system in accordance with 619.09(a) shall be used for coating.

If the contract specifies clean steel bridge, partial, the bridge steel shall be cleaned in accordance with 619.08(a) and either 619.08(e) or 619.08(h). The partial coating system in accordance with 619.09(b) shall be then used for coating.

If the contract specifies clean steel bridge, special, the bridge steel shall be cleaned in accordance with 619.08(a) and either 619.08(e) or 619.08(h). The special partial coating system in accordance with 619.09(c) shall then be used for coating.

SECTION 619, BEGIN LINE 806, DELETE AND INSERT AS FOLLOWS:

619.20 Basis of Payment

Existing steel bridges to be cleaned, ~~or~~ partially cleaned, *or specially cleaned,* whichever is specified, will be paid for at the contract lump sum price for clean steel bridge, ~~or~~ clean steel bridge, partial, *or clean steel bridge, special,* at the bridge number specified. Cleaning the top of the top flange of existing steel bridges will be paid for at the contract lump sum price for clean steel bridge, top flanges, at the bridge number specified. Existing steel bridges to be coated, ~~or~~ partially coated, *or special partially coated,* whichever is specified, will be paid for at the contract lump sum price for coat steel bridge*,* ~~or~~ coat steel bridge, partial*, or coat steel bridge, partial, special,* at the bridge number specified.

SECTION 619, BEGIN LINE 880, INSERT AS FOLLOWS:

Payment will be made under:

Pay Item	**Pay Unit Symbol**
Clean and Coat Bearing Assemblies, Br. No. ____	LS
Clean and Coat Steel Piling, Br. No. ____	LS
Clean Steel Bridge, Partial, QP- ____, Br. No. ____	LS
Clean Steel Bridge, QP-____, Br. No. ___	LS
Clean Steel Bridge, Special, Br. No. ___	*LS*
Clean Steel Bridge, Top Flanges, QP-2, Br. No. ____	LS
Coat Steel Bridge, Br. No.____	LS
Coat Steel Bridge, Partial, Br. No.____	LS
Coat Steel Bridge, Partial, Special, Br. No.____	*LS*
Disposal of Cleaning Waste, _____, Br. No.____	LS
waste type	

SECTION 619, BEGIN LINE 927, DELETE AND INSERT AS FOLLOWS:

The cost of furnishing all materials including caulk, equipment, and labor to perform caulking and coating, including the stripe coats, with the structural steel coating system*,* ~~or~~ the partial coating system*, or the special partial coating system* shall be included in the cost of coat steel bridge, ~~or~~ coat steel bridge, partial*, or coat steel bridge, partial, special*. The cost of switching stripe coat application methods shall be included in the cost of coat steel bridge*,* ~~or~~ coat steel bridge, partial*, or coat steel bridge, partial, special*. The cost of furnishing all materials, equipment, and labor to perform coating of the roadway drain castings shall be included in the cost of coat steel bridge, ~~or~~ coat steel bridge, partial*, or coat steel bridge, partial, special*.

COMMENTS AND ACTION

619-B-330 SPECIAL PARTIAL COATING SYSTEM

DISCUSSION:

This item was introduced and presented by Mr. White, who explained that there are instances where a bridge with a relatively new coating system needs to have portions repainted, such as repairs due to impact damage. The standard partial painting system is a two-coat system that might not provide the full service life of the full three-coat system. The standard three-coat system can't be used as a partial painting system because the inorganic primer of the three-coat system isn't compatible with older existing primers.

Mr. White proposed that a new special partial painting system will provide a three-coat system with an organic primer that's compatible with existing primers.

Prior to the meeting –

Mr. Koch stated that the proposed special three coat system differs by organic zinc primer, vs inorganic, commercial grade power tool cleaning, vs power tool cleaning to bare metal, and proprietary products. The following issues were inquired by Mr. Koch which were responded to by Mr. White and Mr. Reilman.

- Mr. Koch stated that inorganic zinc primer is generally considered a better than organic. Are we sure we want to change? Mr. White responded that, Yes, inorganic zinc primer provides better corrosion protection, but placing new inorganic zinc primer adjacent to previously applied inorganic zinc primer results in a compatibility issue at the interface. Mr. Koch agreed.
- Mr. Koch stated that many piles are being encased with a standard three coat system. Should we specify the better process instead of creating a step? Mr. White replied that when we recoat existing piles, I don't think we'll typically have the new coating applied adjacent to an existing 3-coat system. If that situation were to arise, I agree that the special partial coating system should be used. Mr. Koch replied that with the exception of fully concrete pile encasements, (blast and prime only, I have always constructed exposed piles with our three part system).
- Mr. Koch stated that APL47 includes 5 different organic zinc primers, given the others are on the list, should they be considered acceptable instead of writing a proprietary spec? Mr. White responded, stating with an exception for the top coat for weathering steel, our specifications require all coats of a painting system to be from the same manufacturer. This is to protect us from premature issues, such as flaking, peeling, and sloughing off, and the Contractor using the excuse of different manufacturers to hide their poor workmanship or surface preparation. As such, you are correct, we currently only have one manufacturer who has all three coats on our QPL. M&T is actively working with the other manufacturers and requesting that they submit products for review and consideration for inclusion. Unfortunately, to date, responses have been lacking and interest has been low. Also, M&T is in the process of updating the QPL to remove those with incomplete systems to help reduce confusion. Mr. Koch replied that instead of naming a specific product can we state that we want a uniform paint system from a single manufacturer? Mr. White responded that and if we were to simply allow a uniform system from a single manufacturer, we would essentially be circumventing the QPL, which we certainly don't want to do. The intent of listing specific product lines in the RSP is to make it easier for the Contractor to determine which manufacturer supplies a complete system that includes an organic zinc primer. Since this is an RSP, we can easily make revisions at a later date if more manufacturers supply the appropriate information to be added to this list.

Mr. Jacobs asked if ITM 606 might need a revision to accommodate the organic primer. Other systems may be considered as long as they meet ITM 606 and ITM 607. Mr. Reilman said they can take a look at that offline before the first draft minutes are issued.

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

Post meeting: After reviewing the reference to ITM 606 and ITM 607, Mr. White and Mr. Reilman believe it is correct as written. To avoid confusion, the Special Partial Coating System should not be added into the QPL of Structural Steel Coating Systems.

COMMENTS AND ACTION

619-B-330 SPECIAL PARTIAL COATING SYSTEM

[continued]

Motion: Mr. White Second: Mr. Reilman Ayes: 10 Nays: 0 FHWA Approval: YES	**Action:** X Passed as Submitted ___ Passed as Revised ___ Withdrawn
2026 Standard Specifications Sections: 619, pg(s). 558, 562 - 563, and 567 - 568. Recurring Special Provisions or Plan Details: (proposed new) Standard Drawing affected: NONE Design Manual Chapter: 17-5.11 (No changes required. Use of this coating system will be limited.) GIFE Section: Section 5.24	___ 2028 Standard Specifications X Revise Pay Items List ___ Notification to Designers if change is not addressed by RSP X Create RSP (No. 619-B-330) Effective: June 1, 2026 ___ Revise RSP (No.___) Effective: ___ Standard Drawing Effective: ___ Create RPD (No. ___) Effective: X GIFE Update X Frequency Manual Update X AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The standard two-coat partial coating system is currently used as part of the repairs during a heat straightening project, in accordance with Section 729. However, there are instances where a bridge with a relatively new coating system needs to have portions repainted, and a three-coat system is desired in the repaired areas to better match the service life of the existing coating.

PROPOSED SOLUTION: This RSP will be used in conjunction with the Special Partial Coating System RSP to provide a three-coat system that's compatible with the existing primer.

APPLICABLE STANDARD SPECIFICATIONS: 619 and 729

APPLICABLE STANDARD DRAWING: N/A

APPLICABLE DESIGN MANUAL CHAPTER: 412-3.03(06) (No changes required)

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: RSP 729-R-798 (existing RSP that should remain unchanged by the new proposed RSP)

PAY ITEMS AFFECTED: New pay items proposed with the 619 Special Partial Coating RSP.

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad-hoc committee including Jim Reilman

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

IMPACT ANALYSIS (attach report):

Submitted By: Pete White

Title: Design Manager

Division: INDOT Bridge Engineering

E-mail: pewhite@indot.in.gov

Date: October 21, 2025

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No
Will approval of this item affect the Qualified Products List (QPL)? No
Will this proposal improve:

Construction costs? No
Construction time? No
Customer satisfaction? No
Congestion/travel time? No
Ride quality? No

Will this proposal reduce operational costs or maintenance effort? No

Will this item improve safety:

For motorists? No
For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? No
Asset preservation? Yes
Design process? Yes

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:

729-B-XXX HEAT STRAIGHTENING WITH SPECIAL PARTIAL COATING

(Adopted xx-xx-25)

The Standard Specifications are revised as follows:

SECTION 729, BEGIN LINE 17, DELETE AND INSERT AS FOLLOWS:

729.03 Materials

Materials shall be in accordance with the following:

~~Organic Zinc Primer..... 909.02(a)2~~
~~Partial Coating System..... 619.09(b)~~
Special Partial Coating System ..... 619.09(c)
Structural Steel..... 910.02

SECTION 729, BEGIN LINE 237, DELETE AND INSERT AS FOLLOWS:

729.15 Coating

Upon completion and acceptance of the heat straightened steel members, the Contractor shall clean, prime, and coat the steel members. Surface preparation shall be in accordance with 729.07. The coating system shall be in accordance with *the special partial coating system* ~~*per*~~*in accordance with* 619.09(~~b~~*c*). Coating shall be in accordance with 619.10. All exposed surfaces on heat-straightened steel members shall be fully coated from the edge of the nearest splice plate or steel member end outside the heat straightened area to the nearest splice plate or steel member end on the other side of the heat straightened area. The color of the top coat shall be a similar color to match the color of the existing bridge.

729.16 Method of Measurement

Heat straightening, grinding, drilling crack-arrest holes, NDT testing, and other incidentals will not be measured for payment.

New structural steel and drilled holes for installation of bolts will be measured in accordance with 711.72.

Cleaning and coating of steel structural members where heat straightening has occurred will not be measured for payment.

729.17 Basis of Payment

New structural steel and drilled holes for installation of bolts will be paid for in accordance with 711.73.

Cleaning and coating of steel structural members where heat straightening has occurred will be paid for in accordance with 619.20.

The accepted heat straightened steel members will be paid for at the contract lump sum price for straighten steel member.

Payment will be made under:

Pay Item	**Pay Unit Symbol**
Straighten Steel Member	LS

The cost for all material, labor, equipment, and incidentals for the inspection of the steel members, the temperature verification devices, calibration of the temperature verification devices, grinding, and drilling crack-arrest holes if shown on the plans or directed by the Engineer, shall be included in the cost of straighten steel member.

The cost for all NDT activities, including but not limited to all material, equipment, and labor necessary to clean the test areas, perform and interpret NDT, and preparation of all NDT reports shall be included in the cost of straighten steel member.

The cost for all materials, labor, equipment, and incidentals necessary for disconnecting, supporting, or adjusting the steel members or secondary steel members, jacks or other augmenting devices, the force measurement system, and calibration of the force measurement system shall be included in the cost of straighten steel member.

~~The cost for all materials, labor, equipment, and incidentals required for existing coating removal, preparing, priming, and painting of the steel members shall be included in the cost of straighten steel member.~~

If the Engineer deems it necessary for the Contractor to perform epoxy injection as outlined above, this extra work will be paid for in accordance with 109.05.

If, as a result of the Contractor's methods used in the prosecution of the work, the integrity of the steel member has been compromised as determined by the Engineer, all costs to remedy the situation up to and including replacing of the steel members and all costs associated with replacing the steel members shall be at no additional cost to the Department.

COMMENTS AND ACTION

729-B-331 HEAT STRAIGHTENING WITH SPECIAL PARTIAL COATING

DISCUSSION:

Mr. White introduced and presented this item stating that the standard two-coat partial coating system is currently used as part of the repairs during a heat straightening project, in accordance with Standard Specification Section 729. However, there are instances where a bridge with a relatively new coating system needs to have portions repainted, and a three-coat system is desired in the repaired areas to better match the service life of the existing coating.

Mr. White proposed that this RSP will be used in conjunction with the Special Partial Coating System RSP to provide a three-coat system that's compatible with the existing primer.

There was no further discussion and this item passed as submitted with minor editorial change as shown in these minutes.

Motion: Mr. White Second: Mr. Reilman Ayes: 10 Nays: 0 FHWA Approval: YES	**Action:** X Passed as Submitted ___ Passed as Revised ___ Withdrawn
2026 Standard Specifications Sections: 729, pg(s) 833 - 839. Recurring Special Provisions or Plan Details: NONE Standard Drawing affected: NONE Design Manual Chapter: 412-3.03(06) (No changes required) GIFE Section: NONE	X 2028 Standard Specifications ___ Revise Pay Items List ___ Notification to Designers if change is not addressed by RSP X Create RSP (No. 729-B-331) Effective: June 1, 2026 ___ Revise RSP (No.___) Effective: ___ Standard Drawing Effective: ___ Create RPD (No. ___) Effective: ___ GIFE Update ___ Frequency Manual Update ___ AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: There is confusion in that there are some pipe material types listed in 715.02 that would appear to be viable options, however they are not as there are no suppliers listed on the Qualified Products List. Additional clarification is needed in the 715.02(h), (i), and (m) subsections. ~~The referenced AASHTO specification (M 199) does not cover inlets and catch basins; clarification is needed.~~ The table for thermoplastic pipe (907.16) needs cleanup and clarification as well as some of the 907 sections following the table, including the liner pipe section.

PROPOSED SOLUTION: Delete the pipe material types that do not have any suppliers listed on the qualified products list. Incorporate the proposed changes shown to clarify pipe material types acceptable for specified applications, ~~add a reference to require ASTM C913 for inlets and catch basins,~~ edit and clarify the manufacturer requirements in the table in 907.16 and cascade these edits to the applicable sections following 907.16, and update the liner pipe sections.

APPLICABLE STANDARD SPECIFICATIONS: 715, 907

APPLICABLE STANDARD DRAWINGS: attached E 715 PHCL & E 715-PIPE

APPLICABLE DESIGN MANUAL SECTION:

APPLICABLE SECTION OF GIFE: 4.11.2

APPLICABLE RECURRING SPECIAL PROVISIONS: create new 715 RSP and applicable RPDs

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: INDOT Pipe Committee

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

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman

Title: State Materials Engineer

Organization: INDOT

Phone Number: (317) 522-9692

Date: 10/23/25

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No
Will approval of this item affect the Approved Materials List? No
Will this proposal improve:

- Construction costs? N/A
- Construction time? N/A
- Customer satisfaction? N/A
- Congestion/travel time? N/A
- Ride quality? N/A

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

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 2026 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

SECTION 715 – PIPE CULVERTS, AND STORM AND SANITARY SEWERS
715.02 Materials
715.09 Backfilling
SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*

The Standard Specifications are revised as follows:

SECTION 715, BEGIN LINE 42, 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 ..... [B]
Corrugated Polyethylene Pipe, Type S ..... [A]
Corrugated Polypropylene Pipe ..... [A]
Corrugated Steel Pipe and Pipe-Arches ..... [B]
Non-Reinforced Concrete Pipe, Class 3 ..... 907.01
Polymer Precoated Galvanized Corrugated Steel
Pipe and Pipe-Arches ..... [B]
~~Profile Wall Polyethylene Pipe, Closed ..... [A]~~
~~Profile Wall Polyethylene Pipe, Ribbed ..... [A]~~
Profile Wall PVC Pipe ..... [A]
Reinforced Concrete Horizontal Elliptical Pipe 907.03
Reinforced Concrete Pipe 907.02
~~Smooth Wall Polyethylene Pipe ..... [A]~~
~~Smooth Wall PVC Pipe ..... [A]~~
Spiral Rib Steel Pipe ..... [B]
Structural Plate Pipe and Pipe-Arches 908.09

[A] ~~All t~~*T*hermoplastic pipes shall be from the QPL of Thermoplastic Pipe and Liner Pipe Sources in accordance with 907.16.

[B] 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 ..... [A]
Corrugated Polypropylene Pipe ..... [A]
Fully Bituminous Coated and Lined Corrugated
Steel Pipe and Pipe-Arches ..... [B]
Non-Reinforced Concrete Pipe, Class 3 ..... 907.01
Polymer Precoated Galvanized Corrugated Steel
Pipe and Pipe-Arches Type IA and Type IIA ..... [B]
~~Profile Wall Polyethylene Pipe, Closed ..... [A]~~
~~Profile Wall Polyethylene Pipe, Ribbed ..... [A]~~
Profile Wall PVC Pipe ..... [A]

Reinforced Concrete Horizontal Elliptical Pipe 907.03
Reinforced Concrete Pipe..... 907.02
~~Smooth Wall Polyethylene Pipe.....~~ [A]
~~Smooth Wall PVC Pipe.....~~ [A]

[A] ~~All t~~*T*hermoplastic pipes shall be from the QPL of Thermoplastic Pipe and Liner Pipe Sources in accordance with 907.16.
[B] 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 ..... [A]
Corrugated Polyethylene Pipe, Type S*..... [A]
Corrugated Polyethylene Pipe, Type SP..... [A]
Drain Tile*..... 907.10
Non-Reinforced Concrete Pipe..... 907.01
Perforated Clay Pipe* 907.09
~~Perforated PVC Semicircular Pipe.....~~ [A]
Profile Wall PVC Pipe..... [A]

[A] ~~All t~~*T*hermoplastic 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..... [B]
Corrugated Polyethylene Pipe, Type S..... [A]
Corrugated Polypropylene Pipe..... [A]
Corrugated Steel Pipe and Pipe-Arches ..... [B]
Fully Bituminous Coated and Lined Corrugated
Steel Pipe and Pipe-Arches ..... [B]
Polymer Precoated Galvanized Corrugated
Steel Pipe and Pipe-Arches ..... [B]
~~Profile Wall Polyethylene Pipe, Closed .....~~ [A]
~~Profile Wall Polyethylene Pipe, Ribbed.....~~ [A]

Profile Wall PVC Pipe..... [A]
~~Smooth Wall Polyethylene Pipe.....~~ ~~[A]~~
~~Smooth Wall PVC Pipe.....~~ ~~[A]~~
Spiral Rib Steel Pipe ..... [B]

[A] ~~All t~~*T*hermoplastic pipes shall be from the QPL of Thermoplastic Pipe and Liner Pipe Sources in accordance with 907.16.

[B] Metal pipes shall be from the QPL of Metal Pipe Sources in accordance with 908.01.

(f) Slotted Drain Pipe

Slotted drain pipe shall be used to drain paved median and concrete gutter areas. Slotted drain pipe shall be in accordance with 908.14.

(g) Slotted Vane Drain Pipe

Slotted vane drain pipe shall be used to drain driveway areas. Slotted vane drain pipe shall be in accordance with 908.14.

(h) End Bent Drain Pipe

End bent drain pipe shall be ~~perforated profile wall PVC pipe, perforated smooth wall PVC pipe, or corrugated polyethylene drainage tubing Type SP from the QPL of Thermoplastic Pipe and Liner Pipe Sources in accordance with 907.16.~~*one of the following:*

Pipe Material Type	*In accordance with:*
Corrugated Polyethylene Drainage Tubing, Type SP	*907.17(a)*
Perforated Profile Wall PVC	*907.22*
Perforated Smooth Wall PVC	*907.23*

(i) Underdrain Outlet Pipe

Pipe for underdrain outlets and drain tile outlets shall be ~~PSM PVC pipe, profile wall PVC pipe, smooth wall polyethylene pipe, or smooth wall PVC pipe from the QPL of Thermoplastic Pipe and Liner Pipe Sources in accordance with 907.16 and 907.24. Schedule 40 PVC pipe in accordance with 907.24(b) is also allowable.~~*one of the following:*

Pipe Material Type	*In accordance with:*
Profile Wall PVC	*907.22*
PVC Plastic Pipe, Schedule 40	*907.24(b)*
Smooth Wall Polyethylene	*907.21*
Smooth Wall PVC	*907.23*
Type PSM PVC	*907.24(a)*

(j) Grated Box End Sections

Grating for box end sections shall be in accordance with 910.22. Threaded inserts for Type II grated box end sections shall have a minimum pull-out capacity of 6,000 lb. The 1/2 in. round

bolts shall have hex heads, cut washers, and where necessary, shall be furnished with the grating. The aggregate leveling bed required for precast units shall be coarse aggregate No. 8 in accordance with 904.03.

The hardware cloth used to cover the weep holes ~~may~~*shall* be plastic with 1/4 in. mesh or galvanized steel wire No. 4 mesh with a minimum wire diameter of 1/32 in. It shall be firmly anchored to the outside of the structure and shall be centered on the holes.

A Type C certification in accordance with 916 shall be provided for the materials in this section unless otherwise specified.

(k) Pipe End Sections

Metal pipe end sections shall be in accordance with 908.06. Precast concrete pipe end sections shall be in accordance with 905.06.

(l) Roadway Drain Casting Extensions

Pipe used for extending roadway drain castings located in a bridge deck shall be in accordance with 907.24(b), 907.28, or 908.10. Pipe support brackets and all hardware shall be galvanized in accordance with ASTM A153, Class D or ASTM B695, Class 40, Type I.

A Type C certification in accordance with 916 shall be provided for the pipe brackets.

(m) Drainage Pipe through Concrete Masonry

Pipe used as drainage pipe through concrete masonry as described in 702.16 shall be ~~either profile wall or smooth wall PVC from the QPL of Thermoplastic Pipe and Liner Pipe Sources in accordance with 907.16, or steel in accordance with 908.1.~~*one of the following:*

Pipe Material Type	*In accordance with:*
Profile Wall PVC	*907.22*
Smooth Wall PVC	*907.23*
Steel	*908.11*

SECTION 715, BEGIN LINE 399, DELETE AND INSERT AS FOLLOWS:

After the visual or video inspection, the Contractor shall check pipe deflection by performing a mandrel test as directed on pipes manufactured from materials listed in the following table. The Engineer will determine the runs of pipe installations to be mandrel tested with a minimum of 10% of the total length of each material to be inspected.

PIPES REQUIRING MANDREL TESTING	
Pipe Material	Standard Specifications
Corrugated Polyethylene Pipe*	907.17(b)
Corrugated Polypropylene Pipe	907.19

~~Profile Wall Polyethylene Pipe~~	~~907.20~~
~~Smooth Wall Polyethylene Pipe~~	~~907.21~~
Profile Wall PVC Pipe*	907.22
~~Smooth Wall PVC Pipe~~	~~907.23~~
* When used as underdrain pipe, mandrel testing will not be required.	

~~SECTION 907, BEGIN LINE 51, DELETE AND INSERT AS FOLLOWS:~~ **(No changes to 907.04)**

907.04 Precast Concrete Manholes, Inlets, and Catch Basins

~~These units~~*Manholes* shall be in accordance with AASHTO M 199. ~~References to diameter are applicable to corresponding dimensions in other than circular sections.~~ Absorption tests will not be required for flat top or base slabs. *Inlets and catch basins shall be in accordance with ASTM C913.*

Precast concrete ~~units~~*manholes, inlets, and catch basins* shall be from a source listed ~~in~~*on* the QPL of Certified Precast Concrete Producer in accordance with ITM 813.

SECTION 907, BEGIN LINE 212, 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 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~~*916, Type ~~C~~D certification*
Profile Wall HDPE Liner Pipe	907.25(b)		F894	~~ITM 806, Procedure A or~~ 916, Type A ~~C~~*c*ertification

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

SECTION 907, BEGIN LINE 238, DELETE AND INSERT AS FOLLOWS:

907.18 Perforated PVC Semicircular Pipe

Perforated PVC semicircular pipe may be used as an alternate to 6 in. or less diameter pipe or tile. Pipe shall be in accordance with ASTM D3034, DR 35. This semicircular pipe shall have a smooth top and a smooth, semicircular bottom, nominally 4 5/8 in. in diameter, with perforations uniformly distributed along the top of the bottom section in accordance with AASHTO M 252 perforation requirements. The top section shall extend a minimum of 1/2 in. beyond the top of the semicircular section. The top section shall be approximately 6 3/8 in. wide including the sloping overhangs on each side. ~~Pipe will be considered for inclusion on the QPL by completing the requirements of ITM 806, Procedure A~~*A Type* ~~C~~*D certification in accordance with 916 shall be provided for the perforated PVC semicircular pipe.*

SECTION 907, BEGIN LINE 254, DELETE AND INSERT AS FOLLOWS:

907.20 Profile Wall Polyethylene Pipe

Pipe and fittings shall be either closed profile or ribbed open profile in accordance with ASTM F894. ~~Pipe will be considered for inclusion on the QPL by completing the requirements of~~

~~ITM 806, Procedure A~~*A Type ~~C~~D certification in accordance with 916 shall be provided for the profile wall polyethylene pipe*.

907.21 Smooth Wall Polyethylene Pipe

Pipe shall be in accordance with ASTM F714 for nominal diameters of 39 in. or less. Fittings shall be in accordance with ASTM F1055. The pipe sizes shall be in accordance with ISO sizing system. The pipe DR shall be 26 or less. The resin used in manufacturing this type of pipe shall have a minimum cell classification of 335434C in accordance with ASTM D3350 or a minimum grade of PE4710 in accordance with ASTM F714. ~~Pipe will be considered for inclusion on the QPL by completing the requirements of ITM 806, Procedure A~~*A Type ~~C~~D certification in accordance with 916 shall be provided for the smooth wall polyethylene pipe*.

SECTION 907, BEGIN LINE 274, DELETE AND INSERT AS FOLLOWS:

907.23 Smooth Wall PVC Pipe

Pipe and fittings shall be in accordance with AASHTO M 278 for pipe sizes 4 in. through 15 in., and ASTM F679 for pipe sizes 18 in. through 27 in. ~~Pipe will be considered for inclusion on the QPL by completing the requirements of ITM 806, Procedure A.~~*A Type ~~C~~D certification in accordance with 916 shall be provided for the smooth wall PVC pipe.*

907.24 Pipe for Outlets

Pipe and pipe fittings used for outlets shall be smooth interior wall, unperforated plastic pipe.

(a) Type PSM PVC Pipe and Fittings

Pipe and fittings shall be in accordance with ASTM D3034, DR 23.5. ~~Pipe will be considered for inclusion on the QPL by completing the requirements of ITM 806, Procedure A~~*A Type ~~C~~D certification in accordance with 916 shall be provided for the type PSM PVC pipe and fittings*.

SECTION 907, BEGIN LINE 306, DELETE AND INSERT AS FOLLOWS:

907.25 Thermoplastic Liner Pipe

Thermoplastic liner pipe shall be HDPE or PVC pipe with sufficient rigidity to withstand the installation operation and shall exhibit a minimum amount of distortion. The liner pipe shall be free from visible cracks, holes, foreign inclusions, or other defects. ~~Liner pipe shall be either from the QPL or a Type A certification in accordance with 916 shall be provided for the liner pipe. The results of the tests listed in ITM 804 shall be shown on the certification.~~

(a) Solid Wall HDPE Liner Pipe

Solid wall HDPE liner pipe shall be in accordance with ASTM F714. *Solid wall HDPE liner pipe shall either be selected from a source listed on the QPL of Thermoplastic Pipe and Liner Pipe Sources or a Type A certification in accordance with 916, with the results of the tests listed in ITM 804 shown on the certification, shall be provided for the liner pipe.* The maximum SDR as defined in ASTM F412 for the liner pipe shall be 32.5. The actual calculated minimum DR as defined in ASTM F412 for the liner pipe shall be 30.0. The resin used in the manufacture of the

liner pipe shall have a minimum cell classification of 345464C in accordance with ASTM D3350 or a minimum grade of PE4710 in accordance with ASTM F714. A 12 in. section of the liner pipe shall show no evidence of splitting, cracking, or breaking when compressed between parallel plates to 40% of its outside diameter within 2 to 5 minutes. Thermoplastic liner pipe will be considered for inclusion on the QPL by completing the requirements of ITM 806, Procedure Q.

(b) Profile Wall HDPE Liner Pipe

Profile wall HDPE liner pipe shall be in accordance with ASTM F894. *A Type A certification in accordance with 916, with the results of the tests listed in ITM 804 shown on the certification, shall be provided for the liner pipe.* The minimum liner ring stiffness constant, RSC, shall be 160 for circular installations and 250 for deformed installations. ~~Thermoplastic liner pipe will be considered for inclusion on the QPL by completing the requirements of ITM 806, Procedure A.~~

(c) Profile Wall PVC Liner Pipe

Profile wall PVC liner pipe shall be in accordance with ASTM F949. ~~Thermoplastic liner pipe will be considered for inclusion on the QPL by completing the requirements of ITM 806, Procedure A.~~*A Type A certification in accordance with 916, with the results of the tests listed in ITM 804 shown on the certification, shall be provided for the liner pipe.*

REVISION TO 2026 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

715.02 Materials 715.09 Backfilling

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*

E 715-PHCL-01 PIPE HEIGHT OF COVER LIMITS (with markups)

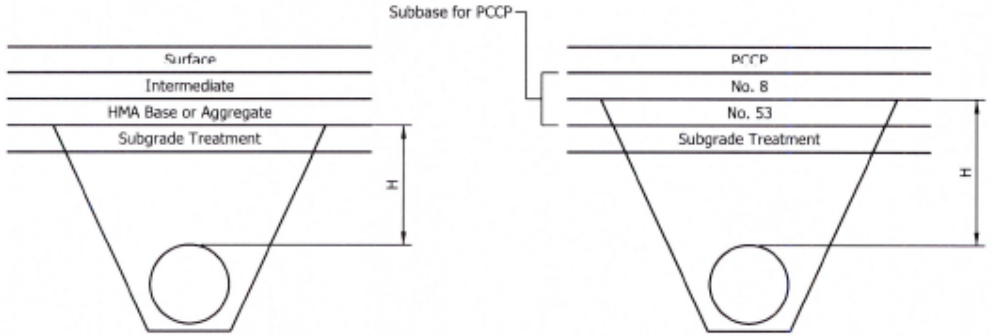
No revisions to sheets -02 thru -19

INDEX	
SHEET NO.	SUBJECT
01	Pipe Height of Cover Drawing Index and General Notes
02-04	2 2/3" x 1/2" Corrugated Aluminum Alloy Pipe and Pipe Arch Height of Cover Limits
05-07	3" x 1" Corrugated Aluminum Alloy Pipe and Pipe Arch Height of Cover Limits
08-09	6" x 1" Corrugated Aluminum Alloy Pipe Height of Cover Limits
10-12	2 2/3" x 1/2" Corrugated Steel Pipe and Pipe Arch Height of Cover Limits
13-15	3" x 1" Corrugated Steel Pipe and Pipe Arch Height of Cover Limits
16-17	5" x 1" Corrugated Steel Pipe and Pipe Arch Height of Cover Limits
18	3/4" x 3/4" x 7 1/2" Spiral Rib Steel Pipe Height of Cover Limits
19	Non-Reinforced Concrete Pipe Class 3 Height of Cover Limits
20-~~X~~	Polyethylene Pipe Height of Cover Limits
~~X~~ 21	Polyvinyl Chloride and Polypropylene Pipe Height of Cover Limits
~~X~~ 22	Vitrified Clay Pipe Height of Cover Limits
23-24-~~X~~	Reinforced Concrete Pipe Height of Cover Limits

Corrugated

GENERAL NOTE:

1. The tabulated cover depth H shall be measured from the top of the pipe to the bottom of the drainage No. 8 layer for PCCP and from the top of the pipe to the top of the subgrade treatment for HMA pavement.



INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS
DRAWING INDEX AND
GENERAL NOTES

SEPTEMBER ~~2017~~ 2026

STANDARD DRAWING NO. E 715-PHCL-01

ELIZABETH W. PHILLIPS REGISTERED No. 10200124 STATE OF INDIANA PROFESSIONAL ENGINEER

/s/ Elizabeth W. Phillips 03/27/17
DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/10/17
CHIEF ENGINEER DATE

REVISION TO 2026 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

715.02 Materials 715.09 Backfilling

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*

E 715-PHCL-20 PIPE HEIGHT OF COVER LIMITS (with markups)

CORRUGATED POLYETHYLENE PIPE TYPE S HEIGHT OF COVER LIMITS (ft)

PAY ITEM DIAMETER (in.)	NOMINAL DIAMETER (in.)	MINIMUM (ft)	MAXIMUM (ft)
12	12	2.0	22.0
15	15	2.0	22.0
18	18	2.0	20.0
21	21	2.0	19.0
24	24	2.0	19.0
30	30	2.0	17.0
36	36	2.0	17.0
42	42	2.0	17.0
48	48	2.0	15.0

NOTES:

1. The pay item diameter reflects the minimum required inside diameter.
2. Because the nominal size of smooth wall polyethylene pipe is based on the outside diameter, different dimension ratios may require different nominal diameters to satisfy the pay item diameter requirements.

SMOOTH WALL POLYETHYLENE PIPE HEIGHT OF COVER LIMITS (ft)

PAY ITEM DIAMETER (in.)	NOMINAL DIAMETER (in.)	DIMENSION RATIO (NOMINAL DIAMETER / WALL THICKNESS)							
		26		21		17		11	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
12	13	2.0	40.0	2.0	57.0				
12	14					2.0	81.0		
15	18	2.0	40.0	2.0	57.0	2.0	81.0		
18	20	2.0	40.0	2.0	57.0	2.0	81.0		
18	22					2.0	81.0	2.0	100.0
21	24	2.0	40.0	2.0	57.0	2.0	81.0		
24	28	2.0	40.0	2.0	57.0	2.0	81.0		
27	32	2.0	40.0	2.0	57.0	2.0	81.0		
30	34	2.0	40.0	2.0	57.0	2.0	81.0		
36	42	2.0	40.0	2.0	57.0	2.0	81.0		

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS

SEPTEMBER 2017

STANDARD DRAWING NO. E 715-PHCL-20

ELIZABETH W. PHILLIPS REGISTERED No. 10200124 STATE OF INDIANA PROFESSIONAL ENGINEER

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REVISION TO 2026 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

715.02 Materials 715.09 Backfilling

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*

E 715-PHCL-21 PIPE HEIGHT OF COVER LIMITS (with markups)

Sheet Deleted

NOTES:

1. The pay item diameter reflects the minimum required inside diameter.

PROFILE WALL (RIBBED) POLYETHYLENE PIPE HEIGHT OF COVER LIMITS (ft)

PAY ITEM DIAMETER (in.)	NOMINAL DIAMETER (in.)	MINIMUM (ft)	MAXIMUM (ft)
18	18	2.0	18.0
21	21	2.0	22.0
24	24	2.0	21.0
27	27	2.0	24.0
30	30	2.0	22.0
33	33	2.0	23.0
36	36	2.0	25.0

PROFILE WALL (CLOSED) POLYETHYLENE PIPE HEIGHT OF COVER LIMITS (ft)

PAY ITEM DIAMETER (in.)	NOMINAL DIAMETER (in.)	MINIMUM (ft)	MAXIMUM (ft)
18	18	2.0	47.0
21	21	2.0	38.0
24	24	2.0	42.0
27	27	2.0	40.0
30	23	2.2	38.0
33	33	2.4	45.0
36	36	2.6	30.0
42	42	3.0	28.0
48	48	3.5	30.0

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS

SEPTEMBER 2017

STANDARD DRAWING NO. E 715-PHCL-21

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REVISION TO 2026 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

715.02 Materials 715.09 Backfilling

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*

E 715-PHCL-22 PIPE HEIGHT OF COVER LIMITS (with markups)

PROFILE WALL POLYVINYL CHLORIDE PIPE HEIGHT OF COVER LIMITS (ft)

DIAMETER (in.)	MINIMUM (ft)	MAXIMUM (ft)
12	2.0	20.0
15	2.0	20.0
18	2.0	20.0
21	2.0	20.0
24	2.0	20.0
30	2.0	18.0
36	2.0	18.0
42	2.0	17.0
48	2.0	15.0

CORRUGATED POLYPROPYLENE PIPE HEIGHT OF COVER LIMITS (ft)

DIAMETER (in.)	MINIMUM (ft)	MAXIMUM (ft)
12	2.0	28.0
15	2.0	28.0
18	2.0	25.0
21	2.0	23.0
24	2.0	23.0
30	2.2	19.0
36	2.6	23.0
42	3.1	22.0
48	3.5	21.0

NOTE:

1. The pay item diameter reflects the minimum required inside diameter.

SMOOTH WALL POLYVINYL CHLORIDE PIPE HEIGHT OF COVER LIMITS (ft)

PAY ITEM DIAMETER (in.)	NOMINAL DIAMETER (in.)	MINIMUM (ft)	MAXIMUM (ft)
12	12	2.0	64.0
15	15	2.0	64.0
18	18	2.0	61.0
21	21	2.0	61.0
24	24	2.0	61.0
27	27	2.0	61.0

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS

SEPTEMBER ~~2017~~ 2026

STANDARD DRAWING NO. E 715-PHCL-21

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CHIEF ENGINEER DATE

REVISION TO 2026 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

715.02 Materials 715.09 Backfilling

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*

E 715-PHCL-23 PIPE HEIGHT OF COVER LIMITS (with markups)

Sheet Renumbered Only

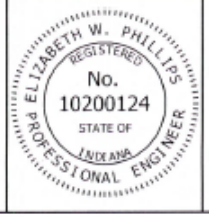
VITRIFIED CLAY PIPE, EXTRA STRENGTH HEIGHT OF COVER LIMITS (ft)		
DIAMETER (in.)	MINIMUM (ft)	MAXIMUM (ft)
12	1.2	16.0
15	1.4	14.0
18	1.4	13.0
21	1.4	14.0
24	1.4	15.0
27	1.5	14.0
30	1.6	13.0
33	1.5	13.0
36	1.5	14.0

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS

SEPTEMBER 2017

STANDARD DRAWING NO. E 715-PHCL-23 X2



/s/ Elizabeth W. Phillips 03/27/17
DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/10/17
CHIEF ENGINEER DATE

REVISION TO 2026 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

715.02 Materials 715.09 Backfilling

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*

E 715-PHCL-24 PIPE HEIGHT OF COVER LIMITS (with markups)

Sheet Renumbered Only

REINFORCED CONCRETE CIRCULAR PIPE HEIGHT OF COVER LIMITS (ft)

DIAMETER (in.)	STRENGTH CLASS / D-LOAD RATING							
	CLASS II: $D_{0.01}$ = 1000		CLASS III: $D_{0.01}$ = 1350		CLASS IV: $D_{0.01}$ = 2000		CLASS V: $D_{0.01}$ = 3000	
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
12	1.0	12.0	1.0	17.0	1.0	25.0	1.0	38.0
15	1.0	13.0	1.0	17.0	1.0	26.0	1.0	39.0
18	1.0	13.0	1.0	17.0	1.0	26.0	1.0	40.0
21	1.0	13.0	1.0	17.0	1.0	26.0	1.0	40.0
24	1.0	13.0	1.0	17.0	1.0	26.0	1.0	40.0
27	1.0	13.0	1.0	17.0	1.0	26.0	1.0	40.0
30	1.0	13.0	1.0	17.0	1.0	26.0	1.0	40.0
33	1.0	12.0	1.0	17.0	1.0	26.0	1.0	40.0
36	1.0	12.0	1.0	17.0	1.0	26.0	1.0	40.0
42	1.0	12.0	1.0	17.0	1.0	26.0	1.0	40.0
48	1.0	12.0	1.0	17.0	1.0	26.0	1.0	40.0
54	1.0	12.0	1.0	17.0	1.0	26.0	1.0	40.0
60	1.0	12.0	1.0	17.0	1.0	26.0	1.0	40.0
66	1.0	12.0	1.0	17.0	1.0	26.0	1.0	39.0
72	1.0	12.0	1.0	17.0	1.0	25.0	1.0	39.0
78	1.0	12.0	1.0	17.0	1.0	25.0	1.0	39.0
84	1.0	12.0	1.0	16.0	1.0	25.0	1.0	39.0
90	1.0	12.0	1.0	16.0	1.0	25.0	1.0	39.0
96	1.0	11.0	1.0	16.0	1.0	25.0	1.0	39.0
102	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
108	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
114	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
120	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
126	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
132	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
138	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
144	1.0	9.0	1.0	15.0	1.0	25.0	1.0	39.0

NOTES:

1. A special design in accordance with AASHTO LRFD Bridge Design Specifications, Section 12, is required for pipe diameters and heights of cover beyond those shown.

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS

SEPTEMBER 2017

STANDARD DRAWING NO. E 715-PHCL-24X3

ELIZABETH W. PHILLIPS REGISTERED No. 10200124 STATE OF INDIANA PROFESSIONAL ENGINEER

/s/ Elizabeth W. Phillips 03/27/17
DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/10/17
CHIEF ENGINEER DATE

REVISION TO 2026 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

715.02 Materials 715.09 Backfilling

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*

E 715-PHCL-25 PIPE HEIGHT OF COVER LIMITS (with markups)

Sheet Renumbered Only

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE HEIGHT OF COVER LIMITS (ft)

SPAN (in.)	RISE (in.)	AREA (sft)	STRENGTH CLASS / D-LOAD RATING									
			CLASS HE-A: $D_{0.01}$ = 600		CLASS HE-I: $D_{0.01}$ = 800		CLASS HE-II: $D_{0.01}$ = 1000		CLASS HE-III: $D_{0.01}$ = 1350		CLASS HE-IV: $D_{0.01}$ = 2000	
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
23	14	1.8	1.3	4.0	1.0	8.0	1.0	11.0	1.0	20.0	1.0	100.0
30	19	3.3	1.1	5.0	1.0	7.0	1.0	10.0	1.0	16.0	1.0	47.0
34	22	4.1	1.0	5.0	1.0	8.0	1.0	11.0	1.0	17.0	1.0	48.0
38	24	5.1	1.0	5.0	1.0	8.0	1.0	11.0	1.0	18.0	1.0	49.0
42	27	6.3	1.0	6.0	1.0	9.0	1.0	12.0	1.0	19.0	1.0	50.0
45	29	7.4	1.0	6.0	1.0	9.0	1.0	12.0	1.0	19.0	1.0	45.0
49	32	8.8	1.0	6.0	1.0	9.0	1.0	12.0	1.0	19.0	1.0	45.0
53	34	10.2	1.0	6.0	1.0	9.0	1.0	12.0	1.0	20.0	1.0	44.0
60	38	12.9	1.0	5.0	1.0	8.0	1.0	10.0	1.0	15.0	1.0	26.0
68	43	16.6	1.0	6.0	1.0	8.0	1.0	10.0	1.0	15.0	1.0	27.0
76	48	20.5	1.0	6.0	1.0	8.0	1.0	11.0	1.0	16.0	1.0	28.0
83	53	24.8	1.0	6.0	1.0	9.0	1.0	11.0	1.0	16.0	1.0	29.0
91	58	29.5	1.0	6.0	1.0	9.0	1.0	12.0	1.0	17.0	1.0	29.0
98	63	34.6	1.1	6.0	1.1	9.0	1.1	12.0	1.1	17.0	1.1	29.0
106	68	40.1	1.2	6.0	1.2	9.0	1.2	12.0	1.2	17.0	1.2	30.0
113	72	46.1	1.2	7.0	1.2	9.0	1.2	12.0	1.2	18.0	1.2	30.0
121	77	52.4	1.3	7.0	1.3	9.0	1.3	12.0	1.3	18.0	1.3	30.0
128	82	59.2	1.4	7.0	1.4	10.0	1.4	13.0	1.4	18.0	1.4	30.0
136	87	66.4	1.5	7.0	1.5	10.0	1.5	13.0	1.5	18.0	1.5	31.0
143	92	74.0	1.5	7.0	1.5	10.0	1.5	13.0	1.5	18.0	1.5	31.0
151	97	82.0	1.6	7.0	1.6	10.0	1.6	13.0	1.6	19.0	1.6	31.0
166	106	99.2	1.7	7.0	1.8	10.0	1.8	13.0	1.8	19.0	1.8	31.0
180	116	118.6	1.8	7.0	1.9	10.0	1.9	13.0	1.9	19.0	1.9	31.0

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS

SEPTEMBER 2017

STANDARD DRAWING NO. E 715-PHCL-2~~3~~4

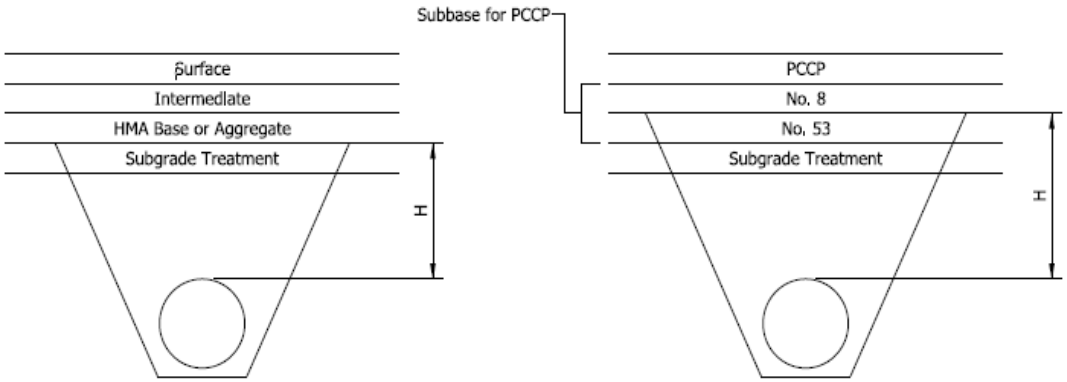
ELIZABETH W. PHILLIPS REGISTERED No. 10200124 STATE OF INDIANA PROFESSIONAL ENGINEER

/s/ Elizabeth W. Phillips 03/27/17
DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/10/17
CHIEF ENGINEER DATE

715.02 Materials 715.09 Backfilling
SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*
E 715-PHCL-01 PIPE HEIGHT OF COVER LIMITS (proposed draft)

INDEX	
SHEET NO.	SUBJECT
01	Pipe Height of Cover Drawing Index and General Notes
02-04	2 2/3" x 1/2" Corrugated Aluminum Alloy Pipe and Pipe Arch Height of Cover Limits
05-07	3" x 1" Corrugated Aluminum Alloy Pipe and Pipe Arch Height of Cover Limits
08-09	6" x 1" Corrugated Aluminum Alloy Pipe Height of Cover Limits
10-12	2 2/3" x 1/2" Corrugated Steel Pipe and Pipe Arch Height of Cover Limits
13-15	3" x 1" Corrugated Steel Pipe and Pipe Arch Height of Cover Limits
16-17	5" x 1" Corrugated Steel Pipe and Pipe Arch Height of Cover Limits
18	3/4" x 3/4" x 7 1/2" Spiral Rib Steel Pipe Height of Cover Limits
19	Non-Reinforced Concrete Pipe Class 3 Height of Cover Limits
20	Corrugated Polyethylene Pipe Height of Cover Limits
21	Polyvinyl Chloride and Polypropylene Pipe Height of Cover Limits
22	Vitrified Clay Pipe Height of Cover Limits
23-24	Reinforced Concrete Pipe Height of Cover Limits



HMA PCCP

GENERAL NOTE:

1. The tabulated cover depth H shall be measured from the top of the pipe to the bottom of the drainage No. 8 layer for PCCP and from the top of the pipe to the top of the subgrade treatment for HMA pavement.

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS
DRAWING INDEX AND
GENERAL NOTES
SEPTEMBER 2026

STANDARD DRAWING NO. E 715-PHCL-01

DESIGN STANDARDS ENGINEER DATE

REVISION TO 2026 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

715.02 Materials 715.09 Backfilling

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*

E 715-PHCL-20 PIPE HEIGHT OF COVER LIMITS (proposed draft)

CORRUGATED POLYETHYLENE PIPE TYPE S HEIGHT OF COVER LIMITS (ft)			
PAY ITEM DIAMETER (in.)	NOMINAL DIAMETER (in.)	MINIMUM (ft)	MAXIMUM (ft)
12	12	2.0	22.0
15	15	2.0	22.0
18	18	2.0	20.0
21	21	2.0	19.0
24	24	2.0	19.0
30	30	2.0	17.0
36	36	2.0	17.0
42	42	2.0	17.0
48	48	2.0	15.0

NOTE:

1. The pay item diameter reflects the minimum required inside diameter.

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS

SEPTEMBER 2026

STANDARD DRAWING NO. E 715-PHCL-20

DESIGN STANDARDS ENGINEER DATE

CHIEF ENGINEER DATE

REVISION TO 2026 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

715.02 Materials 715.09 Backfilling

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*

E 715-PHCL-21 PIPE HEIGHT OF COVER LIMITS (proposed draft)

PROFILE WALL POLYVINYL CHLORIDE PIPE HEIGHT OF COVER LIMITS (ft)		
DIAMETER (in.)	MINIMUM (ft)	MAXIMUM (ft)
12	2.0	20.0
15	2.0	20.0
18	2.0	20.0
21	2.0	20.0
24	2.0	20.0
30	2.0	18.0
36	2.0	18.0
42	2.0	17.0
48	2.0	15.0

CORRUGATED POLYPROPYLENE PIPE HEIGHT OF COVER LIMITS (ft)		
DIAMETER (in.)	MINIMUM (ft)	MAXIMUM (ft)
12	2.0	28.0
15	2.0	28.0
18	2.0	25.0
21	2.0	23.0
24	2.0	23.0
30	2.2	19.0
36	2.6	23.0
42	3.1	22.0
48	3.5	21.0

NOTE:

1. The pay item diameter reflects the minimum required inside diameter.

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS

SEPTEMBER 2026

STANDARD DRAWING NO. E 715-PHCL-21

DESIGN STANDARDS ENGINEER DATE

CHIEF ENGINEER DATE

REVISION TO 2026 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

715.02 Materials 715.09 Backfilling
SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*
E 715-PHCL-22 PIPE HEIGHT OF COVER LIMITS (proposed draft)

VITRIFIED CLAY PIPE, EXTRA STRENGTH HEIGHT OF COVER LIMITS (ft)		
DIAMETER (in.)	MINIMUM (ft)	MAXIMUM (ft)
12	1.2	16.0
15	1.4	14.0
18	1.4	13.0
21	1.4	14.0
24	1.4	15.0
27	1.5	14.0
30	1.6	13.0
33	1.5	13.0
36	1.5	14.0

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS

SEPTEMBER 2017

STANDARD DRAWING NO. E 715-PHCL-22

/s/ Elizabeth W. Phillips 03/27/17
DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/10/17
CHIEF ENGINEER DATE

715.02 Materials 715.09 Backfilling
SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*
E 715-PHCL-23 PIPE HEIGHT OF COVER LIMITS (proposed draft)

REINFORCED CONCRETE CIRCULAR PIPE
HEIGHT OF COVER LIMITS (ft)

DIAMETER (in.)	STRENGTH CLASS / D-LOAD RATING							
	CLASS II: $D_{0.01}$ = 1000		CLASS III: $D_{0.01}$ = 1350		CLASS IV: $D_{0.01}$ = 2000		CLASS V: $D_{0.01}$ = 3000	
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
12	1.0	12.0	1.0	17.0	1.0	25.0	1.0	38.0
15	1.0	13.0	1.0	17.0	1.0	26.0	1.0	39.0
18	1.0	13.0	1.0	17.0	1.0	26.0	1.0	40.0
21	1.0	13.0	1.0	17.0	1.0	26.0	1.0	40.0
24	1.0	13.0	1.0	17.0	1.0	26.0	1.0	40.0
27	1.0	13.0	1.0	17.0	1.0	26.0	1.0	40.0
30	1.0	13.0	1.0	17.0	1.0	26.0	1.0	40.0
33	1.0	12.0	1.0	17.0	1.0	26.0	1.0	40.0
36	1.0	12.0	1.0	17.0	1.0	26.0	1.0	40.0
42	1.0	12.0	1.0	17.0	1.0	26.0	1.0	40.0
48	1.0	12.0	1.0	17.0	1.0	26.0	1.0	40.0
54	1.0	12.0	1.0	17.0	1.0	26.0	1.0	40.0
60	1.0	12.0	1.0	17.0	1.0	26.0	1.0	40.0
66	1.0	12.0	1.0	17.0	1.0	26.0	1.0	39.0
72	1.0	12.0	1.0	17.0	1.0	25.0	1.0	39.0
78	1.0	12.0	1.0	17.0	1.0	25.0	1.0	39.0
84	1.0	12.0	1.0	16.0	1.0	25.0	1.0	39.0
90	1.0	12.0	1.0	16.0	1.0	25.0	1.0	39.0
96	1.0	11.0	1.0	16.0	1.0	25.0	1.0	39.0
102	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
108	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
114	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
120	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
126	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
132	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
138	1.0	9.0	1.0	16.0	1.0	25.0	1.0	39.0
144	1.0	9.0	1.0	15.0	1.0	25.0	1.0	39.0

NOTES:

1. A special design in accordance with AASHTO LRFD Bridge Design Specifications, Section 12, is required for pipe diameters and heights of cover beyond those shown.

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS

SEPTEMBER 2017

STANDARD DRAWING NO. E 715-PHCL-23

ELIZABETH W. PHILLIPS REGISTERED No. 10200124 STATE OF INDIANA PROFESSIONAL ENGINEER

/s/ Elizabeth W. Phillips 03/27/17
DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/10/17
CHIEF ENGINEER DATE

REVISION TO 2026 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

715.02 Materials 715.09 Backfilling

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*

E 715-PHCL-24 PIPE HEIGHT OF COVER LIMITS (proposed draft)

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE HEIGHT OF COVER LIMITS (ft)

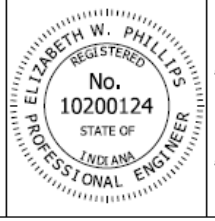
SPAN (in.)	RISE (in.)	AREA (sft)	STRENGTH CLASS / D-LOAD RATING									
			CLASS HE-A: $D_{0.01}$ = 600		CLASS HE-I: $D_{0.01}$ = 800		CLASS HE-II: $D_{0.01}$ = 1000		CLASS HE-III: $D_{0.01}$ = 1350		CLASS HE-IV: $D_{0.01}$ = 2000	
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
23	14	1.8	1.3	4.0	1.0	8.0	1.0	11.0	1.0	20.0	1.0	100.0
30	19	3.3	1.1	5.0	1.0	7.0	1.0	10.0	1.0	16.0	1.0	47.0
34	22	4.1	1.0	5.0	1.0	8.0	1.0	11.0	1.0	17.0	1.0	48.0
38	24	5.1	1.0	5.0	1.0	8.0	1.0	11.0	1.0	18.0	1.0	49.0
42	27	6.3	1.0	6.0	1.0	9.0	1.0	12.0	1.0	19.0	1.0	50.0
45	29	7.4	1.0	6.0	1.0	9.0	1.0	12.0	1.0	19.0	1.0	45.0
49	32	8.8	1.0	6.0	1.0	9.0	1.0	12.0	1.0	19.0	1.0	45.0
53	34	10.2	1.0	6.0	1.0	9.0	1.0	12.0	1.0	20.0	1.0	44.0
60	38	12.9	1.0	5.0	1.0	8.0	1.0	10.0	1.0	15.0	1.0	26.0
68	43	16.6	1.0	6.0	1.0	8.0	1.0	10.0	1.0	15.0	1.0	27.0
76	48	20.5	1.0	6.0	1.0	8.0	1.0	11.0	1.0	16.0	1.0	28.0
83	53	24.8	1.0	6.0	1.0	9.0	1.0	11.0	1.0	16.0	1.0	29.0
91	58	29.5	1.0	6.0	1.0	9.0	1.0	12.0	1.0	17.0	1.0	29.0
98	63	34.6	1.1	6.0	1.1	9.0	1.1	12.0	1.1	17.0	1.1	29.0
106	68	40.1	1.2	6.0	1.2	9.0	1.2	12.0	1.2	17.0	1.2	30.0
113	72	46.1	1.2	7.0	1.2	9.0	1.2	12.0	1.2	18.0	1.2	30.0
121	77	52.4	1.3	7.0	1.3	9.0	1.3	12.0	1.3	18.0	1.3	30.0
128	82	59.2	1.4	7.0	1.4	10.0	1.4	13.0	1.4	18.0	1.4	30.0
136	87	66.4	1.5	7.0	1.5	10.0	1.5	13.0	1.5	18.0	1.5	31.0
143	92	74.0	1.5	7.0	1.5	10.0	1.5	13.0	1.5	18.0	1.5	31.0
151	97	82.0	1.6	7.0	1.6	10.0	1.6	13.0	1.6	19.0	1.6	31.0
166	106	99.2	1.7	7.0	1.8	10.0	1.8	13.0	1.8	19.0	1.8	31.0
180	116	118.6	1.8	7.0	1.9	10.0	1.9	13.0	1.9	19.0	1.9	31.0

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE HEIGHT OF COVER LIMITS

SEPTEMBER 2017

STANDARD DRAWING NO. E 715-PHCL-24



/s/ Elizabeth W. Phillips 03/27/17
DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/10/17
CHIEF ENGINEER DATE

REVISION TO 2026 STANDARD SPECIFICATIONS AND STANDARD DRAWINGS

715.02 Materials 715.09 Backfilling

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*

E 715-PIPE-01 PIPE CLASSIFICATION TABLES (with markups)

715-PIPE is 2-sheet series. No revisions to sheet -02

Material	Pipe Type				
	1	2	3	4	5
Non-Reinforced Concrete Pipe, Class 3 (S)	x	x	x		
Non-Reinforced Concrete Pipe				x	
Reinforced Concrete Pipe (S)	x	x	x		
Reinforced Concrete Horizontal Elliptical Pipe (S)	x	x	x		
Corrugated Steel Pipe (C)	x		x		x
Polymer Precoated Galvanized Corrugated Steel Pipe (C)	x		x		x
Polymer Precoated Galvanized Corrugated Steel Pipe Type IA (S)	x	x	x		x
Fully Bituminous Coated and Lined Corrugated Steel Pipe (S)		x			x
Corrugated Steel Pipe-Arch (C)	x		x		x
Polymer Precoated Galvanized Corr. Steel Pipe Arch Type IIA (S)	x	x	x		x
Fully Bituminous Coated and Lined Corrugated Steel Pipe-Arch (S)		x			x
Polymer Precoated Galvanized Corrugated Steel Pipe-Arch (C)	x		x		x
Corrugated Aluminum Alloy Pipe (C)	x		x		x
Corrugated Aluminum Alloy Pipe-Arch (C)	x		x		x
Structural Plate Steel Pipe (C)	x		x		
Structural Plate Steel Pipe-Arch (C)	x		x		
Structural Plate Aluminum Alloy Pipe (C)	x		x		
Structural Plate Aluminum Alloy Pipe-Arch (C)	x		x		
Spiral Rib Steel Pipe (SS)	x		x		x
Clay Pipe, Extra Strength (S)	x	x	x		
Clay Pipe				x	
Perforated Clay Pipe				x	
Concrete Drain Tile				x	
Clay Drain Tile				x	
Corrugated Polyethylene Pipe, Type SP				x	
Corrugated Polyethylene Pipe, Type (S)	x	x	x	x	x
~~Profile Wall (Ribbed) Polyethylene Pipe (S)~~	~~x~~	~~x~~	~~x~~		~~x~~
~~Profile Wall (Closed) Polyethylene Pipe (S)~~	~~x~~	~~x~~	~~x~~		~~x~~
~~Smooth Wall Polyethylene Pipe (S)~~	~~x~~	~~x~~	~~x~~		~~x~~
Corrugated Polyethylene Drainage Tubing				x	
Corrugated Polypropylene Pipe (S)	x	x	x		x
~~Perforated PVC Semicircular Pipe~~				~~x~~	
Profile Wall PVC Pipe (S)	x	x	x	x	x
~~Smooth Wall PVC Pipe (S)~~	~~x~~	~~x~~	~~x~~		~~x~~

NOTES:

1. The prescribed uses for the pipe types are as follows.
   a. Type 1 Pipe - Culverts under mainline pavement and public road approaches.
   b. Type 2 Pipe - Storm sewer pipe.
   c. Type 3 Pipe - Culverts under driveways and field entrances.
   d. Type 4 Pipe - Drain tile and longitudinal underdrains.
   e. Type 5 Pipe - Broken back and other installations requiring coupled pipe.
2. See to Standard Drawings E 715-PHCL-01 through E 715-PHCL-25 and E 717-PHCL-01 through E 717-PHCL-10 for allowable heights of cover for various pipe materials except Type 4 pipes.
3. See to Standard Drawings E 715-PSLC-01 through E 715-PSLC-03 for required pipe service life criteria.
4. Any pipe material which is in accordance with the designated pipe type, acceptable for height of cover conditions, and conforms to service life criteria may be installed.

LEGEND:

(C)- Corrugated Interior Culvert Pipe

(S)- Smooth Interior Culvert or Storm Sewer Pipe

(SS)- Semi-Smooth Interior Culvert Pipe

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE CLASSIFICATION TABLES

SEPTEMBER 2017 ~~2017~~ 2026

STANDARD DRAWING NO. E 715-PIPE-01

ELIZABETH W. PHILLIPS REGISTERED No. 10200124 STATE OF INDIANA PROFESSIONAL ENGINEER

/s/ Elizabeth W. Phillips 03/22/17
DESIGN STANDARDS ENGINEER DATE

/s/ John Leckie 04/10/17
CHIEF ENGINEER DATE

715.02 Materials 715.09 Backfilling

SECTION 907 – CONCRETE, CLAY, AND PLASTIC DRAINAGE COMPONENTS *(various subsections)*

E 715-PIPE-01 PIPE CLASSIFICATION TABLES (proposed draft)

Material	Pipe Type				
	1	2	3	4	5
Non-Reinforced Concrete Pipe, Class 3 (S)	x	x	x		
Non-Reinforced Concrete Pipe				x	
Reinforced Concrete Pipe (S)	x	x	x		
Reinforced Concrete Horizontal Elliptical Pipe (S)	x	x	x		
Corrugated Steel Pipe (C)	x		x		x
Polymer Precoated Galvanized Corrugated Steel Pipe (C)	x		x		x
Polymer Precoated Galvanized Corrugated Steel Pipe Type IA (S)	x	x	x		x
Fully Bituminous Coated and Lined Corrugated Steel Pipe (S)		x			x
Corrugated Steel Pipe-Arch (C)	x		x		x
Polymer Precoated Galvanized Corr. Steel Pipe Arch Type IIA (S)	x	x	x		x
Fully Bituminous Coated and Lined Corrugated Steel Pipe-Arch (S)		x			x
Polymer Precoated Galvanized Corrugated Steel Pipe-Arch (C)	x		x		x
Corrugated Aluminum Alloy Pipe (C)	x		x		x
Corrugated Aluminum Alloy Pipe-Arch (C)	x		x		x
Structural Plate Steel Pipe (C)	x		x		
Structural Plate Steel Pipe-Arch (C)	x		x		
Structural Plate Aluminum Alloy Pipe (C)	x		x		
Structural Plate Aluminum Alloy Pipe-Arch (C)	x		x		
Spiral Rib Steel Pipe (SS)	x		x		x
Clay Pipe, Extra Strength (S)	x	x	x		
Clay Pipe				x	
Perforated Clay Pipe				x	
Concrete Drain Tile				x	
Clay Drain Tile				x	
Corrugated Polyethylene Pipe, Type SP				x	
Corrugated Polyethylene Pipe, Type (S)	x	x	x	x	x
Corrugated Polyethylene Drainage Tubing				x	
Corrugated Polypropylene Pipe (S)	x	x	x		x
Profile Wall PVC Pipe (S)	x	x	x	x	x

NOTES:

1. The prescribed uses for the pipe types are as follows.
   a. Type 1 Pipe - Culverts under mainline pavement and public road approaches.
   b. Type 2 Pipe - Storm sewer pipe.
   c. Type 3 Pipe - Culverts under driveways and field entrances.
   d. Type 4 Pipe - Drain tile and longitudinal underdrains.
   e. Type 5 Pipe - Broken back and other installations requiring coupled pipe.

2. See to Standard Drawings E 715-PHCL-01 through E 715-PHCL-24 and E 717-PHCL-01 through E 717-PHCL-10 for allowable heights of cover for various pipe materials except Type 4 pipes.

3. See to Standard Drawings E 715-PSLC-01 through E 715-PSLC-03 for required pipe service life criteria.

4. Any pipe material which is in accordance with the designated pipe type, acceptable for height of cover conditions, and conforms to service life criteria may be installed.

LEGEND:

(C)- Corrugated Interior Culvert Pipe

(S)- Smooth Interior Culvert or Storm Sewer Pipe

(SS)- Semi-Smooth Interior Culvert Pipe

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE CLASSIFICATION TABLES

SEPTEMBER 2026

STANDARD DRAWING NO. E 715-PIPE-01

DESIGN STANDARDS ENGINEER DATE

CHIEF ENGINEER DATE

COMMENTS AND ACTION

715.02 Materials
~~907.04 Precast Concrete Manholes, Inlets, and Catch Basins~~
907.16 Thermoplastic Pipe Requirements
907.18 Perforated PVC Semicircular Pipe
907.20 Profile Wall Polyethylene Pipe
E 715-PHCL-01, -20, -21, -22, -23, and -24 PIPE HEIGHT OF COVER LIMITS
E 715-PIPE-01 PIPE CLASSIFICATION TABLES
715.09 Backfilling
907.21 Smooth Wall Polyethylene Pipe
907.23 Smooth Wall PVC Pipe
907.24 Pipe for Outlets
907.25 Thermoplastic Liner Pipe

DISCUSSION:

This item was introduced and presented by Mr. Reilman who explained that there is confusion concerning some pipe material types listed in 715.02 that would appear to be viable options, however they are not since there are no suppliers listed on the Qualified Products List. Additional clarification is needed in the 715.02(h), (i), and (m) subsections. The referenced AASHTO specification (M 199) does not cover inlets and catch basins; so clarification is needed. The table for thermoplastic pipe (907.16) needs cleanup and clarification as well as some of the 907 sections following the table, including the liner pipe section.

Mr. Reilman proposed to delete the pipe material types that do not have any suppliers listed on the qualified products list, and incorporate the proposed changes shown to clarify pipe material types acceptable for specified applications, add a reference to require ASTM C913 for inlets and catch basins, edit and clarify the manufacturer requirements in the table in 907.16, cascade these edits to the applicable sections following 907.16, and update the liner pipe sections.

Prior to the meeting –
Mr. Koch asked if by eliminating some types of plastic pipe, would we also be eliminating a potential source of future materials? Mr. Reilman responded: Not likely. If a company decides to change or adjust operations to make a pipe that they previously did not make, they can always follow our procedure for getting on a QPL. The five pipe types where I am deleting the QPL option, it is impossible for them to get on our QPL because they cannot get an AASHTO audit; AASHTO doesn't audit these pipe materials. In the future if AASHTO decided to add one or more of these into their Thermoplastic Pipe program, then INDOT can revise our specification at that time.
Mr. Koch asked if it would hurt to keep existing language to maintain the possibility of future cost benefits? Mr. Reilman responded that, Yes, because it is misleading.

Mr. Koch stated that, unlike semi local or regional concrete pipe producers, a national 'plastic' pipe manufacturer does not care about a single state. Requiring a company official to sign a type C cert seem very unlikely, they do not care about a relatively few truckloads of pipe. This issue may cause some to take actions that should not be taken. Please consider amending the certification to a Contractor/Supplier certifying the material from a company's product data as the product is the product.
Mr. Reilman responded that it is possible that some contractors purchase pipe from suppliers or other middlemen and they may not be able to get their hands on a certification from a manufacturer even if the pipe was shipped with one. I think your proposal is basically switch this from a type C certification to a type D certification. I agree that "the product is the product", and furthermore, ASTM or AASHTO standards typically require certain markings on pipe that is manufactured to meet certain specifications. If a pipe has the correct markings, it should be easy for the contractor to certify it, type D, and our field personnel to verify that it is pipe that meets specifications. Mr. Koch agreed with changing to a type D certification.

Revisions are as shown above and 907.04 is being removed from this item.

Mr. Reilman revised his motion which was seconded by Mr. White.

COMMENTS AND ACTION

715.02 Materials
~~907.04 Precast Concrete Manholes, Inlets, and Catch Basins~~
907.16 Thermoplastic Pipe Requirements
907.18 Perforated PVC Semicircular Pipe
907.20 Profile Wall Polyethylene Pipe
E 715-PHCL-01, -20, -21, -22, -23, and -24 PIPE HEIGHT OF COVER LIMITS
E 715-PIPE-01 PIPE CLASSIFICATION TABLES
715.09 Backfilling
907.21 Smooth Wall Polyethylene Pipe
907.23 Smooth Wall PVC Pipe
907.24 Pipe for Outlets
907.25 Thermoplastic Liner Pipe

[continued]

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

Motion: Mr. Reilman Second: Mr. White Ayes: 10 Nays: 0 FHWA Approval: YES	**Action:** ___ Passed as Submitted _X_ Passed as Revised ___ Withdrawn
2026 Standard Specifications Sections: 715, pg(s) 744 - 748. 904, pg(s) 1042 - 1051. Recurring Special Provisions or Plan Details: NONE Standard Drawing affected: E 715-PHCL E 715-PIPE Design Manual Chapter: NONE GIFE Section: 4.11.2	_X_ 2028 Standard Specifications ___ Revise Pay Items List ___ Notification to Designers if change is not addressed by RSP _X_ Create RSP (No. 715-R-809) Effective: June 1, 2026 ___ Revise RSP (No.___) Effective: _X_ Standard Drawing (E 715-PHCL and E 715-PIPE) Effective: September 1, 2026 _X_ Create RPD(s) (No. 715-R-810d and 715-R-811d) Effective: June 1, 2026 _X_ GIFE Update _X_ Frequency Manual Update _X_ AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: A major overhaul was needed for the section and lots of clarification and simplifying language were needed.

PROPOSED SOLUTION: Old language was removed and revised with new requirements for compaction.

APPLICABLE STANDARD SPECIFICATIONS: 203.20(b) and 203.20(c)

APPLICABLE STANDARD DRAWING: None

APPLICABLE DESIGN MANUAL CHAPTER: None

APPLICABLE SECTION OF GIFE: NA

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: Yes

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad Hoc committee consisting of Nayyar Siddiki, Samuel Clawson, and Jim Reilman

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

IMPACT ANALYSIS (attach report): Yes

Submitted By: Jim Reilman and Nayyar Siddiki

Title: State Material Engineer

Division: Materials and Test

E-mail: Jreilman@INDOT.IN.GOV

Date: 10/16/2025

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? N/A
Customer satisfaction? Yes
Congestion/travel time? N/A
Ride quality? N/A

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? N/A

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

Is this proposal needed for compliance with:

Federal or State regulations? N/A
AASHTO or other design code? N/A

Is this item editorial? Yes

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

The Standard Specifications are revised as follows:

SECTION 203, BEGIN LINE 889, DELETE AND INSERT AS FOLLOWS:

b) Shale, *Soft Rock, or* Shale and Soft Rock Mixtures~~, or Soft Rock~~

When these materials are ~~encountered and are to be~~ used for embankment construction, the compaction shall be accomplished with an approved vibratory tamping-foot roller in conjunction with a static tamping-foot roller. ~~The minimum weight for the static tamping-foot roller shall be 30 t. The minimum total compactive effort for the vibratory tamping-foot roller shall be 27.5 t. Total compactive effort is defined as that portion of the static weight acting upon the unsprung compaction drum added to the centrifugal force provided by that drum. If the manufacturer's charts do not list the static weight acting on the compaction drum, the roller shall be satisfactorily weighed, the weight shall be added to the centrifugal force, and the roller rated in accordance with the Construction Industry Manufacturers Association, CIMA. Each tamping foot on the static roller shall project from the drum a minimum of 6 in. Each tamping-foot on the vibratory tamping-foot roller shall project from the drum a minimum of 4 in. The surface area of the end of each foot on both tamping-foot rollers shall be no less than 5 1/2 sq in.~~*The lift thickness shall be in accordance with 203.23. The top particle size shall not be more than 3/4 in. in any direction. Optimum moisture content shall be maintained in accordance with ~~the modified proctor~~AASHTO T 180. Shale embankment shall be constructed at ~~100~~95% of maximum dry density in accordance with AASHTO T 180. During shale slaking, moisture content shall be above optimum moisture content.*

~~Shale, shale and soft rock, and their mixtures, or soft rock shall be placed in 8 in. maximum loose lifts. Strength and moisture control for compacted soils shall be in accordance with 203.23 or the density shall be at least 95% of maximum dry density with moisture control in accordance with 203.23.~~ Excavation and blasting procedures shall accommodate the selective placement of these materials and avoid intermixing *of shale and* rock. ~~Rock shall be placed in accordance with 203.20(a).~~ *The shale embankment foundation shall be in accordance with 203.09 and shall be constructed to drain.*

~~*As alternate to above, shale or soft rock shall be pulverized so that 100% passes through a 3/4 in. sieve.*~~

If weathered shale or soft rock is encountered in a cut section, it shall be constructed in accordance with 207. Water shall be applied to the shale in the cut to accelerate the slaking action and again prior to disking and compaction to facilitate the compaction. ~~The water shall be distributed by an approved method which provides uniform application of the required quantity of water. The water shall be uniformly incorporated throughout the entire lift by a multiple gang disk with a minimum disk wheel diameter of 24 in.~~

Unless otherwise approved in writing, each embankment lift shall receive a minimum of three passes with the static roller and a minimum of two passes with the vibratory roller. The material shall be bladed before using the vibratory tamping-foot roller. A pass shall be in accordance with 402.15. The rollers shall not exceed 3 mph during these passes. The number of passes will be adjusted upward if necessary to meet the *compaction* requirements ~~of 203.23. No~~

~~additional compensation will be allowed for additional passes as specified herein, the cost of which shall be included in the cost of the pay items~~.

As alternate to above shale or soft rock shall be pulverized and constructed in accordance with 203.23. A moisture content test will be performed every two hours as a minimum ~~or as directed~~. Gradation test shall be performed every 1,000 ft of length by lane width. Subgrade shall be constructed in accordance with 207. Proofrolling shall be performed in accordance with 203.26.

No additional compensation will be made for additional passes as specified herein, the cost of which shall be included in the cost of the pay items. Water required to facilitate the slaking and compaction of the shale or soft rock will be measured in accordance with 203.27(h) and paid for in accordance with 203.28. No payment will be allowed for any water required for compaction of material furnished as borrow.

(c) Shale and Thinly Layered Limestone

In Dearborn, Decatur, Fayette, Franklin, Jefferson, Ohio, Ripley, Rush, Switzerland, Union, and Wayne Counties specifically, or in other areas where relatively thin layered shale and rock are encountered, their use will be allowed in the construction of embankment, if the following provisions, in addition to those stated in ~~203.20(b)~~*203.19,* are observed.

1. The slopes shall be encased with ~~a minimum of 10 ft of relatively impervious, non-shale,~~ non-erodible material *in accordance with 203.09*.

2. The maximum size of limestone in the mixture shall be 6 in. in thickness and ~~1.5~~*2* ft in any other dimension. *The top size of material shall not be greater than lift thickness, which shall not exceed 12 in.*

3. The minimum number of passes with static roller and the vibratory tamping-foot roller shall be six static and two vibratory.

4. *The embankment foundation shall be constructed to drain in accordance with 203.09.*

If ~~the material is found to be too intermixed with~~*a field density tests cannot be performed due to the presence of too many* limestone fragments ~~to enable field density tests as required in this section~~*in the mixture*, this requirement may be waived ~~by~~*with* written permission *from the Engineer*. As an alternate~~ to this requirement~~, proofrolling shall be performed after every four lifts ~~and the moisture content will be controlled on clayey soils~~ in accordance with ~~203.23~~*203.26*.

COMMENTS AND ACTION

203.20(b) Shale, Shale and Soft Rock Mixtures, or Soft Rock
203.20(c) Shale and Thinly Layered Limestone

DISCUSSION:

Mr. Reilman introduced and presented this item stating that revisions, clarification and simplification were needed in 203. Mr. Reilman proposed to remove old language and revise with the new requirements for compaction.

Mr. Koch stated that 203.23 notes 6 in. lifts for clay, silty, sand, and granular soils. Field personnel will enforce 6 in. lifts while a constructor may take liberties to gain efficiency since there is no lift thickness as we are building with shale. Please consider adding lift thicknesses for shale. Mr. Koch also mentioned that RSP 203-R-806 provides 100% compaction for several sizes of granular material but not 3/4 in. What acceptance should be used? Further inquiries were addressed by Mr. Koch and Mr. Clawson provided revisions as shown above, as addressed by Mr. Siddiki, Mr. Reilman and Mr. Clawson.

Mr. Koch stated that 203.03 defines ROCK as igneous, metamorphic, and sedimentary rock or other sound mineral matter. Field personnel will not understand shale can turn into clay. The proposed language will not provide a clear DCP goal as 203.23 lacks a shale criteria and 203.20 does not state shale turns to clay.
Mr. Koch further mentioned that 203.23 states clay shall be constructed and tested in 6 in. lifts and sand/silt/granular shall be constructed in 6 in. lifts and tested in 12 in. lifts. Similar to above, we need to define expectations for shale lifts as an argument could be made that lift thicknesses do not apply. Our HT manual further complicates shale as sedimentary rock that is clay, silt, or mud.

Mr. Siddiki suggested that this item be withdrawn pending further review. Mr. Reilman withdrew this item.
Mr. Jacobs commented that there is a temporal frequency. Any sort of requirement acceptance requirement that's less than per day. There's a sentence that mentions testing every two hours. Mr. Reilman and Mr. Siddiki agreed that they need to work on that.

Motion: Mr. Reilman Second: Mr. Ayes: Nays: FHWA Approval:	**Action:** ___ Passed as Submitted ___ Passed as Revised _X_ Withdrawn
2026 Standard Specifications Sections: 203.20, pg(s) 171 - 173. Recurring Special Provisions or Plan Details: 203-R-806 EXCAVATION AND EMBANKMENT Standard Drawing affected: NONE Design Manual Chapter: NONE GIFE Section: NONE	___ 2028 Standard Specifications ___ Revise Pay Items List ___ Notification to Designers if change is not addressed by RSP ___ Create RSP (No.__) Effective: ___ Revise RSP (No._) Effective: ___ Standard Drawing ___ Create RPD (No. __) ___ GIFE Update ___ Frequency Manual Update ___ AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Bentonites are used in various applications in INDOT. Some of them are required in the form of grout while others are required in the form of chips. However, the bentonite section in 916 only contained information on grout requirements.

PROPOSED SOLUTION: We have updated the section to include information on chips

APPLICABLE STANDARD SPECIFICATIONS: 701, 913

APPLICABLE STANDARD DRAWING: N/A

APPLICABLE DESIGN MANUAL CHAPTER: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: create new 913 RSP, edit 204-R-727

PAY ITEMS AFFECTED: N/A

APPLICABLE SUB-COMMITTEE ENDORSEMENT: : Ad Hoc committee consisting of Nayyar Siddiki and Samuel Clawson

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

IMPACT ANALYSIS (attach report): Yes

Submitted By: Jim Reilman for Nayyar Siddiki

Title: State Materials Engineer

Division: Materials and Tests

E-mail: Jreilman@INDOT.IN.GOV

Date: 10/31/2025

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? Yes
Will approval of this item affect the Qualified Products List (QPL)? No
Will this proposal improve:

- Construction costs? N/A
- Construction time? N/A
- Customer satisfaction? N/A
- Congestion/travel time? N/A
- Ride quality? N/A

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

Will this change provide the contractor more flexibility? Yes

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

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

Is this proposal needed for compliance with:

- Federal or State regulations? No
- AASHTO or other design code? No

Is this item editorial? No

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

SECTION 701 – DRIVEN PILING
701.02 Materials
SECTION 913 – SOIL TREATMENT MATERIALS
913.06 Bentonite Grout
204-R-727 GEOTECHNICAL INSTRUMENTATION

The Standard Specifications are revised as follows:

SECTION 701, BEGIN LINE 13, DELETE AND INSERT AS FOLLOWS:

701.02 Materials

Materials shall be in accordance with the following:

B Borrow 904.06*
Bentonite ~~Grout~~*Chips and Powder* 913.06
Concrete Piles 707

SECTION 913, BEGIN LINE 69, DELETE AND INSERT AS FOLLOWS:

913.06 Bentonite ~~Grout~~*Chips and Powder*

Bentonite ~~grout~~ *chips and powder* shall be untreated, sodium bentonite~~, finely ground with not more than 5% retained on the No. 200 (75 µm) sieve~~ *with a moisture content between 6% and 10%. Calcium bentonite shall not be used*. It shall be free of lumps. ~~and materials that can prevent mixing into a fluid free of~~*When mixing powder with a fluid to make bentonite grout, the Contractor shall ensure that* lumps of unmixed bentonite *do not form*. ~~Calcium bentonite will not be accepted.~~ *Bentonite chips and powder shall be in accordance with the following gradations.*

GRADATION REQUIREMENTS FOR BENTONITE CHIPS	
Sieve Size	*Percent Retained, max.*
No. 8 (2.36 mm)	*1*
No. 20 (850 µm)	*35*
No. 100 (150 µm)	*50*
*No. 200 (75 µm)**	*10*
Pan	*5*
** Wet screen analysis 3.0 ± 0.5 (% residue on No. 200 (75 µm) sieve)*	

GRADATION REQUIREMENTS FOR BENTONITE POWDER	
Sieve Size	*Percent Retained, max.*
*No. 200 (75 µm)**	*5*
** Wet screen analysis 3.0 ± 0.5 (% residue on No. 200 (75 µm) sieve)*	

Other gradations may be submitted for consideration by the Engineer.

~~The grout shall be proportioned at 2 lb of pure bentonite powder per gal. of potable~~

SECTION 701 – DRIVEN PILING
701.02 Materials
SECTION 913 – SOIL TREATMENT MATERIALS
913.06 Bentonite Grout
204-R-727 GEOTECHNICAL INSTRUMENTATION

~~water~~.

A Type C certification in accordance with 916 shall be provided for the bentonite chips and bentonite powder.

(Note: Proposed changes shown highlighted gray. Only affected paragraphs are shown.)

204-R-727 GEOTECHNICAL INSTRUMENTATION

(Revised 05-01-25)

[-----]

204.02 Materials

Materials shall be in accordance with the following:

B Borrow	904.06
Bentonite Chips and Powder	*913.06*
Coarse Aggregate, Class D or Higher, Size No. 53	904.03
Ottawa Sand*	AASHTO T 252
Portland Cement, Type I	*901.01(b)*
Structure Backfill, Size No. 30	904.05
Water	*913.01*

* Ottawa Sand shall have a minimum permeability of 25 ft/day.

~~Bentonite chips shall consist of commercially processed angular fragments of pure bentonite, without additives.~~ Bentonite-cement grout shall consist of a mixture with the ratio of 25 lb of bentonite *powder* to 94 lb of portland cement, Type I ~~in accordance with 901.01(b)~~ and 30 gal. of water.

[-----]

COMMENTS AND ACTION

701.02 Materials
913.06 Bentonite Grout
204-R-727 GEOTECHNICAL INSTRUMENTATION

DISCUSSION:

Mr. Reilman introduced and presented this item stating that bentonites are used in various applications. Some of them are required in the form of grout, while others are required in the form of chips. However, the bentonite section in 916 only contained information on grout requirements.

Mr. Reilman proposed to update the section to include information concerning chips.

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

Motion: Mr. Reilman Second: Mr. White Ayes: 10 Nays: 0 FHWA Approval: YES	**Action:** X Passed as Submitted __ Passed as Revised __ Withdrawn
2026 Standard Specifications Sections: 701.02, pg. 603; 913.06, pg. 1120. Recurring Special Provisions or Plan Details: 204-R-727 GEOTECHNICAL INSTRUMENTATION Standard Drawing affected: NONE Design Manual Chapter: NONE GIFE Section: NONE	X 2028 Standard Specifications __ Revise Pay Items List __ Notification to Designers if change is not addressed by RSP X Create RSP (No. ~~701-R~~*913-M*-075) Effective: June 1, 2026 X Revise RSP (No. 204-R-727) Effective: June 1, 2026 __ Standard Drawing Effective: __ Create RPD (No. __) Effective: __ GIFE Update X Frequency Manual Update X AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Portions of the Standard Specifications dealing with treated wood need clarification or updating.

PROPOSED SOLUTION: Incorporate the proposed changes into the respective Standard Specification sections

APPLICABLE STANDARD SPECIFICATIONS: 701.13, 712.03, 712.04, 911.02

APPLICABLE STANDARD DRAWINGS: None

APPLICABLE DESIGN MANUAL SECTION: None

APPLICABLE SECTION OF GIFE: None

APPLICABLE RECURRING SPECIAL PROVISIONS: None

PAY ITEMS AFFECTED:

APPLICABLE SUB-COMMITTEE ENDORSEMENT: ad hoc: Jim Reilman, Charles Smith, Chip Bremer (Treated Wood Council)

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

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman

Title: State Materials Engineer

Organization: INDOT

Phone Number: (317) 522-9692

Date: 10/23/25

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No
Will approval of this item affect the Approved Materials List? No
Will this proposal improve:

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

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

Will this item improve safety:

For motorists? N/A
For construction workers? N/A

Will this proposal improve quality for:

Construction procedures/processes? Yes
Asset preservation? N/A
Design process? N/A

Will this change provide the contractor more flexibility? 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 2026 STANDARD SPECIFICATIONS

SECTION 701 – DRIVEN PILING
701.13 Cut-Off Lengths
SECTION 712 – TIMBER STRUCTURES
712.03 General Requirements
712.04 Caps
SECTION 911 – WOOD MATERIALS
911.02 Treated Lumber

The Standard Specifications are revised as follows:

SECTION 701, BEGIN LINE 804, DELETE AND INSERT AS FOLLOWS:

701.13 Cut-Off Lengths

The tops of all steel pile shall be cut off at the elevation shown on the plans. All unused cut-off lengths shall become the property of the Contractor and shall be removed from the project site.

The length of timber pile above the elevation of cut-off shall be sufficient to enable the complete removal of all material injured by driving. Immediately after making final cut-off on treated timber foundation piles, the cut area shall be treated with copper naphthenate *or any other wood preservative pesticide* in accordance with AWPA Standard M4.

Timber piling supporting timber structures where the piles are cut off, but not concrete capped, shall be treated with copper naphthenate *or any other wood preservative pesticide* in accordance with AWPA Standard M4. ~~A layer of saturated building felt or fiberglass cloth which overlaps the side of the pile at least 2 in. shall be securely fastened and completely covered with 20 gauge thick galvanized metal or aluminum sheeting. All cuts, injuries, and holes, which occur from removal of nails or spikes that penetrate the treating zone as well as bolt holes for connections, shall be treated by applying coal-tar roof cement in accordance with ASTM D5643.~~

SECTION 712, BEGIN LINE 61, INSERT AS FOLLOWS:

All cuts in treated piles or timber, all abrasions, after having been trimmed, and all holes for bolts or other appurtenances shall be field-treated with copper naphthenate *or any other wood preservative pesticide* in accordance with AWPA Standard M4. Insofar as practicable, cutting, framing, and boring of timber to be treated, except pile cut-offs, shall be done before treatment.

SECTION 712, BEGIN LINE 95, INSERT AS FOLLOWS:

712.04 Caps

Timber caps shall have an even and uniform bearing over the tops of supporting posts or piles and shall have their ends evenly aligned. All caps shall be secured by drift bolts of no less than 3/4 in. in diameter extending at least 9 in. into the approximate center of posts or piles. Pile heads, after being cut to receive the caps and prior to placing the caps, shall be treated with copper naphthenate *or any other wood preservative pesticide* in accordance with AWPA Standard M4 to prevent decay.

SECTION 911, BEGIN LINE 110, INSERT AS FOLLOWS:

911.02 Treated Lumber

(a) General

Treated lumber shall be preservative-treated by pressure processes in accordance with AWPA standards T1 and U1 or AASHTO M 133. Other AWPA standards applying to specific items are set out in 911.02(b), 911.02(c), 911.02(e), *911.02(f),* and 911.02(g). Lumber to be treated shall be in accordance with 911.01, except as modified in 911.02(b), 911.02(c), and 911.02(e). The

lumber may be inspected at the treating plant. Preservatives shall be in accordance with 911.02(h). Wherever ammoniacal or alkaline copper quat azole or wherever copper preservative is utilized, only stainless steel or hot-dipped galvanized fasteners and hardware shall be used. Galvanizing for fasteners shall be in accordance with ASTM A153. Galvanizing for hardware shall be in accordance with ASTM A653, coating designation G185. Fasteners and hardware in contact with one another shall be of the same base material and coating if applicable, and shall be used consistently throughout the treated wood article or structure.

SECTION 911, BEGIN LINE 257, DELETE AND INSERT AS FOLLOWS:

j. Penetration

The penetration requirements shall be in accordance with AWPA Standard T1, *Commodity Specification B,* table B6*, for round, half-round, and quarter-round posts*. *For sawn posts, including guardrail posts and blocks, assay zones and penetration requirements shall be in accordance with AWPA Standard T1, Commodity Specification A, tables 11 and 12.*

k. Inspection After Treatment

Following treatment, the charge shall be physically inspected in accordance with AWPA Standard M2, section 4. All treated material shall bear the quality mark of ~~the~~*an ALSC-accredited* inspection agency. All inspections shall be completed at no cost to the Department.

All non-compliant material shall be removed from the remaining acceptable material before shipment.

SECTION 911, BEGIN LINE 295, INSERT AS FOLLOWS:

4. Field Treatment of Posts and Blockouts

Cuts, holes, or injuries to the surface of posts and blockouts which occur after pressure treatment shall be field treated with copper naphthenate *or any other wood preservative pesticide* in accordance with AWPA Standard M4.

SECTION 911, BEGIN LINE 326, INSERT AS FOLLOWS:

(g) Recreational Applications

Lumber and timber that will be used in facilities where human contact will occur, such as handrails, pedestrian facilities including decking and picnic tables, shall be treated in accordance with AWPA standards U1 or UC4A, or AASHTO M 133. *All treated lumber and timber shall bear the quality mark of an ALSC-accredited inspection agency, or be certified for treatment by such an agency.*

COMMENTS AND ACTION

701.13 Cut-Off Lengths
712.03 General Requirements
712.04 Caps
911.02 Treated Lumber

DISCUSSION:
This item was introduced and presented by Mr. Reilman who stated that portions of the Standard Specifications dealing with treated wood need clarification or updating.

Mr. Reilman proposed to incorporate the shown changes into the respective Standard Specification sections.

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

Motion: Mr. Reilman Second: Mr. Dave Ayes: 10 Nays: 0 FHWA Approval: YES	**Action:** _X_ Passed as Submitted __ Passed as Revised __ Withdrawn
2026 Standard Specifications Sections: 701, pg. 621; 712, pg(s) 725 - 727; 911.02, pg(s) 1107 - 1111. Recurring Special Provisions or Plan Details: NONE Standard Drawing affected: NONE Design Manual Chapter: NONE GIFE Section: NONE	_X_ 2028 Standard Specifications __ Revise Pay Items List __ Notification to Designers if change is not addressed by RSP _X_ Create RSP (No. ~~712-R~~*911-M*-074) Effective: June 1, 2026 __ Revise RSP (No.__) Effective: __ Standard Drawing Effective: __ Create RPD (No. __) Effective: _X_ GIFE Update _X_ Frequency Manual Update __ AWP Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: There are three issues. First, the strength requirement for LMC overlays needs to be revised. Currently, all overlay types except LMC require strength validation. LMC technically only requires strength validation if the dry curing period is being shortened per the contractor's option. This practice is not sufficient and LMC overlays should always be verified for strength. Second, it is common practice for contractors to add longitudinal cold joints in overlays for convenience. The additional joints are not necessary and create potential durability problems. Third, 4 in. x 8 in. cylinders will be allowed for the acceptance of overlays.

PROPOSED SOLUTION: Revise spec to require strength verification for all LMC overlays. Language will be added to eliminate optional cold joints in all overlay types. The option will be added to use 4 in. x 8 in. cylinders for overlay acceptance.

APPLICABLE STANDARD SPECIFICATIONS: 722

APPLICABLE STANDARD DRAWINGS: none

APPLICABLE DESIGN MANUAL SECTION: none

APPLICABLE SECTION OF GIFE: none

APPLICABLE RECURRING SPECIAL PROVISIONS: none

PAY ITEMS AFFECTED: none

APPLICABLE SUB-COMMITTEE ENDORSEMENT: ad hoc, Pete White, Jim Reilman, and Mike Nelson

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: all contracts with 722 pay items

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman

Title: State Materials Engineer

Organization: INDOT

Phone Number: (317) 522-9692

Date: 9/18/2025

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No
Will approval of this item affect the Approved Materials List? No
Will this proposal improve:

- Construction costs? N/A
- Construction time? N/A
- Customer satisfaction? N/A
- Congestion/travel time? N/A
- Ride quality? Yes

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? 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:

SECTION 722 – CONCRETE BRIDGE DECK OVERLAYS
722.10 Placing and Finishing
722.12 Curing

The Standard Specifications are revised as follows:

SECTION 722, BEGIN LINE 522, DELETE AND INSERT AS FOLLOWS:

~~Screed rails and construction dams~~*Bulkheads* shall be separated from the newly finished overlay by passing a pointing trowel along the ~~rail-to-overlay and dam~~*bulkhead*-to-overlay interfaces after the overlay has sufficiently set such that it does not flow back. This trowel cut shall be made for the entire length and depth of the ~~rail or dam~~*bulkhead*. ~~The rails may be removed any time after the overlay has initially set.~~ ~~*Alternately, t*~~*The bulkhead may be faced with a removeable material, such as roofing felt, that shall be separated from the edge of the overlay once the overlay has sufficiently set such that it is able to maintain a vertical edge.* Adequate precautions shall be taken during and after the ~~rail~~*bulkhead* removal to protect the edge of the new overlay from damage. *All vertical edges of the overlay that will abut a subsequent phase of overlay shall be water blasted or sandblasted to create a roughened surface.*

Only construction joints shown on the plans shall be used. Construction joints shall not be placed in other locations unless written approval has been received from the Engineer.

SECTION 722, BEGIN LINE 625, DELETE AND INSERT AS FOLLOWS:

For LMC overlays the minimum curing period shall be 48 h of wet cure followed by 48 h of dry cure. An LMC overlaid bridge deck may be opened to traffic ~~during the dry curing duration~~ *after the wet curing period and* when the compressive strength of cylinders is 4,000 psi or greater.

SECTION 722, BEGIN LINE 639, DELETE AND INSERT AS FOLLOWS:

The wet cure period for all overlay types is not controlled by strength and shall not be reduced. Membrane forming curing compound shall not be used to cure the bridge deck overlay. All cylinders *for compressive strength determination* shall be *either 4 in. by 8 in. or* 6 in. by 12 in. ~~and~~*Final* compressive strength shall be determined from the average of a minimum of *either* two *6 in. by 12 in.* cylinders *or three 4 in. by 8 in. cylinders*. For LMC and SFMC, cylinders shall be cast and cured in accordance with 702.24. For LMC-VE cylinders shall be cast and field cured at the jobsite under the same conditions as the LMC-VE overlay.

COMMENTS AND ACTION

722.10 Placing and Finishing
722.12 Curing

DISCUSSION:

Mr. Reilman introduced and presented this item stating that there are three issues to be addressed.

First, the strength requirement for LMC overlays needs to be revised, since all overlay types except LMC require strength validation. LMC technically only requires strength validation if the dry curing period is being shortened at the Contractor's option. This practice is not sufficient and LMC overlays should always be verified for strength.

Second, it is common practice for contractors to add longitudinal cold joints in overlays for convenience. The additional joints are not necessary and create potential durability problems.

Third, 4 in. x 8 in. cylinders will be allowed for the acceptance of overlays.

Mr. Reilman proposed to revise the spec language to require strength verification for all LMC overlays, add language to eliminate optional cold joints in all overlay types, and incorporate the option to use 4 in. x 8 in. cylinders for overlay acceptance.

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

Motion: Mr. Reilman Second: Mr. Koch Ayes: 10 Nays: 0 FHWA Approval: YES	**Action:** X Passed as Submitted ___ Passed as Revised ___ Withdrawn
2026 Standard Specifications Sections: 722, pg(s) 794 - 797. Recurring Special Provisions or Plan Details: NONE Standard Drawing affected: NONE Design Manual Chapter: NONE GIFE Section: NONE	X 2028 Standard Specifications ___ Revise Pay Items List ___ Notification to Designers if change is not addressed by RSP X Create RSP (No. 722-~~R~~B-329) Effective: June 1, 2026 ___ Revise RSP (No.___) Effective: ___ Standard Drawing Effective: ___ Create RPD (No. ___) Effective: ___ GIFE Update X Frequency Manual Update X AWP Update