



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758 CM
Indianapolis, Indiana 46204

www.in.gov/indot

Mike Braun, Governor
Lyndsay Quist, Commissioner

AGENDA

March 20, 2026, Standards Committee Meeting

MEMORANDUM

March 2, 2025

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Agenda for March 20, 2026, Standards Committee Meeting

A Standards Committee meeting is scheduled for 09:00 a.m. on Friday, March 20, and will be held virtually via *Teams*. Please contact Scott Trammell (strammell@indot.in.gov) for instructions on how to join this event.

The following items are listed for consideration:

A. GENERAL BUSINESS

❖ OLD BUSINESS

(No items on this agenda)

❖ NEW BUSINESS

Approval of the Minutes from the [January 15](#) meeting

B. CONCEPTUAL PROPOSAL

(No items on this agenda)

C. STANDARD SPECIFICATIONS, PROVISIONS, AND DRAWINGS PROPOSAL

❖ OLD BUSINESS

(No items on this agenda)

❖ NEW BUSINESS

Item No. 1 Mr. Reilman pg. 3

2026 Standard Specifications:

219.02	Materials
219.04	Testing and Mix Design
219.07	Preparation of Soils
219.13	Curing
219.14	Proofrolling
219.16	Basis of Payment

Item No. 2 Mr. Reilman pg. 8

2026 Standard Specifications:

715.04	Excavation
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Item No. 3 Mr. Reilman pg. 12

2026 Standard Specifications:

203.23	Embankment other than Rock, with Strength or Density Control
203.27	Method of Measurement
203.28	Basis of Payment

Item No. 4 Mr. Reilman pg. 18

Recurring Special Provision:

204-R-727	GEOTECHNICAL INSTRUMENTATION
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Item No.5 Mr. Reilman pg. 26

Recurring Special Provision:

106-C-277	BUILD AMERICA, BUY AMERICA ACT REQUIREMENTS
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cc: Committee Members
FHWA
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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Minor edits are needed to include the option to use blended cement (type 1L), add a clause about proofrolling, and remove requirements for use of curing compound.

PROPOSED SOLUTION: Add option to use blended cement, add clause regarding proofrolling requirements, and delete requirement to use liquid membrane curing compound since a geotextile is required on the top of the cement stabilized subgrade. This geotextile is used to separate the subgrade or subbase.

APPLICABLE STANDARD SPECIFICATIONS: 219

APPLICABLE STANDARD DRAWING: No

APPLICABLE DESIGN MANUAL CHAPTER: No

APPLICABLE SECTION OF GIFE: Section 3

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: create new RSP

PAY ITEMS AFFECTED: No

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: N/A

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman and Nayyar Siddiki

Title: State Material Engineer

Division: Materials and Test

E-mail: Jreilman@INDOT.IN.GOV

Date: 1/23/2026

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No

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

Will this proposal improve:

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

Will this proposal reduce operational costs or maintenance effort? No

Will this item improve safety:

For motorists? No
For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? Yes
Asset preservation? No
Design process? 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? 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? 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 219 - CEMENT STABILIZED SUBGRADE SOIL

- 219.02 Materials
- 219.04 Testing and Mix Design
- 219.07 Preparation of Soils
- 219.13 Curing
- 219.14 Proofrolling
- 219.16 Basis of Payment

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 219, BEGIN LINE 10, INSERT AS FOLLOWS:

219.02 Materials

Materials shall be in accordance with the following:

<i>Blended Cement, Type II</i>	901.01(b)
Portland Cement, Type I.....	901.01(b)
Water	913.01

Note: *Blended cement and Portland cement* may be used dry or as a slurry. Soils shall meet the requirements of 215.02.

SECTION 219, BEGIN LINE 24, INSERT AS FOLLOWS:

219.04 Testing and Mix Design

Testing and mix design shall be in accordance with 215.03. The Contractor shall be responsible for all tests required to determine the optimum cement content for producing cement stabilized subgrade soil with a minimum unconfined compressive strength of 300 psi at seven days. The quantities of portland cement shall be based on 6% of the maximum dry density of the soils. 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. The unconfined compressive strength test shall be performed in accordance with AASHTO T 208. Sulfate tests for water shall be performed in accordance with ASTM D516.

The 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 five business days prior to use. *If the type of cement is changed from Type I to Type II or from Type II to Type I, a new mix design shall be submitted for approval.*

SECTION 219, BEGIN LINE 48, INSERT AS FOLLOWS:

219.07 Preparation of Soils

Soil preparation shall be in accordance with 215.06. All rocks greater than 2 in. encountered before or after mixing the soils and chemical modifiers shall be removed.

When stabilization of foundation soils with cement is required in a cut or at-grade section, *proofrolling is required in accordance with 203.26 to delineate the soft soil. When it does not meet the proofrolling requirements,* the top 12 in. of soil for cement stabilized subgrade soil shall be removed and stockpiled prior to constructing the 14 in. thick

REVISION TO 2026 STANDARD SPECIFICATIONS

- SECTION 219 - CEMENT STABILIZED SUBGRADE SOIL
- 219.02 Materials
- 219.04 Testing and Mix Design
- 219.07 Preparation of Soils
- 219.13 Curing
- 219.14 Proofrolling
- 219.16 Basis of Payment

stabilization of foundation soils with cement. When the stabilization of foundation soils with cement is complete, the 12 in. of cement stabilized subgrade soil shall then be placed.

When stabilization of foundation soils with cement is required in a fill section, it shall be constructed prior to placement of the 12 in. of soil for cement stabilized subgrade soil.

SECTION 219, BEGIN LINE 158, DELETE AND INSERT AS FOLLOWS:

219.13 Curing

The surface shall be maintained in moist condition with no visible dry areas for the first seven days after mixing with cement.

~~Liquid membrane forming compound shall be applied in accordance with 504.04(a) to the surface and reapplied as applicable for the first seven days to aid in curing and prevent loss of moisture.~~
Lightweight equipment, up to 4 tons, may be used on the cement stabilized subgrade during curing operations.

SECTION 219, BEGIN LINE 174, DELETE AS FOLLOWS:

219.16 Basis of Payment

The accepted quantity of cement stabilized subgrade soil will be paid for at the contract unit price per square yard.

Approved adjustments for cement that exceed the limit of 219.04 will be included in a change order for materials only and paid for as additional cement for subgrade soil stabilization. Payment for additional cement for subgrade soil stabilization will be made for direct delivered material costs incurred by the Contractor and will not include any other markups.

Payment will be made under:

Pay Item	Pay Unit Symbol
Cement Stabilized Subgrade Soil	SYS

The cost of performing mix design, services of a qualified geotechnical consultant, scarification of the soil, spreading and mixing of the cement and soil, compaction of the resultant mixture, shaping the soil, work required due to adjustments of modifier proportioning, work required due to weather conditions, correction of deficient areas, water required for the stabilization process, soil trimming, ~~liquid membrane forming compound~~, and all operations needed to meet the requirements of this specification shall be included in the cost of the pay item.

COMMENTS AND ACTION

- 219.02 Materials
- 219.04 Testing and Mix Design
- 219.07 Preparation of Soils
- 219.13 Curing
- 219.14 Proofrolling
- 219.16 Basis of Payment

DISCUSSION:

<p>Motion: Second: Ayes: Nays: FHWA Approval:</p>	<p><u>Action:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn
<p>2026 Standard Specifications Sections: 219 pp. 258 - 262.</p> <p>Recurring Special Provisions or Plan Details: NONE</p> <p>Standard Drawing affected: NONE</p> <p>Design Manual Chapter: NONE</p> <p>GIFE Section: Section 3</p>	<ul style="list-style-type: none"> <input type="checkbox"/> 2028 Standard Specifications <input type="checkbox"/> Revise Pay Items List <input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP <input type="checkbox"/> Create RSP (No. __) Effective: <input type="checkbox"/> Revise RSP (No. __) Effective: <input type="checkbox"/> Standard Drawing Effective: <input type="checkbox"/> Create RPD (No. __) Effective: <input type="checkbox"/> GIFE Update <input type="checkbox"/> Frequency Manual Update <input type="checkbox"/> SiteManager Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: When rock or soft rock is excavated, it is not level causing problems during construction when placing the pipe.

PROPOSED SOLUTION: Update the language to cover soft rock and shale and that 12 in. should be excavated and replaced with Coarse Aggregate No. 8.

APPLICABLE STANDARD SPECIFICATIONS: Yes

APPLICABLE STANDARD DRAWING: No

APPLICABLE DESIGN MANUAL CHAPTER: No

APPLICABLE SECTION OF GIFE: No

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: 715-R-809

PAY ITEMS AFFECTED: No

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: revise existing RSP 715-R-809 to include these changes. Keep existing BFU.

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman and Nayyar Siddiki

Title: State Material Engineer

Division: Materials and Test

E-mail: Jreilman@INDOT.IN.GOV

Date: 1/23/26

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? N/A

Construction time? Yes

Customer satisfaction? Yes

Congestion/travel time? N/A

Ride quality? No

Will this proposal reduce operational costs or maintenance effort? No

Will this item improve safety:

For motorists? No

For construction workers? Yes

Will this proposal improve quality for:

Construction procedures/processes? Yes

Asset preservation? 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? 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? 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 715 – PIPE CULVERTS, AND STORM AND SANITARY SEWERS
715.04 Excavation

(Note: Proposed changes shown highlighted gray)

SECTION 715, BEGIN LINE 227, DELETE AND INSERT AS FOLLOWS:

715.04 Excavation

Unless otherwise directed, the trench cross-sectional dimensions shall be as shown on the plans. The trench bottom shall give full support to the pipe as shown on the plans. Recesses shall be cut to receive any projecting hubs or bells.

Where pipe is to be placed in fill sections, a portion of the fill shall be constructed prior to installation of the pipe as shown on the plans.

Where rock, *soft rock, shale*, or boulder formation is encountered at or above the proposed trench bottom elevation, the trench shall be excavated at least 812 in. below the proposed grade, backfilled with ~~structure backfill~~ *coarse aggregate No. 8*, and compacted in accordance with 211.04.

In case a firm foundation is not encountered at the required grade, the unstable material shall be removed to a depth that when replaced with suitable material, usually B borrow, compacted, and properly shaped, it will produce a uniform and stable foundation along the entire length of the pipe. A timber mat shall be placed to hold the pipe to line and grade if necessary.

All trenches shall be kept free from water until any joint filling material has hardened sufficiently not to be harmed.

COMMENTS AND ACTION

715.04 Excavation

DISCUSSION:

Motion: Second: Ayes: Nays: FHWA Approval:	Action: <input type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn
2026 Standard Specifications Sections: 715.04 p. 749.	<input type="checkbox"/> 2028 Standard Specifications <input type="checkbox"/> Revise Pay Items List <input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP
Recurring Special Provisions or Plan Details: 715-R-809 PIPE CULVERTS, AND STORM AND SANITARY SEWERS	<input type="checkbox"/> Create RSP (No. __) Effective:
Standard Drawing affected: NONE	<input type="checkbox"/> Revise RSP (No. __) Effective:
Design Manual Chapter: NONE	<input type="checkbox"/> Standard Drawing Effective:
GIFE Section: NONE	<input type="checkbox"/> Create RPD (No. __) Effective: <input type="checkbox"/> GIFE Update <input type="checkbox"/> Frequency Manual Update <input type="checkbox"/> SiteManager Update

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Occasionally a situation arose where the use of lightweight aggregate for embankment would be advantageous. A specification does not currently exist for this application.

PROPOSED SOLUTION: Draft a lightweight aggregate section for the 203 embankment section.

APPLICABLE STANDARD SPECIFICATIONS: Yes

APPLICABLE STANDARD DRAWING: No

APPLICABLE DESIGN MANUAL CHAPTER: No

APPLICABLE SECTION OF GIFE: No

APPLICABLE RECURRING SPECIAL PROVISION OR PLAN DETAILS: Yes, create new 203 RSP

PAY ITEMS AFFECTED: Yes, create two new pay items

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: As required by the project's Geotechnical Report. *904-M-076 must also be included in the contract.

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman for Nayyar Siddiki

Title: State Materials Engineer

Division: Materials and Tests

E-mail: Jreilman@INDOT.IN.GOV

Date: 2/24/2026

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? 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? Yes

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

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

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

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

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

REVISION TO 2026 STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

SECTION 203 – EXCAVATION AND EMBANKMENT

203.23 Embankment other than Rock, with Strength or Density Control

203.27 Method of Measurement

203.28 Basis of Payment

203-X-xxx EMBANKMENT CONSTRUCTION WITH LIGHTWEIGHT AGGREGATE

(Adopted xx-xx-xx)

The Standard Specifications are revised as follows:

SECTION 203, AFTER LINE 1162, INSERT AS FOLLOWS:

203.23.2 Blank

203.23.3 Lightweight Aggregate Embankment

When shown on the plans, lightweight aggregate, LWA, of the type specified shall be used to construct the embankment. The LWA shall be either expanded shale or foam glass in accordance with 904.08 and that same material shall be used throughout the embankment unless otherwise shown on the plans.

(a) General Requirements

The grade shall be prepared in accordance with 203.09. A layer of geotextile of the type shown on the plans and in accordance with 918.02 shall be placed on the prepared grade. The LWA shall not be placed in standing water or mixed with soil or other aggregate. LWA shall be placed in lifts a maximum of 12 in. thick by tracked equipment that does not crush the LWA. Construction equipment that in the determination of the Engineer causes crushing of the LWA shall immediately be removed from the embankment. The LWA shall be compacted as specified for the material below. Excessive compaction shall be avoided to minimize crushing of the LWA.

Lateral underdrains shall be installed at the bottom of LWA embankments. Lateral underdrains shall be trenched into the embankment after it has reached an elevation at least 2 ft above existing ground. The bottom of the trench shall be at the top of existing ground with adjustment made for the slope of the drain. The trench shall be located within 2 ft of the toe of slope. The trench shall be backfilled with the LWA material used for the embankment and mechanically compacted to meet the compaction requirements herein. Lateral underdrains shall be 6 in. diameter Type 4 pipe in accordance with 715.02(d) and shall be enclosed in geotextile for underdrains in accordance with 918.02. Lateral underdrains shall be spaced a maximum of 100 ft longitudinally along the centerline of the embankment, shall outlet into the roadside ditch on each side of the embankment, shall extend a minimum of 8 ft horizontally into the embankment, and shall be sloped at a minimum of 0.2%.

Underdrain outlet protectors in accordance with 718.06 shall be installed at the outlet end of each lateral underdrain.

Each lift of LWA embankment shall extend transversely over the entire area and be kept smooth and uniform. The LWA shall be encapsulated with the same geotextile used on the prepared grade and encased with sandy clay loam, clay loam, silty clay loam, or silty

REVISION TO 2026 STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

- SECTION 203 – EXCAVATION AND EMBANKMENT
- 203.23 Embankment other than Rock, with Strength or Density Control
- 203.27 Method of Measurement
- 203.28 Basis of Payment

clay in accordance with 903.02. The encasement shall be constructed in accordance with 203.09. The LWA and soil encasement shall be constructed concurrently.

The LWA embankment shall be constructed to an elevation 2 ft below the bottom of the subgrade unless otherwise shown on the plans. The remainder of the embankment and subgrade shall be constructed with structure backfill or aggregate in accordance with 211 and 207. The same geotextile as that used on the prepared grade shall be used to separate the top of the LWA embankment from the structure backfill or aggregate.

(b) Expanded Shale

Each lift shall be compacted using a vibratory roller weighing no more than 10 t. Four roller passes at the lowest frequency shall be performed per lift. The placement of the expanded shale shall be performed with equipment that does not crush the expanded shale.

(c) Foam Glass Aggregate

Foam glass aggregate, FGA, shall be compacted using a walk-behind plate compactor. Four passes of the walk-behind plate compactor shall be used to compact each FGA lift.

SECTION 203, AFTER LINE 1461, INSERT AS FOLLOWS:

(l) Blank

(m) Measurement of Lightweight Aggregate as Borrow

LWA of the specified material will be measured by the ton in accordance with 109.01(b). Geotextiles will be measured in accordance with 214.05.

SECTION 203, AFTER LINE 1561, INSERT AS FOLLOWS:

LWA expanded shale or foam glass will be paid for at the contract unit price per ton.

Coal ash used as borrow will be paid for at the contract unit price for borrow.

Excavation of coal ash will be paid for at the contract unit price for common excavation.

Geotextiles of the type specified will be paid for in accordance with 214.06.

Payment will be made under:

Pay Item	Pay Unit Symbol
Borrow	CYS
Breaking Pavement	SYS
Cased Test Holes.....	LFT

REVISION TO 2026 STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

SECTION 203 – EXCAVATION AND EMBANKMENT

- 203.23 Embankment other than Rock, with Strength or Density Control
- 203.27 Method of Measurement
- 203.28 Basis of Payment

Embankment Foundation Soils Treatment	SYS
Embankment	CYS
Excavation, Common	CYS
Excavation, Peat.....	CYS
Excavation, Rock	CYS
Excavation, Unclassified	CYS
Excavation, Waterway.....	CYS
Excavation, Y.....	CYS
Exploratory Cores	LFT
Exploratory Drilling	LFT
Linear Grading.....	LFT
<i>LWA, Expanded Shale</i>	TON
<i>LWA, Foam Glass</i>	TON
Water for Shale	kGAL.

SECTION 203, BEGIN LINE 1632, DELETE AS FOLLOWS:

~~The cost of geotextiles shall be included in the cost of other pay items.~~

SECTION 203, AFTER LINE 1638, INSERT AS FOLLOWS:

The costs for the use of LWA in embankment construction, including but not limited to encasement, additional erosion and sediment control measures, lateral underdrains, underdrain outlets, and all incidentals shall be included in the cost of other pay items in this section.

COMMENTS AND ACTION

203.23 Embankment other than Rock, with Strength or Density Control
 203.27 Method of Measurement
 203.28 Basis of Payment

DISCUSSION:

<p>Motion: Second: Ayes: Nays: FHWA Approval:</p>	<p>Action: <input type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn</p>
<p>2026 Standard Specifications Sections: 203 pp. 178, 186, 188, and 188.</p>	<p><input type="checkbox"/> 2028 Standard Specifications <input type="checkbox"/> Revise Pay Items List <input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP</p>
<p>Recurring Special Provisions or Plan Details: proposed new</p>	<p><input type="checkbox"/> Create RSP (No. __) Effective:</p>
<p>Standard Drawing affected: NONE</p>	<p><input type="checkbox"/> Revise RSP (No. __) Effective:</p>
<p>Design Manual Chapter: NONE</p>	<p><input type="checkbox"/> Standard Drawing Effective:</p>
<p>GIFE Section: TBD</p>	<p><input type="checkbox"/> Create RPD (No. __) Effective:</p>
	<p><input type="checkbox"/> GIFE Update <input type="checkbox"/> Frequency Manual Update <input type="checkbox"/> SiteManager Update</p>

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: There is a need to add settlement monuments and a way to monitor cracks due to settlement or movement in the geotechnical instrumentation section.

PROPOSED SOLUTION: Add language describing settlement monuments and crack gauges to 204.

APPLICABLE STANDARD SPECIFICATIONS: 204 and RSP 204-R-727

APPLICABLE STANDARD DRAWINGS: None

APPLICABLE DESIGN MANUAL SECTION: None

APPLICABLE SECTION OF GIFE: None

APPLICABLE RECURRING SPECIAL PROVISIONS: revise RSP 204-R-727

PAY ITEMS AFFECTED: create new pay item for settlement monument in the 204 section

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad hoc: Nayyar Siddiki and Samuel Clawson

IF APPROVED AS RECURRING SPECIAL PROVISION OR PLAN DETAILS, PROPOSED BASIS FOR USE: Use the current BFU for RSP 204-R-727

IMPACT ANALYSIS (attach report):

Submitted By: Jim Reilman for Nayyar Siddiki

Title: State Materials Engineer

Organization: INDOT

Phone Number: (317) 522-9692

Date: 2/24/26

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? N/A

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

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? No

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

REVISION TO SPECIAL PROVISION

204-R-727 GEOTECHNICAL INSTRUMENTATION

204-R-727 GEOTECHNICAL INSTRUMENTATION

(Revised xx-xx-26)

The Standard Specifications are revised as follows:

SECTION 204, BEGIN LINE 1, DELETE AND INSERT AS FOLLOWS:

SECTION 204 – GEOTECHNICAL INSTRUMENTATION

204.01 Description

This work shall consist of providing, installing, and maintaining geotechnical instrumentation including settlement plates, settlement stakes, lateral stakes, *vibrating wire settlement systems*, *settlement monuments*, *crack gauges*, and standpipe piezometers as directed and in accordance with 105.03.

MATERIALS

204.02 Materials

Materials shall be in accordance with the following:

B Borrow	904.06
<i>Bentonite Chips and Powder</i>	913.06
Coarse Aggregate, Class D or Higher, Size No. 53.....	904.03
Ottawa Sand*.....	AASHTO T 252
<i>Portland Cement, Type I or IL</i>	901.01(b)
Structure Backfill, Size No. 30	904.05
<i>Water</i>	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 or IL in accordance with 901.01(b) and 30 gal. of water.~~

Crack gauges shall be in accordance with the type or configuration specified in the Geotechnical Report.

SECTION 204, AFTER LINE 95, DELETE AND INSERT AS FOLLOWS:

204.04 Vibrating Wire Settlement Systems

A vibrating wire settlement system from the Department's QPL for Vibrating Wire Settlement Systems shall be provided. A vibrating wire settlement system will be considered for inclusion on the QPL by following ITM 806, Procedure U. The settlement system shall consist of sensor, tubing, and reservoir system. The system shall also have the capability of being attached to a datalogger and be remotely monitored via a cell phone modem.

Structure backfill shall be No. 30 sand in accordance with 904.05.

REVISION TO SPECIAL PROVISION

204-R-727 GEOTECHNICAL INSTRUMENTATION

The Contractor shall submit a Type D certification in accordance with 916 and the manufacturer's calibration report for the settlement system to the Engineer and to the Department's Geotechnical Engineering Division two weeks prior to beginning construction. The Contractor shall supply the hardware, software, power supply, and monitoring system.

A qualified geotechnical consultant, from the Department's list of Qualified Geotechnical Consultants, shall install these devices as specified by the manufacturer.

(a) Installation Requirements

Prior to installation, the settlement system materials shall be assembled and inspected for defects in accordance with manufacturer's instructions and recommendations. The Contractor shall verify that all cable and tube lengths are of sufficient length to facilitate proper installation and layout. Cables and tubes shall be labeled with a unique instrument number using a permanent marking system at the terminal end, at the sensor end, and at 50 ft intervals in between.

The settlement cells shall be mounted onto rigid plates. The Contractor shall also install at least two survey pins on the plates and provide easy access to the markers for a survey crew to measure elevations using standard tools.

The Contractor shall provide details for protecting the signal cables and tubing at the connection from the reservoir to the settlement plate.

Sharp bends where the signal cable and tubing exit the embankment shall be avoided. All signal cable and tubing shall be run in a 1 ft deep by 1 ft, minimum, wide trench using structure backfill for 3 in. under the cable and 3 in. over the cable, or other approved method, to protect the signal cable and tubing from damage. The Contractor shall run cabling and tubing leaving enough slack to provide necessary strain relief for the anticipated movements in accordance with the manufacturer's recommendations.

Only hand tools shall be used to place and compact fill material for a height of 1 1/2 ft above signal cable, tubing, and the settlement plate. The Contractor shall avoid driving heavy equipment that causes rutting deeper than 2 in. over or near the signal cable, tubing, and settlement plate until the height of the fill over the signal cable, tubing, and settlement plate reaches at least 5 ft.

The signal cable and tubing shall terminate at a datalogger inside a lockable readout enclosure. The enclosure shall be mounted on a post driven into stable ground as close as possible to the right of way line. The Contractor shall keep the fluid reservoir vertical at all times. The sensor and tubing shall be at a lower elevation than the instrument reservoir at all times. The enclosure and instrument tubing from the ground into the reservoir enclosure shall be protected from thermal influence.

REVISION TO SPECIAL PROVISION

204-R-727 GEOTECHNICAL INSTRUMENTATION

After the completion of the installation, a detailed installation log shall be completed. The as built location in a horizontal position shall be determined for both the sensor and the reservoir to an accuracy of ± 1 ft and the elevation for both the sensor and the reservoir determined to an accuracy of ± 0.01 ft.

After the completion of the installation, a post-installation acceptance test shall be performed by obtaining three independent readings from the sensor in accordance with the manufacturer's recommendations. The acceptance test shall be performed prior to backfilling of the trench. This shall be accomplished using a vibrating wire readout compatible with the installed settlement system. Elevations obtained from all three readings shall be within a range of 0.02 ft from each other. The Engineer will review the data from these readings to determine whether the instrument is acceptable.

The Contractor shall be responsible for any damage to the vibratory wire settlement systems.

(b) Instrument Reading and Documentation

Monitoring will be performed by the Department's Geotechnical Engineering Division. Measurements at each instrument will include the raw readings from the settlement cell, the temperature at the settlement cell, and the temperature at the reservoir. Instruments will be read in accordance with 204.03(b), or as recommended by the Engineer.

The Geotechnical Engineering Division will keep a weekly record which lists for each settlement system, sensor elevation, reservoir elevation, and list of pay items. A copy of each weekly report shall be provided to the Engineer.

204.045 Standpipe Piezometers

204.06 Settlement Monument

Settlement monuments shall be installed on embankments upon completion of construction of the embankment to determine vertical deformations. These monuments are either used alone or in coordination with settlement vibratory gauges or settlement plates. The physical targets shall be 3 in. by 3 in. by 24 in. long, 12 in. of which should be set firmly in the ground, are placed to measure vertical settlement. Physical targets may be concrete, wood, or other material that will maintain its shape throughout the duration of monitoring and is suitable to the Engineer. The Contractor shall ensure that the settlement monument is protected from damage or impacts from construction traffic. Conventional survey techniques will be used to determine any changes in elevation. A benchmark shall be located outside the influence of the embankment to serve as a reference monument. Measurement will be taken at the same interval of other settlement plates or vibratory gauges.

Readings will be taken every seven days until the settlement rate per week is 1/4 in. or less for four consecutive weeks in addition to settlement plates and vibratory rollers. The data will be reported to the INDOT Division of Geotechnical Engineering.

REVISION TO SPECIAL PROVISION
 204-R-727 GEOTECHNICAL INSTRUMENTATION

204.07 Crack Gauges

Crack gauges shall be provided as shown on the plans and will be used to measure cracks or joints. The crack gauge provided shall be in accordance with the type or configuration listed in the Geotechnical Report. Gauges shall be installed on smooth and clean surfaces over a crack or joint to visually monitor relative vertical and horizontal deformation by the Engineer without requiring the use of survey equipment. Gauges shall be protected from weather when needed. Monitoring will continue for the time period specified in the Geotechnical Report but no longer than the date of substantial completion.

SECTION 204, BEGIN LINE 198, DELETE AND INSERT AS FOLLOWS:

204.0568 Method of Measurement

Settlement plates, settlement stakes, lateral stakes, *vibrating wire settlement systems*, *settlement monuments*, standpipe piezometers, and water monitoring boreholes will be measured by the number of units installed *and accepted*.

Crack gauges will not be measured for payment.

204.0679 Basis of Payment

Settlement plates, settlement stakes, lateral stakes, *vibrating wire settlement systems*, *settlement monuments*, standpipe piezometers, and water monitoring boreholes will be paid for at the contract unit price per each.

Payment will be made under:

Pay Item	Pay Unit Symbol
<i>Settlement Monument</i>	<i>EACH</i>
Settlement Plate.....	EACH
Stake, Lateral	EACH
Stake, Settlement.....	EACH
Standpipe Piezometer.....	EACH
<i>Vibrating Wire Settlement System</i>	<i>EACH</i>
Water Monitoring Borehole.....	EACH

The cost of furnishing, installing, and maintaining settlement plates, extension pipes, cover pipes, B borrow, structure backfill, coarse aggregate and all necessary incidentals shall be included in the cost of settlement plates.

The cost of furnishing all tools, labor, and materials necessary to complete the installation, maintenance, and baseline reading of vibratory wire settlement systems as specified by the manufacturer shall be included in the cost of the vibratory wire settlement system pay item.

The cost of furnishing, installing, maintaining, and removing crack gauges shall be included in the cost of the other pay items in this section.

REVISION TO SPECIAL PROVISION

204-R-727 GEOTECHNICAL INSTRUMENTATION

The cost of backfilling water monitoring boreholes will be included in the cost of water monitoring boreholes.

The cost of handholes, protective covers, bentonite chips, bentonite-cement grout, Ottawa sand, tips, casing, drilling, tubing or PVC pipe, backfilling and measurements will be included in the cost of standpipe piezometers.

No additional compensation will be made for any costs incurred related to the repair of settlement plates, pipes, settlement stakes, lateral stakes, *vibratory wire settlement systems*, or standpipe piezometers as the result of damage by the Contractor.

No payment will be made for unacceptable settlement plates, pipes, settlement stakes, lateral stakes, vibratory wire settlement systems, or standpipe piezometers. No payment will be made for delays and expenses incurred by the Contractor, through changes necessitated by improper or unacceptable installation, material or equipment.

AGENDA

COMMENTS AND ACTION

204-R-727 GEOTECHNICAL INSTRUMENTATION

DISCUSSION:

<p>Motion: Second: Ayes: Nays: FHWA Approval:</p>	<p>Action: <input type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn</p>
<p>2026 Standard Specifications Sections: 204 pp. 190 - 194.</p>	<p><input type="checkbox"/> 2028 Standard Specifications <input type="checkbox"/> Revise Pay Items List <input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP</p>
<p>Recurring Special Provisions or Plan Details: 204-R-727 GEOTECHNICAL INSTRUMENTATION</p>	<p><input type="checkbox"/> Create RSP (No. __) Effective:</p>
<p>Standard Drawing affected: NONE</p>	<p><input type="checkbox"/> Revise RSP (No. __) Effective:</p>
<p>Design Manual Chapter: NONE</p>	<p><input type="checkbox"/> Standard Drawing Effective:</p>
<p>GIFE Section: NONE</p>	<p><input type="checkbox"/> Create RPD (No. __) Effective:</p>
	<p><input type="checkbox"/> GIFE Update <input type="checkbox"/> Frequency Manual Update <input type="checkbox"/> SiteManager Update</p>

PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The 106-C-277 RSP for Build America, Buy America needs to be updated to reflect the new requirements effective in October 2026.

PROPOSED SOLUTION: Incorporate the suggested language to update the existing RSP 106-C-277.

APPLICABLE STANDARD SPECIFICATIONS: None

APPLICABLE STANDARD DRAWINGS: None

APPLICABLE DESIGN MANUAL SECTION: None

APPLICABLE SECTION OF GIFE:

APPLICABLE RECURRING SPECIAL PROVISIONS: RSP 106-C-277

PAY ITEMS AFFECTED: None

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Ad hoc: Jim Reilman, Charles Smith

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: 3/2/26

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? 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? Yes

AASHTO or other design code? No

Is this item editorial? No

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

REVISION TO SPECIAL PROVISION

106-C-277 BUILD AMERICA, BUY AMERICA ACT REQUIREMENTS

(Note: Proposed changes shown highlighted gray)

106-C-277 BUILD AMERICA, BUY AMERICA ACT REQUIREMENTS
[for Federal-Aid Contracts Only]

(Revised xx-xx-26)

The Standard Specifications are revised as follows:

SECTION 106, BEGIN LINE 109, DELETE AND INSERT AS FOLLOWS:

(c) Build America, Buy America Requirements

All contracts shall be supplied with steel and iron products, *construction materials, and manufactured products* that are produced in the United States. Steel and iron products shall comply with IC 5-16-8, 2 CFR 184, and 23 CFR 635.410.

A *Build America, Buy America Certification* shall be submitted and received for each product or source of material prior to being incorporated into the contract in accordance with 916. An example certification is shown in 916.03(e). In lieu of the example certification, alternate certifications such as the PEAS Domestic Materials Self-Certification Form or certifications containing all of the information shown on the certification in 916.03(e) will be acceptable.

SECTION 106, BEGIN LINE 132, INSERT AS FOLLOWS:

a. Exceptions

The Engineer may grant specific written permission to use foreign steel or iron products when both of the following conditions apply:

- (1) The total cost of all foreign products to be used does not exceed 0.1 percent of the total Contract cost, or \$2,500, whichever is greater. The cost is the value of the product as delivered to the project.
- (2) The specified products are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet the requirements of the Contract Documents. The Engineer may require the Contractor to obtain letters from three different suppliers documenting the unavailability of a product from a domestic source if the shortage is not previously established by the Department.

2. Construction Materials

All construction materials incorporated permanently into a contract that serve an ongoing need to the finished product shall be manufactured in the United States. All manufacturing processes for the construction materials shall occur in the United States.

3. Manufactured Products

All manufactured products incorporated permanently into a contract that serve an ongoing need to the finished product shall have had final assembly at least 55% of the total cost of components used to make the manufactured product derived from components made

REVISION TO SPECIAL PROVISION
106-C-277 BUILD AMERICA, BUY AMERICA ACT REQUIREMENTS

in the United States.

SECTION 916, BEGIN LINE 21, INSERT AS FOLLOWS:

916.02 Types of Certifications

Certifications shall be Type A, Type B, Type C, Type D, *Build America*, Buy America, or as required under other types. When specified, the type of certification provided for a material shall be in accordance with the Frequency Manual except as otherwise specified. Specific information and test results required in Type A, Type B, and other types of certifications will be listed in the material specifications. Sample forms for Type A, Type B, Type C, Type D, and *Build America*, Buy America certifications are shown in 916.03. Sample forms for other type certifications are shown in ITM 804.

SECTION 916, BEGIN LINE 57, INSERT AS FOLLOWS:

(e) Build America, Buy America Requirement

All steel and iron materials and products, *construction materials, and manufactured products* used in the contract shall be certified to be in accordance with 106.01(c).

SECTION 916, BEGIN LINE 221, INSERT AS FOLLOWS:

(e) Sample Build America, Buy America Certification Form

BUILD AMERICA, BUY AMERICA CERTIFICATION

SECTION 916, AFTER LINE 260, INSERT AS FOLLOWS:

2. Construction Materials

In accordance with 106.01(c)2, I hereby certify that all construction materials and manufacturing processes for the materials listed below occurred in the United States of America or territories subject to its jurisdiction.

<i>Material Name*</i>	<i>Quantity (units)</i>
_____	_____
_____	_____
_____	_____

* *Identifying information shall be shown when appropriate. A separate certification is required for each different manufacturer.*

Signature of Company Official

Title

Date: _____

Company Name

Signature of Contractor Official

Title

Date: _____

COMMENTS AND ACTION

106-C-277 BUILD AMERICA, BUY AMERICA ACT REQUIREMENTS

DISCUSSION:

Motion:	Action:
Second:	<input type="checkbox"/> Passed as Submitted
Ayes:	<input type="checkbox"/> Passed as Revised
Nays:	<input type="checkbox"/> Withdrawn
FHWA Approval:	
2026 Standard Specifications Sections:	<input type="checkbox"/> 2028 Standard Specifications
Recurring Special Provisions or Plan Details:	<input type="checkbox"/> Revise Pay Items List
106-C-277 BUILD AMERICA, BUY AMERICA ACT REQUIREMENTS	<input type="checkbox"/> Notification to Designers if change is <u>not</u> addressed by RSP
Standard Drawing affected: NONE	<input type="checkbox"/> Create RSP (No. __) Effective:
Design Manual Chapter: NONE	<input type="checkbox"/> Revise RSP (No. __) Effective:
GIFE Section: TBD	<input type="checkbox"/> Standard Drawing Effective:
	<input type="checkbox"/> Create RPD (No. __) Effective:
	<input type="checkbox"/> GIFE Update
	<input type="checkbox"/> Frequency Manual Update
	<input type="checkbox"/> SiteManager Update