



## INDIANA DEPARTMENT OF TRANSPORTATION

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**Eric Holcomb, Governor**  
**Joe McGuinness, Commissioner**

# FINAL DRAFT MINUTES

## September 21, 2017 Standards Committee Meeting

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

October 13, 2017

TO: Standards Committee

FROM: Scott Trammell, Secretary

RE: Minutes from the September 21, 2017 Standards Committee Meeting

The Standards Committee meeting was called to order by Mr. Leckie at 09:00 a.m. on September 21, 2017 in the N955 Bay Window Conference Room. The meeting was adjourned at 11:56 a.m.

The following committee members were in attendance:

John Leckie, Chairman, Construction Management Director  
Dave Boruff, Traffic Engineering Division  
Greg Pankow, Construction Management Division  
Louis Feagans, Statewide Technical Services Director  
Mark Orton, Bridges Division  
Matt Thomas\*, Pavement Engineering, Highway Design  
Matthew Beeson, Materials Engineer, Materials Management  
Michael Beuchel, Contract Administration Division  
Michael Koch, Fort Wayne District Area Engineer  
Rob Goldner, Manager, Construction Technical Support

\*Proxy for Kumar Dave

Also in attendance were the following:

Andrew Pangallo, INDOT  
Dudley Bonte, APAI  
Guy Boruff, INDOT  
Mark Tidd, INDOT  
Nayyar Siddiki, INDOT  
Steve Fisher, INDOT  
Tom Duncan, FHWA  
Tom Harris, INDOT  
Jim Blazek, D2 Land & Water Resource  
Justin Nolting, Force Construction Co.  
Pat Kirchner, Force Construction Co.  
Brad Schneider, Specialty Company

Kurt Pelz, INDOT  
Joe Bruno, INDOT  
Dan Osborn, ICI  
Kirk Frederick, INDOT  
Lana Podorvanova, INDOT  
Nathan Edwards, INDOT  
Scott Trammell, INDOT  
Melinda Schwer, INDOT

The following items were listed for consideration:

A. GENERAL BUSINESS ITEMS

OLD BUSINESS

(No items were listed)

NEW BUSINESS

1. Approval of the Minutes from the July 19, 2017 meeting

DISCUSSION: Mr. Leckie requested a motion to approve the minutes from the July 19, 2017 meeting.

Motion: Mr. Koch  
Second: Mr. Goldner  
Ayes: 9  
Nays: 0

**ACTION:**

**PASSED AS SUBMITTED**

B. CONCEPTUAL PROPOSAL ITEMS

OLD BUSINESS

(No items were listed)

NEW BUSINESS

(No items were listed)

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

OLD BUSINESS

(No items were listed)

NEW BUSINESS

<u>Item No. 1 (2018 SS)</u>	<u>Mr. Beeson</u>	<u>pg 4</u>
709.05(e)	Alternate To Concrete Sealers	

**ACTION:**

**PASSED AS REVISED**

<u>Item No. 2 (2018 SS)</u>	<u>Mr. Beeson</u>	<u>pg 8</u>
909.02(b)	Epoxy Intermediate Paint	

**ACTION:**

**PASSED AS SUBMITTED**

<u>Item No. 3 (2018 SS)</u>	<u>Mr. Goldner</u>	<u>pg 12</u>
Recurring Special Provisions:		

615-R-XXX

MONUMENTS, MARKERS, AND PARKING  
BARRIERS

~~615-R-020~~

~~WOOD POST PARKING BARRIERS~~

**ACTION:**

**PASSED AS SUBMITTED**

Item No. 4 (2018 SS) Mr. Beeson pg 18  
902.01(a) Performance Graded Asphalt Binders

ACTION: PASSED AS SUBMITTED

Item No. 5 (2018 SS) Mr. Beeson pg 22  
910.18 Fence, Fittings, and Gates

ACTION: PASSED AS REVISED

Item No. 6 (2018 SS) Mr. Boruff pg 33  
Recurring Plan Details:  
801-T-2XXd NEXT LEVEL ROADS SIGN

ACTION: PASSED AS REVISED

Item No. 7 (2018 SS) Mr. Beeson pg 39  
Recurring Special Provision:  
500-R-623 RECYCLED CONCRETE AGGREGATE

ACTION: PASSED AS SUBMITTED

Item No. 8 (2018 SS) Mr. Beeson pg 43  
SECTION 207 SUBGRADE  
214.02 Materials  
214.03 Foundation Preparation  
214.05 Method of Measurement  
214.06 Basis of Payment

ACTION: PASSED AS REVISED

Item No. 9 (2018 SS) Mr. Pankow pg 54  
401.18(c) Smoothness Correction  
501.25 Pavement Smoothness

ACTION: PASSED AS SUBMITTED

Item No. 10 (2018 SS) Mr. Goldner pg 61  
Recurring Special Provision:  
801-R-xxx LAW ENFORCEMENT OFFICER FOR WORK  
ZONE SAFETY

ACTION: WITHDRAWN

cc: Committee Members  
FHWA  
ICI

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

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED:

Section 709.05(e) allows the use of an alternate concrete mix design in lieu of surface sealing for barrier rail and bridge railing. The alternate mix design must include one of two supplemental cementitious materials (SCMs), silica fume or ground granulated blast furnace slag (GGBFS). The specification has been in place since the late 1990's and multiple research projects over the past few years including SPR-3104 by Frosch (2010) and SPR-3864 by Weiss (2016) have further emphasized the significant benefits of including SCMs in concrete. The benefits include reduced permeability, increased durability and reduced strains. The alternate mix option is also attractive to contractors since it eliminates an operation and they do not have to wait 28-days to apply clear sealers. The problem is that the current specification is restricted to railing.

PROPOSED SOLUTION:

Revise section 709.05(e) to include bridge decks, bridge approaches, pier and bent caps, and mudwalls.

APPLICABLE STANDARD SPECIFICATIONS: 709.05(e)

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: INDOT-IRMCA working committee

IMPACT ANALYSIS (attach report): yes

Submitted By: Matt Beeson

Title: State Materials Engineer

Organization: INDOT Office of Materials Management

Phone Number: 317-610-7251 x 204

Date: 7/21/17

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

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IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No

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

Will this proposal improve:

Construction costs? Yes

Construction time? Yes

Customer satisfaction? N/A

Congestion/travel time? N/A

Ride quality? N/A

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? N/A

For construction workers? N/A

Will this proposal improve quality for:

Construction procedures/processes? 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? 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: N/A

REVISION TO STANDARD SPECIFICATIONS

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SECTION 709 - PORTLAND CEMENT CONCRETE SEALERS

709.05(e) ALTERNATE TO CONCRETE SEALERS

The Standard Specifications are revised as follows:

SECTION 709, BEGIN LINE 123, DELETE AND INSERT AS FOLLOWS:

**(e) Alternate To Concrete Sealers**

In lieu of concrete surface sealing for concrete barrier wall, *bridge decks*, *reinforced concrete* bridge approaches, pier and bent caps, *mudwalls*, and concrete bridge railing, *and bridge railing transitions*, an alternate concrete mix design may be used.

FINAL DRAFT MINUTES

COMMENTS AND ACTION

709.05(e) ALTERNATE TO CONCRETE SEALERS

DISCUSSION:

This item was introduced and presented by Mr. Beeson who stated that Standard Specification Section 709.05(e) allows the use of an alternate concrete mix design in lieu of surface sealing for barrier wall and bridge railing. The benefits include reduced permeability, increased durability and reduced strains. The alternate mix option is also attractive to contractors since it eliminates an operation and they do not have to wait 28-days to apply clear sealers. The problem is that the current specification is restricted to railing.

Mr. Beeson therefore proposes to revise 709.05(e) to include bridge decks, reinforced concrete bridge approaches, pier and bent caps, and bridge railing transitions. Minor revisions to the proposed language, requested by Mr. Nelson and Mr. Koch, are as shown. The Construction Memo 17-12 will also need to be revised.

Mr. Beeson revised his motion to approve as revised.

<p>Motion: Mr. Beeson  Second: Mr. Pankow  Ayes: 9  Nays: 0  FHWA Approval: YES</p>	<p>Action:</p> <p><input type="checkbox"/> Passed as Submitted  <input checked="" type="checkbox"/> Passed as Revised  <input type="checkbox"/> Withdrawn</p>
<p>Standard Specifications Sections referenced and/or affected:</p> <p>709.05 pg 587</p>	<p><input checked="" type="checkbox"/> 2020 Standard Specifications</p> <p><input type="checkbox"/> Revise Pay Items List</p>
<p>Recurring Special Provision affected:</p> <p>NONE</p>	<p><input checked="" type="checkbox"/> Create RSP (No. 709-C-256)  Effective Feb. 01, 2018 Letting  RSP Sunset Date: 2020 SS book</p>
<p>Standard Drawing affected:</p> <p>NONE</p>	<p><input type="checkbox"/> Revise RSP (No. _____)  Effective _____ Letting  RSP Sunset Date:</p>
<p>Design Manual Sections affected:</p> <p>NONE</p>	<p><input type="checkbox"/> Standard Drawing Effective</p>
<p>GIFE Sections cross-references:</p> <p>NONE</p>	<p><input type="checkbox"/> Create RPD (No. _____)  Effective _____ Letting</p> <p><input type="checkbox"/> GIFE Update</p> <p><input type="checkbox"/> SiteManager Update</p>

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

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Our specifications currently require a pot life for epoxy intermediate paint to be 6 hours or more. In practice, some paints are shorter than this and have been approved “outside the spec” in the past.

PROPOSED SOLUTION: Revise to require manufacturer recommended time for pot life.

APPLICABLE STANDARD SPECIFICATIONS: 909

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: N/A

APPLICABLE SUB-COMMITTEE ENDORSEMENT: N/A

IMPACT ANALYSIS (attach report):

Submitted By: Matt Beeson

Title: State Materials Engineer

Organization: INDOT

Phone Number: 317-610-7251 x 204

Date: 7/21/17



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

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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? N

Will approval of this item affect the Approved Materials List? N

Will this proposal improve:

Construction costs? Y

Construction time? N

Customer satisfaction? N

Congestion/travel time? N

Ride quality? N

Will this proposal reduce operational costs or maintenance effort? Y

Will this item improve safety:

For motorists? N

For construction workers? N

Will this proposal improve quality for:

Construction procedures/processes? Y

Asset preservation? Y

Design process? N

Will this change provide the contractor more flexibility? Y

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

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

Is this proposal needed for compliance with:

Federal or State regulations? N

AASHTO or other design code? N

Is this item editorial? N

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

REVISION TO STANDARD SPECIFICATIONS  
SECTION 909 - PAINT AND LIQUID EPOXY  
909.02(b) EPOXY INTERMEDIATE PAINT

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(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 909, BEGIN LINE 103, DELETE AND INSERT AS FOLLOWS:

**(b) Epoxy Intermediate Paint**

Epoxy intermediate paint shall be a two-component coating consisting of an epoxy resin and a curing agent, together with prime and filler pigments, colorants, gellant, leveling agents and solvents. When mixed, this coating shall be suitable for application over inorganic and organic zinc primers and shall be compatible with a polyurethane finish coat. The color of this coating shall contrast significantly from the other coatings within the coating system.

The mixed paint shall be in accordance with the requirements as follows.

Volatile organic compounds, ASTM D 3960, max. ....	336 g/L
Volume solids, ASTM D 2697, min. ....	60%
Set-to-touch, ASTM D 1640, 6 mils wet film thickness, 25 ± 1°C, max. ....	4 h
<del>Potlife, 25 ± 1°C, min. ....</del>	<del>6 h</del>
Weight/volume variance from the initially approved batch, ASTM D 1475, 25°C, max. ....	0.060 kg/L
Total solids variance from the initially approved batch, ASTM D 2369, max. ....	3.0%

*The coating shall be applied within the pot life recommended by the paint manufacturer with no evidence of gelation. The coating shall be in a free-flowing condition and easily sprayed.*

The infrared spectra of each component and of the mixed coating shall essentially match the spectrums of the initially approved batch.

COMMENTS AND ACTION

909.02(b) EPOXY INTERMEDIATE PAINT

DISCUSSION:

Mr. Beeson introduced and presented this item stating the need to revise 909.02(b) to require manufacturer recommended time for pot life, since some products have a shorter pot life than currently specified in 909.

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

<p>Motion: Mr. Beeson  Second: Mr. Pankow  Ayes: 8  Nays: 0  FHWA Approval: <b>YES</b></p>	<p>Action:</p> <p><input checked="" type="checkbox"/> Passed as Submitted  <input type="checkbox"/> Passed as Revised  <input type="checkbox"/> Withdrawn</p>
<p>Standard Specifications Sections referenced and/or affected:</p> <p>909.02(b) pg 923</p>	<p><input checked="" type="checkbox"/> 2020 Standard Specifications</p> <p><input type="checkbox"/> Revise Pay Items List</p>
<p>Recurring Special Provision affected:</p> <p>NONE</p>	<p><input checked="" type="checkbox"/> Create RSP (No. <b>909-C-257</b>)  Effective <b>Febr. 01 2018</b> Letting  RSP Sunset Date: <b>2020 SS book</b></p>
<p>Standard Drawing affected:</p> <p>NONE</p>	<p><input type="checkbox"/> Revise RSP (No. <input type="text"/>)  Effective <input type="text"/> Letting  RSP Sunset Date: <input type="text"/></p>
<p>Design Manual Sections affected:</p> <p>NONE</p>	<p><input type="checkbox"/> Standard Drawing  Effective <input type="text"/></p>
<p>GIFE Sections cross-references:</p> <p>NONE</p>	<p><input type="checkbox"/> Create RPD (No. <input type="text"/>)  Effective <input type="text"/> Letting</p> <p><input type="checkbox"/> GIFE Update</p> <p><input checked="" type="checkbox"/> SiteManager Update</p>

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

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: RSP 615-R-020 WOOD POST PARKING BARRIER has a revised statement that clarifies that the cost of backfill, disposal of surplus materials and all other necessary incidentals shall be included in the cost of the pay items shown in the 615 section but due to limiting Basis for Use for this RSP "Required for all contracts with the Parking Barrier Wood Post pay item" only, this revised statement was missed in contracts with other 615 pay items.

PROPOSED SOLUTION: To discontinue use of mentioned RSP and to create new with the Basis for Use to be included in contracts with any 615 pay items. Also, to be incorporated into 2020 Standard Specifications.

APPLICABLE STANDARD SPECIFICATIONS: 615

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: To create new RSP 615-R-xxx and to discontinue use RSP 615-R-020

PAY ITEMS AFFECTED: No changes.

APPLICABLE SUB-COMMITTEE ENDORSEMENT: N/A

IMPACT ANALYSIS (attach report): yes

Submitted By: Robert Goldner

Title: Construction Technical Support Manager, Construction Management

Organization: INDOT

Phone Number: 317-232-7758

Date: 8/1/17

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

IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? N

Will approval of this item affect the Approved Materials List? N

Will this proposal improve:

Construction costs? Y

Construction time? N

Customer satisfaction? N

Congestion/travel time? N

Ride quality? N

Will this proposal reduce operational costs or maintenance effort? Y

Will this item improve safety:

For motorists? N

For construction workers? N

Will this proposal improve quality for:

Construction procedures/processes? Y

Asset preservation? Y

Design process? N

Will this change provide the contractor more flexibility? Y

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

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

N

Is this proposal needed for compliance with:

Federal or State regulations? N

AASHTO or other design code? N

Is this item editorial? N

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

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS  
615-R-XXX MONUMENTS, MARKERS, AND PARKING BARRIERS (PROPOSED NEW)

615-R-XXX MONUMENTS, MARKERS, AND PARKING BARRIERS

(Adopted xx-xx-17)

The Standard Specifications are revised as follows:

SECTION 615, BEGIN LINE 10, INSERT AS FOLLOWS:

**615.02 Materials**

Materials shall be in accordance with the following:

Coarse Aggregate, Class A or Higher, Size No. 8 or 91 .....	904
Fine Aggregate, Size No. 23 .....	904
Portland Cement.....	901.01(b)
<i>Post.....</i>	<i>911.02(d)</i>
Reinforcing Bars .....	910.01

SECTION 615, BEGIN LINE 69, DELETE AND INSERT AS FOLLOWS:

**615.06 Parking Barriers**

Parking barriers shall be of the dimensions shown on the plans.

*Placement of parking barriers shall be at the locations and in accordance with the details shown on the plans, or as otherwise directed.*

*Existing parking barriers to be removed and reset shall be removed without damage, stored and reinstalled as shown on the plans.*

**(a) Concrete**

The *concrete* barriers shall be cast and tested in accordance with the applicable requirements of 615.03, except the strength shall be determined by concrete cores taken from the finished product. At least two concrete cores will be taken from each unit and the average strength of the unit shall be at least 4,000 psi with no individual core strength less than 3,600 psi.

**(b) Wood Post**

*Vertical wood posts as parking barriers shall be round, roofed on top, and be dimensioned as shown on the plans. The posts shall be in accordance with the applicable requirements of 911.02(d).*

SECTION 615, BEGIN LINE 150, DELETE AND INSERT AS FOLLOWS:

**615.13 Method of Measurement**

Right-of-way markers, reset right-of-way markers, monuments, re-established monuments, castings adjusted to grade monuments, bench mark posts, ~~and reset bench mark posts,~~ *parking barriers, and reset parking barriers* will be measured by the number of units installed. ~~Parking barriers will be measured by the number of units installed.~~

**615.14 Basis of Payment**

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS  
615-R-XXX MONUMENTS, MARKERS, AND PARKING BARRIERS (PROPOSED NEW)

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The acceptable quantities of right-of-way markers, reset right-of-way markers, monuments, re-established monuments, castings adjusted to grade monuments, bench mark posts, ~~and~~ reset bench mark posts, ~~and~~ parking barriers, *and reset parking barriers* will be paid for at the contract unit price per each, complete in place.

Payment will be made under:

Pay Item	Pay Unit Symbol
Bench Mark Post .....	EACH
Bench Mark Post, Reset .....	EACH
Casting Adjusted to Grade, Monument .....	EACH
Monument, _____ type .....	EACH
Monument, Re-Establish .....	EACH
Parking Barrier, <i>Concrete</i> .....	EACH
<i>Parking Barrier, Reset</i> .....	EACH
<i>Parking Barrier, Wood Post</i> .....	EACH
Right-of-Way Marker .....	EACH
Right-of-Way Marker, Reset .....	EACH

The cost of setting tablets in structures or bench mark posts, extensions for monuments, adjustment castings, *backfill, disposal of surplus materials*, re-establishing disturbed existing monuments, and *all* other necessary incidentals shall be included in the cost of the pay items *in this section*.

*The cost of existing parking barrier removal, storage, resetting, and all other necessary incidentals needed for resetting shall be included in the cost of parking barrier, reset. Existing barriers that are damaged by the Contractor shall be replaced with no additional payment.*

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REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

615-R-020 WOOD POST PARKING BARRIERS (PROPOSED TO DISCONTINUE USE)

615-R-020 WOOD POST PARKING BARRIER

(Revised 05-23-13)

The Standard Specifications are revised as follows:

SECTION 615, AFTER LINE 149, INSERT AS FOLLOWS:

**615.12.1 Wood Post Parking Barriers**

*Placement of vertical wood posts as parking barriers shall be at the locations and in accordance with the details shown on the plans, or as otherwise directed. They shall be round, roofed on top, and be dimensioned as shown on the plans. The posts shall be in accordance with the applicable requirements of 911.02(d). The posts shall be pressure treated in accordance with 911.02.*

SECTION 615, BEGIN LINE 172, INSERT AS FOLLOWS:

Parking Barrier, Concrete .....	EACH
Parking Barrier, Wood Post .....	EACH

SECTION 615, BEGIN LINE 176, INSERT AS FOLLOWS:

The cost of setting tablets in structures or bench mark posts, extensions for monuments, adjustment castings, *backfill, disposal of surplus materials*, re-establishing disturbed existing monuments, and *all* other necessary incidentals shall be included in the cost of the pay items *in this section*.



COMMENTS AND ACTION

615-R-XXX MONUMENTS, MARKERS, AND PARKING BARRIERS (PROPOSED NEW)  
615-R-020 WOOD POST PARKING BARRIERS (PROPOSED TO DISCONTINUE USE)

DISCUSSION:

This item was introduced and presented by Mr. Goldner who stated that Recurring Special Provision 615-R-020, for WOOD POST PARKING BARRIER, contains a revised statement that clarifies that the cost of backfill, disposal of surplus materials and all other necessary incidentals shall be included in the cost of the pay items shown in 615. However, due to the limited Basis for Use for this RSP, "Required for all contracts with the Parking Barrier Wood Post pay item", this revised statement was missed in contracts with other 615 pay items.

Mr. Goldner therefore proposes to discontinue use of RSP 615-R-020 and create a new RSP with the Basis for Use to be "included in contracts with any 615 pay items". This new RSP will further define pay items for parking barriers made of concrete, or wood, and will also allow for the resetting of existing parking barriers. Mr. Goldner further requests that this new RSP be incorporated into the 2020 Standard Specifications.

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

<p>Motion: Mr. Goldner  Second: Mr. Pankow  Ayes: 8  Nays: 0  FHWA Approval: <b>YES</b></p>	<p>Action:</p> <p><input checked="" type="checkbox"/> Passed as Submitted  <input type="checkbox"/> Passed as Revised  <input type="checkbox"/> Withdrawn</p>
<p>Standard Specifications Sections referenced and/or affected:</p> <p>615 begins on pg 444</p>	<p><input checked="" type="checkbox"/> 2020 Standard Specifications</p> <p><input checked="" type="checkbox"/> Revise Pay Items List</p>
<p>Recurring Special Provision affected:</p> <p>SEE PROPOSAL SHEET</p>	<p><input checked="" type="checkbox"/> Create RSP (No. <b>615-R-666</b>)  Effective <b>April 01, 2018</b> Letting  RSP Sunset Date: <b>2020 SS book</b></p>
<p>Standard Drawing affected:</p> <p>NONE</p>	<p><input checked="" type="checkbox"/> Delete RSP (No. <b>615-R-020</b>)  Effective _____ Letting  RSP Sunset Date: <b>March 31, 2018</b></p>
<p>Design Manual Sections affected:</p> <p>NONE</p>	<p>_____ Standard Drawing Effective</p>
<p>GIFE Sections cross-references:</p> <p>NONE</p>	<p>_____ Create RPD (No. _____)  Effective _____ Letting</p> <p>_____ GIFE Update</p> <p>_____ SiteManager Update</p>

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

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: A frequency manual change to PG binder sampling frequency resulted in confusion as to how to handle a failed PG binder sample, because the current specification was based on daily sampling.

PROPOSED SOLUTION: Revise to ensure clarity. Eliminate lot and subplot system, as it is no longer relevant. Add statement that failed test applies to week's production.

APPLICABLE STANDARD SPECIFICATIONS: 902

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: N/A

APPLICABLE SUB-COMMITTEE ENDORSEMENT: N/A

IMPACT ANALYSIS (attach report):

Submitted By: Matt Beeson

Title: State Materials Engineer

Organization: INDOT

Phone Number: 317-610-7251 x 204

Date: 08/28/17

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

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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? N

Will approval of this item affect the Approved Materials List? N

Will this proposal improve:

Construction costs? Y

Construction time? N

Customer satisfaction? N

Congestion/travel time? N

Ride quality? N

Will this proposal reduce operational costs or maintenance effort? Y

Will this item improve safety:

For motorists? N

For construction workers? N

Will this proposal improve quality for:

Construction procedures/processes? Y

Asset preservation? Y

Design process? N

Will this change provide the contractor more flexibility? Y

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

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

Is this proposal needed for compliance with:

Federal or State regulations? N

AASHTO or other design code? N

Is this item editorial? N

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

REVISION TO STANDARD SPECIFICATIONS

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SECTION 902 - ASPHALT MATERIALS

902.01(a) PERFORMANCE GRADED ASPHALT BINDERS

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 902, BEGIN LINE 41, DELETE AND INSERT AS FOLLOWS:

**1. Lots and Sublots**

~~A binder lot for each grade of PG binder will be one week of HMA production. Lots will be further subdivided into sublots for each calendar day that HMA is produced.~~

**21. Sampling**

An acceptance sample and backup sample shall be taken from the asphalt delivery system at the HMA plant. ~~The two samples will represent a subplot.~~ A copy of a load ticket identifying the binder source shall be submitted with the subplot samples. The Engineer will take immediate possession of the samples.

**32. PG Binder Testing**

The Department will ~~randomly select one subplot from each lot in accordance with ITM 802 for either perform~~ complete ~~or partial~~ testing in accordance with AASHTO M 320. Complete PG binder testing will consist of RTFO DSR and PAV BBR testing. ~~Partial PG binder testing will consist of RTFO DSR testing.~~ Rotational viscosity and flashpoint tests are not required. If the subplot selected is in accordance with the specifications, the lot will be accepted. ~~If the selected subplot material is not in accordance with the specifications, the material will represent one week of HMA production and~~ be adjudicated as a failed material in accordance with 105.03.

**43. Appeals**

If the Contractor does not agree with the acceptance test results ~~for the lot,~~ a request may be made in writing for additional testing. The appeal shall be submitted within 15 calendar days of receipt of the Department's written results. The basis of the appeal shall include complete AASHTO M 320 test results ~~for the specific subplot in question. The appeal results will replace all previous test results for acceptance of the lot.~~

COMMENTS AND ACTION

902.01(a) PERFORMANCE GRADED ASPHALT BINDERS

DISCUSSION:

Mr. Beeson introduced and presented this item explaining that a frequency manual change to PG binder sampling frequency resulted in confusion as to how to handle a failed PG binder sample since the current language in 902 was based on daily sampling. Mr. Beeson proposes to revise 902.01(a) to ensure clarity, eliminate lot and subplot system, since it is no longer relevant, and also add a statement that a failed test will represent one HMA week's production.

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

<p>Motion: Mr. Beeson  Second: Mr. Pankow  Ayes: 8  Nays: 0  FHWA Approval: <b>YES</b></p>	<p>Action:</p> <p><input checked="" type="checkbox"/> Passed as Submitted  <input type="checkbox"/> Passed as Revised  <input type="checkbox"/> Withdrawn</p>
<p>Standard Specifications Sections referenced and/or affected:</p> <p>902.01 pg 867</p>	<p><input checked="" type="checkbox"/> 2020 Standard Specifications</p> <p><input type="checkbox"/> Revise Pay Items List</p>
<p>Recurring Special Provision affected:</p> <p>NONE</p>	<p><input checked="" type="checkbox"/> Create RSP (No. <b>902-C-258</b>)  Effective <b>Febr. 01 2018</b> Letting  RSP Sunset Date: <b>2020 SS book</b></p>
<p>Standard Drawing affected:</p> <p>NONE</p>	<p><input type="checkbox"/> Revise RSP (No. <input type="text"/>)  Effective <input type="text"/> Letting  RSP Sunset Date: <input type="text"/></p>
<p>Design Manual Sections affected:</p> <p>NONE</p>	<p><input type="checkbox"/> Standard Drawing  Effective <input type="text"/></p>
<p>GIFE Sections cross-references:</p> <p>NONE</p>	<p><input type="checkbox"/> Create RPD (No. <input type="text"/>)  Effective <input type="text"/> Letting</p> <p><input type="checkbox"/> GIFE Update</p> <p><input type="checkbox"/> SiteManager Update</p>

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

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The steel laboratory at OMM performs one hundred or more tests per year on fence and fence materials that rarely fail, and pose little to no risk to the Department if they do fail. This laboratory time could be better used on more critical materials. This also reduces the time spent sampling the materials in the field.

PROPOSED SOLUTION: Revise 910.18 to accept all fence and fence materials by Type C Certification. A draft Frequency Manual revision is also attached.

APPLICABLE STANDARD SPECIFICATIONS: 910

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: N/A

APPLICABLE SUB-COMMITTEE ENDORSEMENT: N/A

IMPACT ANALYSIS (attach report):

Submitted By: Matt Beeson

Title: State Materials Engineer

Organization: INDOT

Phone Number: 317-610-7251 x 204

Date: 08/25/17

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

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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? N

Will approval of this item affect the Approved Materials List? N

Will this proposal improve:

Construction costs? Y

Construction time? N

Customer satisfaction? N

Congestion/travel time? N

Ride quality? N

Will this proposal reduce operational costs or maintenance effort? Y

Will this item improve safety:

For motorists? N

For construction workers? N

Will this proposal improve quality for:

Construction procedures/processes? Y

Asset preservation? Y

Design process? N

Will this change provide the contractor more flexibility? Y

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

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

Is this proposal needed for compliance with:

Federal or State regulations? N

AASHTO or other design code? N

Is this item editorial? N

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

REVISION TO STANDARD SPECIFICATIONS

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SECTION 910 - METAL MATERIALS

910.18 FENCE, FITTINGS, AND GATES

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 910, BEGIN LINE 1, DELETE AND INSERT AS FOLLOWS:

**910.18 Fence, Fittings, and Gates**

**(a) Farm Field or Woven Wire Fence**

This fence shall be in accordance with ASTM A 116. The wire shall be No. 9 gage (3.8 mm). The design shall be 1047-6-9. The coating shall be class 3. The method of securing the vertical stays to the horizontal wires may be either of those shown on the plans. Diagonal braces shall be in accordance with 910.18(b)3.

*Material furnished under this specification shall be covered by a type C certification in accordance with 916.*

**(b) Steel Fabric Chain Link Fence**

This fence shall be in accordance with ASTM A 392 for galvanized steel fabric or ASTM A 491 for aluminum coated steel fabric. The height of the fabric shall be 48 in. unless otherwise specified. It shall be of No. 9 gage (3.8 mm) wire woven in 2 in. mesh. The fabric shall be knuckled at the top and bottom selvages when the height is less than 72 in. Fabric of 72 in. in height or higher shall be knuckled at the top and shall have the twisted and barbed finish at the bottom. For galvanized fabric, coating shall be done after weaving and shall be class II, average of two or more specimens no less than 2.0 oz/sq ft and no less than 1.8 oz/sq ft for any individual specimen. For aluminum coated fabric, coating shall be class II, 0.40 oz/sq ft minimum.

The fabric shall be furnished with ties required for fastening it to the top and bottom tension wires. These fastenings may be of aluminum wire or strip of approved gage and design, or of galvanized steel wire in accordance with the manufacturer's standard design. If galvanized steel wire ties are furnished, the wire shall be no smaller than No. 12 gage (2.7 mm). Sufficient ties shall be furnished to provide for attaching to the top and bottom tension wires each 24 in. Fittings necessary to make complete installation shall be pressed or rolled steel, forged steel, cast steel, or malleable iron.

Steel fabric chain link fence shall be as shown on the plans and as set out above.

*Material furnished under this specification shall be covered by a type C certification in accordance with 916.*

**1. Tension Wire**

Tension wire intended for use on the top or bottom of steel chain link fence or on the bottom of farm field fence when specified shall be spring coil or crimped steel wire with an initial diameter of  $0.177 \pm 0.005$  of an in., a minimum breaking load of 1,950 lb,



REVISION TO STANDARD SPECIFICATIONS

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SECTION 910 - METAL MATERIALS

910.18 FENCE, FITTINGS, AND GATES

and a coating of either zinc or aluminum. The minimum weight (mass) of coating shall be 0.80 oz/sq ft for galvanized wire and 0.40 oz/sq ft for aluminum coated steel wire. The weight of aluminum coating shall be determined in accordance with ASTM A 428.

*Material furnished under this specification shall be covered by a type C certification in accordance with 916.*

**2. Stretcher Bars, Truss Rods, and Turnbuckles**

Stretcher bars shall be 3/16 by 3/4 in. flat bars. These bars, truss rods, turnbuckles, and necessary fittings shall be of good commercial quality steel, malleable iron, or wrought iron. They shall be galvanized in accordance with ASTM A 153 after fabrication. The turnbuckles shall be made from drop forged malleable iron. They shall have a minimum take up of 4 in. The fittings may be pressed or rolled steel, forged steel, cast steel, or malleable iron.

**3. Braces**

Braces shall be made of steel pipe with bolted steel couplings or connections. Steel pipe shall be in accordance with ASTM F 1083. They shall be galvanized as set out therein. Fabrication or manipulation that causes minor damage to the galvanized coating shall be corrected by approved application of a high zinc dust-zinc oxide paint conforming to the requirements of Federal Specification TT-P-641 type II or Military Specifications DOD-P-21035. When spray paints are used, two coats shall be applied. Damaged braces will be rejected.

**4. Barbed Wire**

Barbed wire used at the top and bottom of farm field fence, or as otherwise specified, and in accordance with 603 shall be in accordance with applicable provisions of ASTM A 121. It shall be composed of No. 12 1/2 gage (2.5 mm) galvanized or aluminum coated steel wire with four round 14 gage (2.0 mm) barbs at approximately 5 in. spacing. The galvanized coating shall be in accordance with class 3 in Table 2. The minimum aluminum coating shall be in accordance with class 60 for the line wire and class 20 for the barb wire. The weight of coating shall be determined in accordance with ASTM A 428. The use of aluminum barbs, in accordance with ASTM B 211, alloy 5052-H38, nominal diameter No. 14 gage (2.03 mm), will be allowed.

The use of barbed wire with No. 15 1/2 gage (1.70 mm), high tensile strength line wires, and No. 16 1/2 gage (1.47 mm) barbs will be allowed. The barbs shall be round with four points and spaced at approximately 5 in. intervals. The barbed wire shall be in accordance with ASTM A 121. The galvanized coating shall be in accordance with class 3 in Table 2.

*Material furnished under this specification shall be covered by a type C certification in accordance with 916.*

REVISION TO STANDARD SPECIFICATIONS

SECTION 910 - METAL MATERIALS

910.18 FENCE, FITTINGS, AND GATES

**5. Bridge Railing Pedestrian Fence**

Fence posts and horizontal rails shall be in accordance with 910.13(b)1. The zinc-coating weight shall not be less than 2 oz/sq ft.

Base plates shall be steel in accordance with ASTM A 709, grade 36 or 50. Galvanization shall be in accordance with AASHTO M 111. The zinc-coating weight shall not be less than 2 oz/sq ft.

The chain link fabric shall be coated wire of 9 gage, with a mesh size of 2 in. The zinc-coating weight of fabric shall not be less than 2 oz/sq ft. The zinc-coating weight of brace bands, fabric ties, fence post loop caps, fence post caps, horizontal rail end cups, tension bands, and tension bars shall not be less than 1.2 oz/sq ft.

*Material furnished under this specification shall be covered by a type C certification in accordance with 916.*

**(c) Aluminum Fabric Chain Link Fence**

This fence shall be in accordance with the applicable requirements of 910.18(b) except for composition of materials. Requirements for the various component parts of aluminum fence shall be as shown in Table 1.

TABLE 1

ITEM	ASTM REFERENCE	ALLOY	ADDITIONAL INFORMATION
Fabric	B 211	Alclad 5056 or 6061-T94	
Barbed Wire - Line	B 211	5062-0, H38, or 6061-T89	2-strand dia. 0.110 in. 4-pt barb. dia. 0.080 in. 5 in. space
Barbs	B 211	5052-H38	
Tension Wire	B 211	Alclad 5056 or 6061-T94	Dia. 0.192 in.; Note 1
Hog Ring Fasteners	B 211	6061-T94	Dia. 0.110 in.
Wire Ties	B 211	1100-H18	Dia. 0.148 in.
Flat Band Ties	B 211	3003-H14	1.2 in. wide; 0.06 in. thick
Stretcher Bars	B 211	6063-T6	3/4 in. by 1/4 in.; square edges
Truss and Brace Rods	B 211 or B 221	6061-T6	Dia. 3/8 in.
Turn Buckles	B 26 (cast parts), B 211 (wrought)	356.0-T6 6061-T6	
Bands	B 221	6063-T6	1/8 in. by 1 in. beveled edge
Bolts	B 211 or B 221	2024-T4	

REVISION TO STANDARD SPECIFICATIONS

SECTION 910 - METAL MATERIALS

910.18 FENCE, FITTINGS, AND GATES

Nuts	B 211 or B 221	6061-T6	ASA B 18.2 hexagon threads class 2, 2A, or 2B
Expansion Sleeves	B 210	3003-H18	1.695 in. ID by 0.078 in.; wall drawn type. 6 in. long; self centering
Post Tops, Rails and Brace Ends	B 26 or B 108	356.0T6	Fabricated in permanent molds or sand castings
Top and Brace Rails	B 241 and B 429	6063-T6	1 1/4 in. pipe; Note 2
Barbed Wire Extension Arms	B 26 or B 108	356.0T6	Fabricated as for post tops; sheet castings
Line Posts	B 241 and B 429	6063-T6	2 in. pipe; Note 2
Corner Posts	B 241 and B 429	6063-T6	2 1/2 in. pipe; Note 2
Note 1: Aluminum coated steel wire in accordance with 910.18(b) may be used.			
Note 2: ANSI schedule 40 pipe, plain ends.			

**(d) Gates**

Gate posts sizes shall be as follows:

ANSI Nominal Pipe Size	Swing Gate Opening, (inclusive)	
	Single Gate	Double Gate
2 1/2 in.	Up to 6 ft	Up to 12 ft
3 1/2 in.	7 to 13 ft	13 to 26 ft
6 in.	14 to 18 ft	27 to 36 ft
8 in.	19 to 32 ft	37 to 64 ft

**1. Steel Gates**

Steel gate posts shall be standard weight, galvanized, steel pipe in accordance with ASTM F 1083 and furnished with all necessary fittings. Post sizes shall be as set out above. The gate frames shall be of standard weight, galvanized, steel pipe in accordance with ASTM A 53; of 1 1/2 in. (38.1 mm) nominal size; and shall have welded joint or riveted construction using galvanized pressed steel or malleable fittings. Areas welded after galvanizing shall be coated with a material conforming to the requirements of Federal Specification TT-P-641, type II or Military Specifications DOD-P-21035. When spray paints are used, two coats shall be applied. Fabric coverings for gates shall be in accordance with 910.18(a) or 910.18(b). These gates shall be furnished with necessary fastenings, hinges, center stops, and locking devices galvanized after fabrication in accordance with ASTM A 153.

**2. Aluminum Gates**

Aluminum gate post sizes shall be in accordance with 910.18(d). They shall be ANSI schedule 40 pipe and in accordance with ASTM B 241 or B 429, alloy 6063-T6. Gate frames shall consist of 1 1/2 in. schedule 40 pipe assembled by welding or with fittings. Pipe shall be in accordance with ASTM B 241 or B 429, alloy 6063-T6. Welding

REVISION TO STANDARD SPECIFICATIONS

SECTION 910 - METAL MATERIALS

910.18 FENCE, FITTINGS, AND GATES

material and procedures shall be in accordance with the applicable AWS provisions. Formed sheet fittings shall be in accordance with ASTM B 209, alloy 6061-T6. Gate hinges may be offset type wrought aluminum, ASTM B 209, alloy 6061-T6, or galvanized malleable iron. Fabric shall be in accordance with 910.18(c).

**(c) Control Procedures for Furnishing Fence and Accessories**

**1. General Requirements**

All fence and accessory materials shall be subject to the control procedures set out herein. The control procedure methods which may be used are as follows.

- a. Suppliers qualified to furnish pretested approved stockpiled material;
- b. Suppliers not qualified or not desiring to furnish pretested approved stockpiled material.

**2. Suppliers of Pretested Approved Stockpiled Material**

Suppliers desiring to furnish pretested approved stockpiled material shall contact the District Testing Engineer. A written request will not be required.

The requirements set out in the General Procedures for Controlling Materials Approved Prior to Delivery to the Project will apply with the following additions, modifications, or clarifications:

- a. Posts, braces, or similar pieces shall be bundled before or after sampling, but prior to approval.
- b. All tests will be performed at the Office of Materials Management.
- c. Basis of acceptance will be a car seal attached to each roll of fence, barbed wire or tension wire, and each bundle of posts. Acceptance numbers will not be issued for accessories such as post caps, brackets, or tie wires.
- d. If a complete roll or bundle is not shipped, the car seal shall be retained with the unused portion. The number shall be supplied to the Engineer for the material acceptance.

**3. Suppliers Not Furnishing Pretested Approved Stockpiled Material**

Suppliers not desiring to retain status or who lose status to furnish pretested stockpiled material will have their material inspected at the project site after delivery. No material may be used until it has been tested and approved.

REVISION TO STANDARD SPECIFICATIONS

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SECTION 910 - METAL MATERIALS

910.18 FENCE, FITTINGS, AND GATES

~~Material furnished under this specification shall be covered by a type C certification in accordance with 916.~~

FINAL DRAFT MINUTES

BACKUP 1

DRAFT FREQUENCY MANUAL CHANGES

REF	SUB REF.	SPEC REFERENCE	ITEM	JOB CONTROL LOCATION	JOB CONTROL NOTES	JOB CONTROL FREQUENCY	ACCEPTANCE TEMPLATES
27	01 of 04	910.18b or 910.18c	FENCE MATERIALS	INSTALLER or JOBSITE	FABRIC-CHAIN LINK, FARM FIELD, WOVEN WIRE, FABRIC-CHAIN LINK, GATES, AND ACCESSORIES	For $\leq$ 100 ft, no sampling required. Certification-Type C	No Sample ID required. SM9003
27	02 of 04	910.18b or 910.18c	FENCE MATERIALS	INSTALLER or JOBSITE	FABRIC-CHAIN LINK.	For $>$ 100 ft, one 3 ft full height sample for each 2400 ft.	SM6008-Seal Numbers
27	03 of 04	910.18a	FENCE MATERIALS	INSTALLER or JOBSITE	FARM FIELD.	For $\leq$ 330 ft, no sampling required.	No Sample ID required.
27	04 of 04	910.18a	FENCE MATERIALS	INSTALLER or JOBSITE	FARM FIELD.	For $>$ 330 ft, one 3 ft full height sample for each 16,500 ft.	SM6008-Seal Numbers
28	01 of 02	910.18b1 or 910.18c (Table 1)	FENCE MATERIALS	INSTALLER or JOBSITE	TENSION WIRE.	For $\leq$ 1000 ft, no sampling required.	No Sample ID required.
28	02 of 02	910.18b1 or 910.18c (Table 1)	FENCE MATERIALS	INSTALLER or JOBSITE	TENSION WIRE.	For $>$ 1000 ft, one 6 ft sample for each 18,000 ft.	SM6008-Seal Numbers
29	01 of 02	910.1b4 or 910.18c (Table 1)	FENCE MATERIALS	INSTALLER or JOBSITE	BARBED WIRE.	For $\leq$ 1320 ft, no sampling required.	No Sample ID required.
29	02 of 02	910.1b4 or 910.18c (Table 1)	FENCE MATERIALS	INSTALLER or JOBSITE	BARBED WIRE.	For $>$ 1320 ft, one 25 ft sample for each 33,000 ft.	SM6008-Seal Numbers
30	01 of 03	910.13 or 910.18b3 or 910.18c (Table 1)	FENCE MATERIALS	INSTALLER or JOBSITE	POSTS AND BRACES.	For $\leq$ 25 each of any size or type, no sampling	No Sample ID required.

(CONTINUED ON NEXT PAGE)

BACKUP 1

DRAFT FREQUENCY MANUAL CHANGES

REF	SUB REF.	SPEC REFERENCE	ITEM	JOB CONTROL LOCATION	JOB CONTROL NOTES	JOB CONTROL FREQUENCY	ACCEPTANCE TEMPLATES
30	02 of 03	910.13 or 910.18b3 or 910.18c (Table 1)	FENCE MATERIALS	INSTALLER or JOBSITE	POSTS AND BRACES.	For > 25 each of any size or type, one sample (unit) per 1000.	SM6008-Seal Numbers
30	03 of 03		FENCE MATERIALS	INSTALLER or JOBSITE	POSTS AND BRACES. Pedestrian Protection Fencing. Fabricated Support Posts Only.	Certification Type C	SM9003
34	01 of 01	910.18d	FENCE MATERIALS	JOBSITE	GATES-STEEL OR ALUMINUM. Inspect for dimensions and workmanship.	Visual Inspection	No Sample ID required.

COMMENTS AND ACTION

910.18 FENCE, FITTINGS, AND GATES

DISCUSSION:

Mr. Beeson introduced and presented this item explaining that the steel laboratory at OMM performs 100 or more tests per year on fence and fence materials that rarely fail, and pose little to no risk to the Department if they do fail. This laboratory time could be better used on more critical materials. This would also reduce the time spent sampling the materials in the field.

Mr. Beeson proposes to revise 910.18 to accept all fence and fence materials by Type C Certification. A draft Frequency Manual revision is also attached. Mr. Beeson also proposed to strike section (e), as shown above.

Mr. Koch asked if the material section in RSP 603-R-414 should also be updated since PVC coatings seem to fail rather frequently. Mr. Koch added that the testing process requires considerable lead time with little overall risk. Mr. Beeson agreed and asked that the RSP acceptance requirements be revised as well. Mr. Beeson said he will look into it and proceed accordingly.

A Construction Memo will be drafted by Mr. Beeson.

Mr. Beeson revised his motion.

<p>Motion: Mr. Beeson  Second: Mr. Pankow  Ayes: 8  Nays: 0  FHWA Approval: <b>YES</b></p>	<p>Action:</p> <p><input type="checkbox"/> Passed as Submitted  <input checked="" type="checkbox"/> Passed as Revised  <input type="checkbox"/> Withdrawn</p>
<p>Standard Specifications Sections referenced and/or affected:</p> <p>910.18 pg 960 thru 964.</p>	<p><input checked="" type="checkbox"/> 2020 Standard Specifications</p> <p><input type="checkbox"/> Revise Pay Items List</p>
<p>Recurring Special Provision affected:</p> <p>NONE</p>	<p><input checked="" type="checkbox"/> Create RSP (No. <b>910-C-259</b>)  Effective <b>Febr. 01, 2018</b> Letting  RSP Sunset Date: <b>2020 SS book</b></p>
<p>Standard Drawing affected:</p> <p>NONE</p>	<p><input type="checkbox"/> Revise RSP (No. <input type="text"/>)  Effective <input type="text"/> Letting  RSP Sunset Date: <input type="text"/></p>
<p>Design Manual Sections affected:</p> <p>NONE</p>	<p><input type="checkbox"/> Standard Drawing  Effective <input type="text"/></p>
<p>GIFE Sections cross-references:</p> <p>NONE</p>	<p><input type="checkbox"/> Create RPD (No. <input type="text"/>)  Effective <input type="text"/> Letting</p> <p><input type="checkbox"/> GIFE Update</p> <p><input checked="" type="checkbox"/> SiteManager Update</p>



STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS  
REVISION TO RECURRING PLAN DETAILS

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The Governor's Office has requested information signs to identify Next Level Roads projects.

PROPOSED SOLUTION: Create a recurring plan detail with sign shop drawings and typical placement locations. The sign design was developed by INDOT Central Office.

APPLICABLE STANDARD SPECIFICATIONS: 801.04

APPLICABLE STANDARD DRAWINGS: 801-TCSN-02, 801-TCSN-04, and 801-TCSN-05

APPLICABLE DESIGN MANUAL SECTION: 83-2.0

APPLICABLE SECTION OF GIFE: No

APPLICABLE RECURRING SPECIAL PROVISIONS: 801-R-542

PAY ITEMS AFFECTED: No

APPLICABLE SUB-COMMITTEE ENDORSEMENT: Yes, ad hoc committee of Scott Manning, Elizabeth Phillips, and Dave Boruff

IMPACT ANALYSIS (attach report): Yes, attached.

Submitted By: Joe Bruno on behalf of Dave Boruff

Title: Traffic Administration Engineer

Organization: INDOT

Phone Number: (317) 234-7949

Date: 8/28/2017

STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND STANDARD DRAWINGS  
REVISION TO RECURRING PLAN DETAILS

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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? 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? No

Design process? No

Will this change provide the contractor more flexibility? No

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

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

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

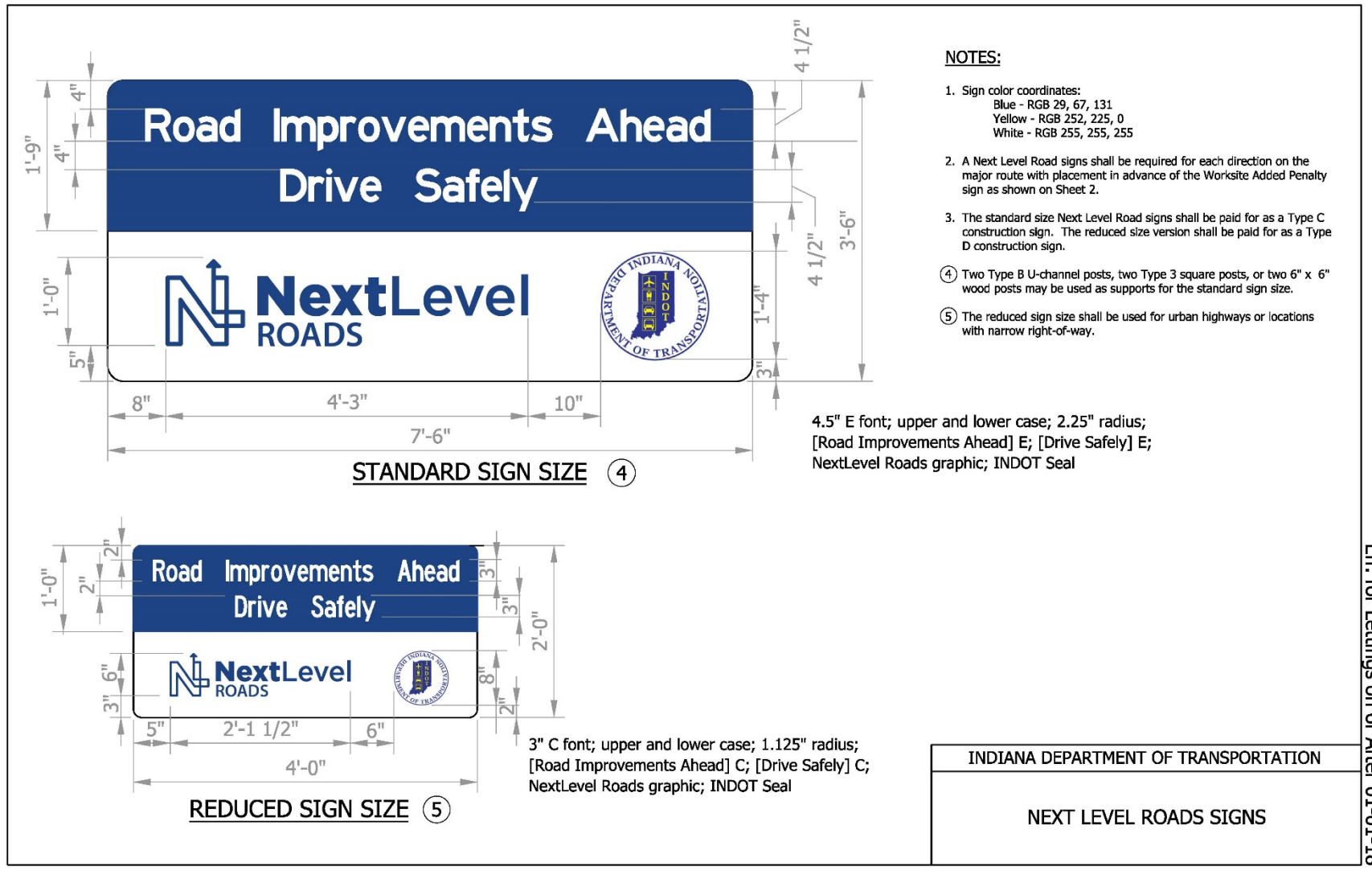
Is this item editorial? No

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

REVISION TO RECURRING PLAN DETAILS

PROPOSED NEW RPD 801-T-2XXd NEXT LEVEL ROADS SIGN (REVISED DRAFT)

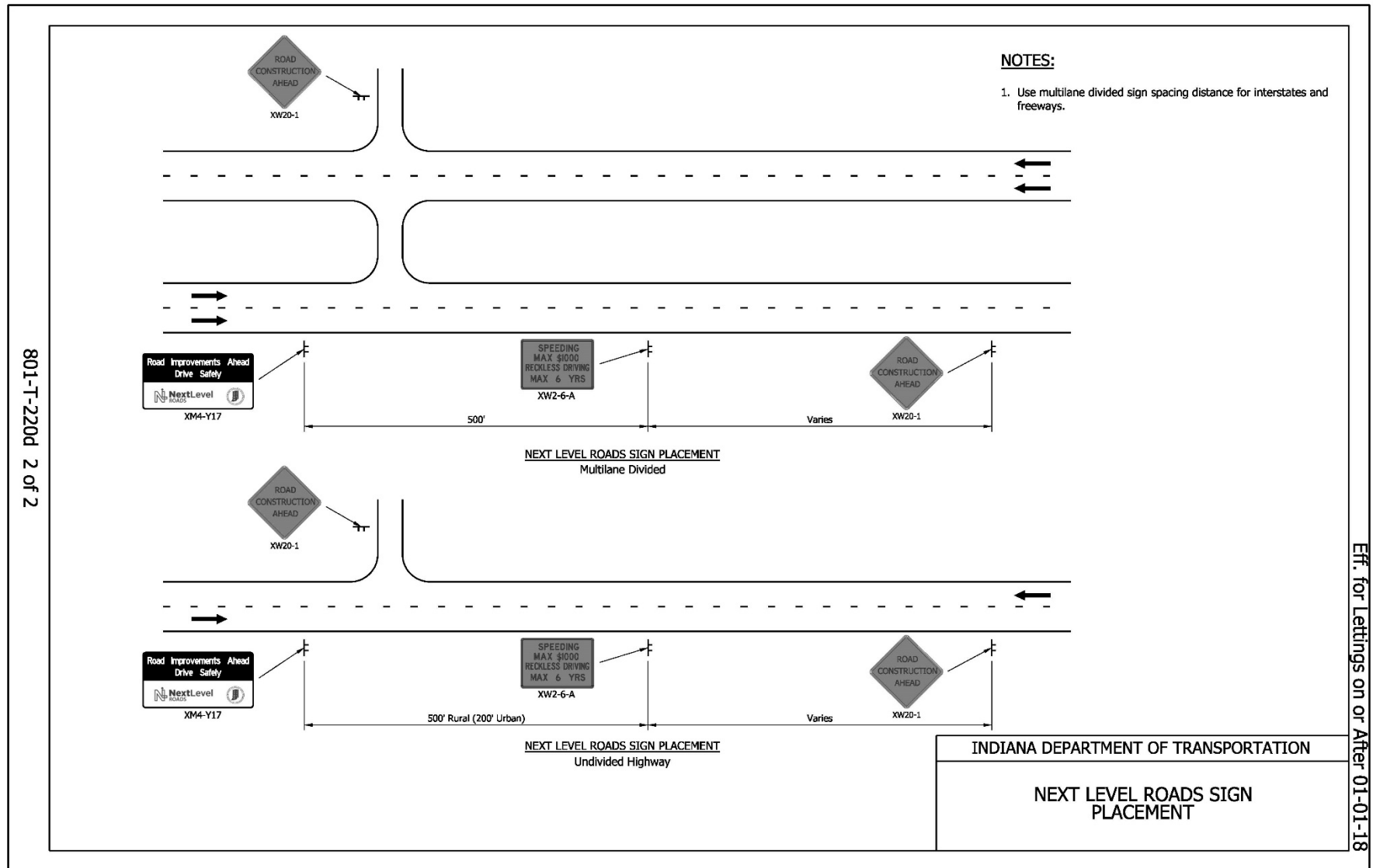
801-T-220d 1 of 2



Eff. for Lettings on or After 01-01-18

REVISION TO RECURRING PLAN DETAILS

PROPOSED NEW RPD 801-T-2XXd NEXT LEVEL ROADS SIGN (REVISED DRAFT)



Eff. for Lettings on or After 01-01-18

BACKUP 1

DESIGN MEMORANDUM NO. 17-XX ON NEXT LEVEL SIGNS (DRAFT)



## **INDIANA DEPARTMENT OF TRANSPORTATION**

*Driving Indiana's Economic Growth*

### **Design Memorandum No. 17-xx Technical Advisory**

Date - Draft

**TO:** All Design, Operations, and District Personnel, and Consultants

**FROM:** /s/  
David Boruff  
Manager, Traffic Administration  
Traffic Engineering Division

**SUBJECT:** Next Level Signs

**EFFECTIVE:** Lettings on or after January 1, 2018

As part of the Governor's Next Level Roads initiative, special construction signs will be needed for informational purposes on select Next Level Roads construction projects. The appropriate project manager will notify a designer when a Next Level Roads project has been selected for signage. For more information about Next Level Roads projects, please visit:

<http://www.in.gov/indot/div/nextlevel/>

Two signs will be used for each project selected, one sign for each direction on the major roadway. The signs should be placed approximately 500 ft in advance of the Worksite Added Penalty sign on freeways and rural highways, and approximately 200 ft in advance of the Worksite Added Penalty sign on urban highways.

There are two sizes of the next level sign. The standard size (96" x 48") should be used at all locations where there is sufficient right-of-way for an 8 ft wide sign. The reduced size (48" x 24") should be used at all other locations. The standard size will be paid for as a Type C construction sign, and the reduced size will be paid for as a Type D construction sign.

Attached is a copy of the recurring plan detail that should be included in the contract documents. Questions regarding the next level signs should be directed to the Office of Traffic Administration, Dave Boruff at [dboruff@indot.in.gov](mailto:dboruff@indot.in.gov).

[P:\Structural Services\Design Memos\PENDING\2017\17-xxa Next Level Signs.doc]

COMMENTS AND ACTION

RPD 801-T-2XXd NEXT LEVEL ROADS SIGN

DISCUSSION:

This item was introduced and presented by Mr. Boruff who explained that the Governor's Office has requested information signs to identify Next Level Roads projects. Mr. Boruff proposed to create a recurring plan detail with sign shop drawings and typical placement locations. The sign design was developed by the Department's Central Office and is as shown above.

Mr. Osborn expressed concern over the type of sign this will be and if it can be properly manufactured. Mr. Bruno offered solutions to those concerns, and will provide revisions accordingly.

Mr. Pankow asked, and Mr. Bruno confirmed, that the Contractor will be responsible for making the signs.

Mr. Boruff revised his motion.

<p>Motion: Mr. Boruff  Second: Mr. Beeson  Ayes: 8  Nays: 0  FHWA Approval: <b>YES</b></p>	<p>Action:</p> <p><input type="checkbox"/> Passed as Submitted  <input checked="" type="checkbox"/> Passed as Revised  <input type="checkbox"/> Withdrawn</p>
<p>Standard Specifications Sections referenced and/or affected:</p> <p>801.04 pg 754-755</p>	<p><input type="checkbox"/> 2020 Standard Specifications</p> <p><input type="checkbox"/> Revise Pay Items List</p>
<p>Recurring Special Provision affected:</p> <p>NONE</p>	<p><input type="checkbox"/> Create RSP (No. _____)  Effective _____ Letting  RSP Sunset Date:</p>
<p>Standard Drawing affected:</p> <p>NONE</p>	<p><input type="checkbox"/> Revise RSP (No. _____)  Effective _____ Letting  RSP Sunset Date:</p>
<p>Design Manual Sections affected:</p> <p>NONE</p>	<p><input type="checkbox"/> Standard Drawing  Effective</p>
<p>GIFE Sections cross-references:</p> <p>NONE</p>	<p><input checked="" type="checkbox"/> Create RPD (No. <b>801-T-220d</b>)  Effective <b>Jan. 01, 2018</b> Letting</p> <p><input type="checkbox"/> GIFE Update</p> <p><input type="checkbox"/> SiteManager Update</p>

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

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: RSP 500-R-623 was created after the June 2015 Standards Committee to allow the use of recycled concrete aggregate back into concrete mixtures. Since taking effect, no Contractors have elected to use the specification. Since there is no interest, it does not make sense to maintain the specification or the test equipment required for this spec.

PROPOSED SOLUTION: Delete RSP 500-R-623 RECYCLED CONCRETE AGGREGATE.

APPLICABLE STANDARD SPECIFICATIONS: 501 and 502

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: 500-R-623 RECYCLED CONCRETE AGGREGATE

PAY ITEMS AFFECTED: N/A

APPLICABLE SUB-COMMITTEE ENDORSEMENT: INDOT/IACPA

IMPACT ANALYSIS (attach report):

Submitted By: Matt Beeson

Title: State Materials Engineer

Organization: INDOT

Phone Number: 317-610-7251 x 204

Date: 08/28/17

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

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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? N

Will approval of this item affect the Approved Materials List? N

Will this proposal improve:

Construction costs? Y

Construction time? N

Customer satisfaction? N

Congestion/travel time? N

Ride quality? N

Will this proposal reduce operational costs or maintenance effort? Y

Will this item improve safety:

For motorists? N

For construction workers? N

Will this proposal improve quality for:

Construction procedures/processes? Y

Asset preservation? Y

Design process? N

Will this change provide the contractor more flexibility? Y

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

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

Is this proposal needed for compliance with:

Federal or State regulations? N

AASHTO or other design code? N

Is this item editorial? N

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



REVISION TO SPECIAL PROVISIONS

500-R-623 RECYCLED CONCRETE AGGREGATE (PROPOSED TO DISCONTINUE USE)

500-R-623 RECYCLED CONCRETE AGGREGATE

(Adopted 06-18-15)

The Standard Specifications are revised as follows:

SECTION 501, BEGIN LINE 23, INSERT AS FOLLOWS:

**501.03 Materials**

Materials shall be in accordance with the following:

Admixtures.....	912.03
Coarse Aggregate, Class AP, Size No. 8* .....	904
Fine Aggregate, Size No. 23** .....	904
Fly Ash.....	901.02
Ground Granulated Blast Furnace Slag.....	901.03
Portland Cement.....	901.01(b)
Rapid Setting Patch Materials .....	901.07
Water .....	913.01
* Or gradation as identified in the QCP. <i>Recycled concrete aggregate ,RCA, in accordance with ITM 223 may be used.</i>	
** Or gradation as identified in the QCP.	

SECTION 501, AFTER LINE 156, INSERT AS FOLLOWS:

*Recycled concrete aggregate, RCA, may be added up to 30% of the coarse aggregate by weight when no fly ash is used as an additive in the concrete mix and up to 50% of the coarse aggregate by weight when fly ash is used as an additive in the concrete mix.*

SECTION 502, BEGIN LINE 9, INSERT AS FOLLOWS:

**502.02 Materials**

Materials shall be in accordance with the following:

Admixtures.....	912.03
Coarse Aggregate, Class AP, Size No. 8* .....	904
Fine Aggregate, Size No. 23 .....	904
Fly Ash.....	901.02
Ground Granulated Blast Furnace Slag.....	901.03
Portland Cement.....	901.01(b)
Rapid Setting Patch Materials .....	901.07
Water .....	913.01
* <i>Recycled concrete aggregate, RCA, in accordance with ITM 223 may be used.</i>	

SECTION 502, AFTER LINE 61, INSERT AS FOLLOWS:

*Recycled concrete aggregate, RCA, may be added up to 30% of the coarse aggregate by weight when no fly ash is used as an additive in the concrete mix and up to 50% of the coarse aggregate by weight when fly ash is used as an additive in the concrete mix.*

COMMENTS AND ACTION

500-R-623 RECYCLED CONCRETE AGGREGATE (PROPOSED TO DISCONTINUE USE)

DISCUSSION:

Mr. Beeson introduced and presented this item stating that RSP 500-R-623 was created after the June 2015 Standards Committee to allow the use of recycled concrete aggregate back into concrete mixtures. Since taking effect, no Contractors have elected to use the specification. Since there is no interest, it does not make sense to maintain the specification or the test equipment required for this spec. Therefore, Mr. Beeson proposed to discontinue RSP 500-R-623 RECYCLED CONCRETE AGGREGATE. The ITM procedure was also deemed to be unsafe.

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

<p>Motion: Mr. Beeson  Second: Mr. Pankow  Ayes: 8  Nays: 0  FHWA Approval: <b>YES</b></p>	<p>Action:</p> <p><input checked="" type="checkbox"/> Passed as Submitted  <input type="checkbox"/> Passed as Revised  <input type="checkbox"/> Withdrawn</p>
<p>Standard Specifications Sections referenced and/or affected:</p> <p>501.03 pg 340 and 502.02 pg 358</p>	<p>2020 Standard Specifications</p> <p>Revise Pay Items List</p>
<p>Recurring Special Provision affected:</p> <p>500-R-623 RECYCLED CONCRETE AGGREGATE</p>	<p><input checked="" type="checkbox"/> Delete RSP (No. <b>500-R-663</b>)  Effective <b>ASAP</b> Letting  RSP Sunset Date:</p>
<p>Standard Drawing affected:</p> <p>NONE</p>	<p>Revise RSP (No. _____)  Effective _____ Letting  RSP Sunset Date:</p>
<p>Design Manual Sections affected:</p> <p>NONE</p>	<p>Standard Drawing Effective</p>
<p>GIFE Sections cross-references:</p> <p>NONE</p>	<p>Create RPD (No. _____)  Effective _____ Letting</p> <p>GIFE Update</p> <p>SiteManager Update</p>

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

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: Section 207 - Subgrade has a number of issues. There has been a lack of clarity on the subgrade soils requirements, and no requirement for proofrolling currently exists. Also, there is some confusion with what is intended to be paid for in the cost of other items, such as geotextile. A need for a geosynthetic confining system for certain subgrade treatment types has been identified.

PROPOSED SOLUTION: Subgrade soil requirements have been placed into a table for more clarity. Also, the subgrade treatment types have been placed into a table. Editorial changes have been made throughout to organize the construction specifications. A requirement for proofrolling has been added.

A Geosynthetic confining system has been added to certain subgrade treatment types, and edits to section 214 have been made accordingly.

APPLICABLE STANDARD SPECIFICATIONS: Sec 207 and Sec 214

APPLICABLE STANDARD DRAWINGS: Yes

APPLICABLE DESIGN MANUAL SECTION: yes

APPLICABLE SECTION OF GIFE: yes

APPLICABLE RECURRING SPECIAL PROVISIONS: yes

PAY ITEMS AFFECTED: NO

APPLICABLE SUB-COMMITTEE ENDORSEMENT:

IMPACT ANALYSIS (attach report):

Submitted By: Matt Beeson & Nayyar Siddiki

Title: State Materials Engineer

Organization: Office of Materials Management and Office of Geotechnical Services

Phone Number: 317-610-7251 x 204

Date: 08/28/17

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

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IMPACT ANALYSIS REPORT CHECKLIST

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

Does this item appear in any other specification sections? No

Will approval of this item affect the Approved Materials List? yes

Will this proposal improve:

Construction costs? Na

Construction time? Na

Customer satisfaction? Na

Congestion/travel time? Na

Ride quality? Na

Will this proposal reduce operational costs or maintenance effort? No

Will this item improve safety:

For motorists? No

For construction workers? NA

Will this proposal improve quality for:

Construction procedures/processes? yes

Asset preservation? NA

Design process? Yes

Will this change provide the contractor more flexibility? yes

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

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

Is this proposal needed for compliance with:

Federal or State regulations?

AASHTO or other design code?

Is this item editorial?

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

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

SECTION 207 - SUBGRADE  
SECTION 214 - GEOSYNTHETICS  
214.02 MATERIALS  
214.03 FOUNDATION PREPARATION  
214.05 METHOD OF MEASUREMENT  
214.06 BASIS OF PAYMENT

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 207, BEGIN LINE 1, DELETE AND INSERT AS FOLLOWS:

**SECTION 207 – SUBGRADE**

**207.01 Description**

This work shall consist of the construction of the subgrade in accordance with 105.03.

**MATERIALS**

**207.02 Materials**

Materials shall be in accordance with the following.

Chemical Modifiers.....	215.02
Fly Ash.....	901.02
Lime.....	913.04(b)
Portland Cement, Type I.....	901.01(b)
Coarse Aggregate, Class D or Higher, Size No. 41, 42, 5, 8, 43, 53, or 73 .....	904.301
Geogrid, Type IB .....	918.05(a)
Geocell Confining System .....	214
Subgrade Soils.....	*As Defined
Water .....	913.01

Soils containing greater than 3% by dry weight organic material, or with a maximum dry density of less than 100 pcf, or with liquid limit of greater than 50, or with a soluble sulfate content greater than 1,000 ppm, will not be allowed within the specified thickness of the subgrade treatment in cut sections and will not be allowed within 24 in. of the finished subgrade elevation in fill sections. Density will be determined in accordance with AASHTO T 99 or ITM 512 and loss on ignition organic content will be determined in accordance with AASHTO T 267. Liquid limits will be determined in accordance with AASHTO T 89. Sulfate content will be determined in accordance with ITM 510.

Subgrade soils shall be in accordance with the following:

Characteristics	Test Method	Requirement
Maximum Dry Density, min.	AASHTO T 99 or ITM 512	100 pcf

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

SECTION 207 - SUBGRADE

SECTION 214 - GEOSYNTHETICS

214.02 MATERIALS

214.03 FOUNDATION PREPARATION

214.05 METHOD OF MEASUREMENT

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<i>Organic Content, max.</i>	<i>AASHTO T 267</i>	<i>3 %</i>
<i>Liquid Limit, max.</i>	<i>AASHTO T 89</i>	<i>50 %</i>
<i>Soluble Sulfate, max.</i>	<i>ITM 510</i>	<i>1000 ppm</i>

CONSTRUCTION REQUIREMENTS

**207.03 General Construction Requirements**

**(a) Subgrade Construction Methods**

The subgrade shall be constructed uniformly transversely across the width of the pavement including shoulders or curbs unless shown otherwise on the plans, by one of the following methods:

- (a) chemical modification in accordance with 215;
- (b) aggregate No. 53 in accordance with 301;
- (c) geogrid in accordance with 214 placed under aggregate No. 53 in accordance with 301, or
- (d) soil compaction to 100% of maximum dry density.

Longitudinally, the treatment may vary depending on the method of construction.

~~Soils containing greater than 3% by dry weight organic material, or with a maximum dry density of less than 100 pcf, or with liquid limit of greater than 50, or with a soluble sulfate content greater than 1,000 ppm, will not be allowed within the specified thickness of the subgrade treatment in cut sections and will not be allowed within 24 in. of the finished subgrade elevation in fill sections. Density will be determined in accordance with AASHTO T 99 or ITM 512 and loss on ignition will be determined in accordance with AASHTO T 267. Liquid limits will be determined in accordance with AASHTO T 89. Sulfate content will be determined in accordance with ITM 510.~~

**(b) General Requirements**

~~Coal within the specified thickness of the subgrade shall be excavated if directed, and disposed of in accordance with 202.05. Coal or coal blossoms that are allowed to remain shall be mixed thoroughly with subgrade soils and compacted in accordance with 207.04.~~

All rock greater than 63 in. shall be removed or broken off *and placed* at least 6 in. below the specified subgrade ~~surface~~. Holes or depressions resulting from the removal of

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

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SECTION 207 - SUBGRADE

SECTION 214 - GEOSYNTHETICS

214.02 MATERIALS

214.03 FOUNDATION PREPARATION

214.05 METHOD OF MEASUREMENT

214.06 BASIS OF PAYMENT

unsuitable material shall be filled with ~~an acceptable material and compacted to conform with the surrounding subgrade soils in accordance with 207.02 or B Borrow and compacted in accordance with 203.23.~~

*Coal within the specified thickness of the subgrade shall be excavated if directed, and disposed of in accordance with 202.02.*

During subgrade preparation, adequate drainage shall be provided at all times to prevent water from standing on the subgrade. *The grade and cross section of the subgrade shall be finished within a tolerance of 1/2 in. from the subgrade elevation specified on the plans.*

Even though the subgrade has been previously accepted, the condition of the subgrade shall be in accordance with 105.03 and 207.04 at the time paving material is placed. ~~Just prior to placing the base course on the subgrade, proofrolling in accordance with 203.26 shall be completed. Undue distortion of the subgrade shall be avoided. If limits of the work make mechanical preparation of the subgrade impractical, appropriate hand methods may be used.~~

The grade and cross section of the subgrade shall be finished within a tolerance of 1/2 in. from the true subgrade. Finishing within this tolerance by blading or other mechanical means without the use of side forms will be allowed. If these methods do not finish within this tolerance, side forms shall be used.

**207.04 Subgrade Treatments Types**

The subgrade treatment type shall be as specified on the contract plans. If required, the subgrade foundation shall be corrected as directed by the Engineer prior to subgrade treatment.

~~Type I 24 in. of soil compacted to density and moisture requirements.~~

~~Type IA [blank]~~

~~Type IB 14 in. chemical soil modification.~~

~~Type IC 12 in. of the subgrade excavated and replaced with coarse aggregate No. 53.~~

~~Type II 6 in. of the subgrade excavated and replaced with coarse aggregate No. 53.~~

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

SECTION 207 - SUBGRADE  
 SECTION 214 - GEOSYNTHETICS  
 214.02 MATERIALS  
 214.03 FOUNDATION PREPARATION  
 214.05 METHOD OF MEASUREMENT  
 214.06 BASIS OF PAYMENT

~~Type IIA 8 in. chemical soil modification.~~

~~Type III 6 in. of soil compacted to the density and moisture requirements.~~

~~Type IV 12 in. of the subgrade excavated and replaced with coarse aggregate No. 53 on type IB geogrid.~~

~~Type V 3 in. of subgrade excavated and replaced with 3 in. coarse aggregate No. 53.~~

SUBGRADE TREATMENT TYPES	
Type	Subgrade Description
I	24 in. of soil compacted in accordance with 203.23
IA	[Blank]
IB	14 in. chemical soil modification
IC	12 in. <del>thick</del> coarse aggregate No. 53 in accordance with 301
II	6 in. <del>thick</del> coarse aggregate No. 53 in accordance with 301
IIA	8 in. chemical soil modification
III	In place compaction in accordance with 203.23
IV	12 in. <del>of</del> coarse aggregate No. 53 with Type IB geogrid in accordance with 214
IVA	12 in. coarse aggregate with Geocell confining system in accordance with 214
V	3 in. of subgrade excavated and replaced with 3 in. coarse aggregate No. 53.

In areas where shallow utilities are encountered or chemical modification is not allowed, the Contractor may submit a request to the Engineer to substitute Type IC for Type IB.

Where the ~~strength or~~ density and moisture control option is used, compaction of embankment areas shall be in accordance with 203.23. In cut and transition areas, the top lifts shall be removed, and the bottom 6 in. compacted in-place ~~to comply with the specified in accordance with~~ density and moisture requirements 203.23. The excavated material shall then be replaced and compacted in 6 in. lifts ~~to comply in accordance with 203.23 the specified density and moisture requirements~~. Removal of the lifts may be waived and only the upper 6 in. ~~treated~~ compacted in accordance with ~~207.03~~ 203.23 when it is determined, through testing in accordance with 203.24, that the lower lifts comply with the specified density and moisture requirements 203.23.



REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

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SECTION 207 - SUBGRADE

SECTION 214 - GEOSYNTHETICS

214.02 MATERIALS

214.03 FOUNDATION PREPARATION

214.05 METHOD OF MEASUREMENT

214.06 BASIS OF PAYMENT

In sections where ~~rock~~, shale, ~~sandstone~~ or ~~shale and rockits~~ mixtures are encountered, these materials shall be undercut ~~1224~~ in. below the subgrade elevation and replaced with coarse aggregate No. 53 or No. 73 and compacted in accordance with 301.06. *Geotextiles used shall be used in accordance with 918.02.* All irregularities and holes shall be graded ~~to provide positive drainage with either coarse aggregate No. 53 or No. 73.~~ Where necessary, finishing to subgrade elevation shall be accomplished using No. 11 or No. 12 crushed stone. *If an aggregate base is part of the HMA pavement structure, reduce the above 24 in. excavation depth shall be reduced by the thickness of the aggregate base.*

~~The existing railroad ballast and railroad bed material shall be excavated to the depth specified for subgrade treatment, Type V and graded as shown on the plans, or as directed by the Engineer, in order to provide the subgrade width required for the proposed pavement section, including side slopes. Excavation and grading of the ballast and bed material shall include any cuts and fills necessary to account for erosion or degradation of the ballast in localized areas. Cuts and fills shall be balanced within sections approximately 300 ft in length along the profile of the pavement. The graded ballast and bed material shall be compacted in accordance with the applicable provisions of 203 prior to placement of the coarse aggregate No. 53. The 3 in. compacted aggregate as part of the subgrade treatment Type V shall be compacted to 100% prior to the placement of the pavement.~~

When conditions are encountered below the specified subgrade treatment depth that prevent achieving the specified subgrade compaction, such conditions shall be corrected *in accordance with 203.09 or as directed.*

*Proof rolling shall be performed in accordance with 203.26. The proof rolling shall cover the entire subgrade surface. The maximum allowable deflection or rutting in subgrade shall not be greater than 1/2 in.*

**207.05 Method of Measurement**

Subgrade treatment will be measured in both cut and fill areas by the square yard per type. Chemicals for modification, excavation, aggregates, and geogrid materials will not be measured.

The undercutting of rock, where encountered, will be measured in accordance with 203.27(b).

**207.06 Basis of Payment**

The accepted quantities of subgrade treatment will be paid for at the contract unit price per square yard per type, complete in place. In areas where shallow utilities are encountered or the Contractor elects to use Type IC for Type IB, payment will be made at the price of Type IB.

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

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SECTION 207 - SUBGRADE  
SECTION 214 - GEOSYNTHETICS  
214.02 MATERIALS  
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214.06 BASIS OF PAYMENT

The undercutting of rock, where encountered, will be measured in accordance with 203.27.

Payment will be made under:

**Pay Item**

**Pay Unit Symbol**

Subgrade Treatment, Type \_\_\_\_\_ SYS

The cost of subgrade treatments including testing, sampling, aggregates ~~for cut or at-grade areas~~, chemicals for modification, geogrid, ~~geotextile and geocell confining system, coarse aggregate for subgrade Type IC, Type II, Type IV, Type IVA and Type V,~~ water, and the excavation required ~~for the methods chosen by the Contractor~~ shall be included in the cost of the pay item for subgrade treatment, type.

The cost of excavation and grading of existing railroad ballast and railroad bed material shall be included in the cost of subgrade treatment, Type V.

Where conditions exist below the specified subgrade compaction depth that prevent achieving the specified compaction, payment for correcting such conditions will be made based on the directed method of treatment.

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

SECTION 207 - SUBGRADE  
SECTION 214 - GEOSYNTHETICS  
214.02 MATERIALS  
214.03 FOUNDATION PREPARATION  
214.05 METHOD OF MEASUREMENT  
214.06 BASIS OF PAYMENT

214-X-XXX GEOCELL CONFINING SYSTEM

(Adopted xx-xx-17)

The Standard Specifications are revised as follows:

SECTION 214, BEGIN LINE 9, INSERT AS FOLLOWS:

**214.02 Materials**

Materials shall be in accordance with the following:

Geocell Confining System .....	918.04
Geogrid.....	918.05
Geotextile for Pavement and Subgrade.....	918.02
Coarse Aggregate .....	904.03

Note 1: Coarse Aggregate No. 2, 5, 43, 53, 73, shall be used only.

Note 2: ACBF Slag shall not be allowed.

SECTION 214, AFTER LINE 101, INSERT AS FOLLOWS:

**(d) Geocell Confining System**

*The Contractor shall construct the grade in accordance with 203. A layer of geotextile shall be placed in accordance with 214.03(b) and shall be anchored at the roadway edge when widening or when intersecting an existing roadway. The geocell confining system, GCS, shall be placed and anchored as shown on the plans or as directed. The Contractor shall ensure that the GCS is anchored vertically and the geocell shall be filled with a minimum of 3 in. of coarse aggregate No. 5, ~~or~~ No. 8, or No. 43. If the ~~contractor~~ Contractor chooses No. 5 or No. 8, geotextile in accordance with 918.02(a), Type 1B shall be placed on the GCS before placing No. 53 or No. 73. The GCS shall be oriented with the smaller cell dimension perpendicular to the roadway. The remaining GCS shall be filled with No. 53 or No. 73 and at least 9 in. of No. 53 or No. 73 shall be placed on the GCS. The aggregate shall be back dumped and compacted with a light roller in accordance with 301. No trucks or construction vehicles shall be allowed on the GCS. A light tracked bulldozer or other equipment may be used as directed. A 6 in. lift above GCS shall be compacted with low frequency and amplitude, with a minimum of six passes. The remaining aggregate shall be placed and compacted lightly at first, then with high amplitude. Efforts shall be made to ensure that the geotextile, and GCS, ~~is~~ are in tension. The Contractor may propose an alternate means of providing a typical section for the GCS, and shall submit the proposal to the Engineer for review and approval. The proposal shall be certified by a professional engineer registered in the state of Indiana.*

*GCS shall be constructed in accordance with 207 and 214.*

SECTION 214, AFTER LINE 117, INSERT AS FOLLOWS:

REVISION TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS

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SECTION 207 - SUBGRADE

SECTION 214 - GEOSYNTHETICS

214.02 MATERIALS

214.03 FOUNDATION PREPARATION

214.05 METHOD OF MEASUREMENT

214.06 BASIS OF PAYMENT

~~The geocell confining aggregate system, including geotextiles, will be measured in accordance with 207.05. The quantity will be based on the total area of geocell systems as shown on the plans. The GCS and Excavation required to place GCS will also not be measured.~~

SECTION 214, AFTER LINE 124, INSERT AS FOLLOWS:

~~The geocell confining aggregate system, including geotextiles, shall be included in the cost of subgrade treatment in accordance with 207.06.~~

SECTION 214, AFTER LINE 141, INSERT AS FOLLOWS:

~~The geocell confining system, Anchors, restraint clips, pins or other required, hardware or appurtenances that are required to provide a complete in place system are considered incidental to the GCS and will not be paid for separately. Necessary incidentals required to provide a complete in place system, and the Type IB geotextile if required for the GCS, shall be included in the cost of subgrade treatment in accordance with 207.06.~~

COMMENTS AND ACTION

SECTION 207 - SUBGRADE

214.02 MATERIALS

214.03 FOUNDATION PREPARATION

214.05 METHOD OF MEASUREMENT

214.06 BASIS OF PAYMENT

DISCUSSION:

Mr. Beeson introduced and presented this item stating that language regarding subgrade in 207 has a number of issues. There is a lack of clarity for the subgrade soils requirements and there is currently no requirement for proofrolling. There also exists some confusion with regard to what is to be included in the cost of other items, such as geotextiles. Mr. Siddiki mentioned that there is a need for a geosynthetic confining system for certain subgrade treatment types, and explained the proposed revisions shown.

Mr. Beeson and Mr. Siddiki proposed to include subgrade soil requirements in a table to promote clarity. The subgrade treatment types have also been placed into a table. Further editorial revisions have been incorporated throughout 207 to better organize the construction specifications, and a requirement for proofrolling has been added. Also added is a geosynthetic confining system for certain subgrade treatment type, and 214 has been revised accordingly.

Following much discussion, other editorial revisions are as shown. Mr. Beeson revised his motion.

<p>Motion: Mr. Beeson  Second: Mr. Koch  Ayes: 8  Nays: 0  FHWA Approval: <b>YES</b></p>	<p>Action:</p> <p><input type="checkbox"/> Passed as Submitted  <input checked="" type="checkbox"/> Passed as Revised  <input type="checkbox"/> Withdrawn</p>
<p>Standard Specifications Sections referenced and/or affected:</p> <p>Section 207 begin pg 206; 214.02 pg 224; 214.03 pg 226; 214.05 and 214.06 pg 227</p>	<p><input checked="" type="checkbox"/> 2020 Standard Specifications  <input checked="" type="checkbox"/> Revise Pay Items List  <input checked="" type="checkbox"/> Create RSP (No. <b>207-R-669</b> and <b>214-R-670</b>)</p>
<p>Recurring Special Provision affected:</p> <p>NONE</p>	<p>Effective <b>July 01, 2018</b> Letting  RSP Sunset Date: <b>2020 SS book</b></p>
<p>Standard Drawing affected:</p> <p>NONE</p>	<p>Revise RSP (No. <u>      </u>)  Effective <u>      </u> Letting  RSP Sunset Date: <u>      </u></p>
<p>Design Manual Sections affected:</p> <p>NONE</p>	<p>Standard Drawing  Effective <u>      </u></p>
<p>GIFE Sections cross-references:</p> <p>NONE</p>	<p>Create RPD (No. <u>      </u>)  Effective <u>      </u> Letting  <input checked="" type="checkbox"/> GIFE Update  <u>      </u> SiteManager Update</p>

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

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: The grinding of current pavement bumps over 0.3 inches, as identified by profilograph traces, has been questioned as to whether it is intended to include a range between 0.25 inches to 0.34 inches due to the presumed Department rounding range.

PROPOSED SOLUTION: In order to clarify the intent of the bump correction Specification, the significant digits for a pavement bump will be increased and will be represented as 0.30 rather than 0.3. With this revision, any potential rounding of bump corrections would range from 0.295 to 0.304 inches. This range is more in line with the original intent of the bump grinding specification.

APPLICABLE STANDARD SPECIFICATIONS: 401, 501

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: N/A

APPLICABLE SUB-COMMITTEE ENDORSEMENT:

IMPACT ANALYSIS (attach report):

Submitted By: Gregory Pankow, P.E.

Title: State Construction Engineer

Organization: Division of Construction Management and District Support

Phone Number: 317-232-5502

Date: September 1, 2017

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

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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? No

Construction time? No

Customer satisfaction? Yes

Congestion/travel time? No

Ride quality? Yes

Will this proposal reduce operational costs or maintenance effort? Yes

Will this item improve safety:

For motorists? No

For construction workers? No

Will this proposal improve quality for:

Construction procedures/processes? No

Asset preservation? Yes

Design process? No

Will this change provide the contractor more flexibility? No

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

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

Is this proposal needed for compliance with:

Federal or State regulations? No

AASHTO or other design code? No

Is this item editorial? Yes

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

REVISION TO STANDARD SPECIFICATIONS

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SECTION 401 - QUALITY CONTROL/QUALITY ASSURANCE, QC/QA, HOT MIX  
ASPHALT, HMA, PAVEMENT  
401.18(c) SMOOTHNESS CORRECTION

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 401, BEGIN LINE 638, INSERT AS FOLLOWS:

**(c) Smoothness Correction**

At locations where the profilograph is being used on an intermediate course, all areas having a high or low point deviation in excess of 0.30 in. shall be corrected. After corrective action is taken on an intermediate course, a 16 ft straightedge may be used to verify the adequacy of the corrective action.

At locations where the profilograph is being used on a surface course, all areas having a high or low point deviation in excess of 0.30 in. shall be corrected. All smoothness sections with a deficient profile index in accordance with 401.19(c) shall be corrected. Underlying courses that are exposed by corrective action shall be milled to a depth of 1 1/2 in. and replaced with surface course. After the corrective action is taken on a surface course, the profilograph shall be operated throughout the entire affected smoothness section to verify the adequacy of the corrective action.

At locations where the 16 ft straightedge is used, the pavement variations shall be corrected to 1/4 in. or less. When the 10 ft straightedge is used, the pavement variations shall be corrected to 1/8 in. or less.

If grinding of an intermediate course is used for pavement smoothness corrections, the grinding shall not precede the surface placement by more than 30 calendar days if open to traffic.



REVISION TO STANDARD SPECIFICATIONS

SECTION 501 - QUALITY CONTROL/QUALITY ASSURANCE, QC/QA, PORTLAND CEMENT  
CONCRETE PAVEMENT, PCCP  
501.25 PAVEMENT SMOOTHNESS

(Note: Proposed changes shown highlighted gray)

The Standard Specifications are revised as follows:

SECTION 501, BEGIN LINE 375, INSERT AS FOLLOWS:

**501.25 Pavement Smoothness**

Pavement smoothness will be accepted by means of a profilograph, a 16 ft long straightedge, or a 10 ft long straightedge as described below.

**(a) Profilograph**

When a pay item for Profilograph, PCCP is included in the contract, the Contractor shall furnish, calibrate, and operate an approved profilograph in accordance with ITM 912 for the acceptance of longitudinal smoothness on the mainline traveled way and ramps, including adjacent acceleration or deceleration lanes, where both of the following conditions are met:

1. The design speed is greater than 45 mph.
2. The traveled way or ramp lane width is constant and is 0.1 mi in length or longer.

The profilogram produced shall become the property of the Department. The profilograph shall remain the property of the Contractor.

The project area, less paving exceptions and areas exempt from profilograph operation in accordance with ITM 912, will be divided into individual smoothness sections measuring 0.1 mi in length for each lane. Partial length smoothness sections adjacent to project limits, paving exceptions, or areas exempt from profilograph operation will be considered in accordance with ITM 912.

If the posted speed limit for an entire smoothness section is less than or equal to 45 mph, the section will be exempt from profilograph operation and the smoothness within the section will be accepted by a 16 ft straightedge.

If the posted speed limit is greater than 45 mph for a portion of a smoothness section and is less than or equal to 45 mph for the remainder, the section smoothness acceptance will be as follows:

1. By profilograph for the portion of the section with a posted speed limit greater than 45 mph.
2. By 16 ft straightedge for the portion of the section with a posted speed limit less than or equal to 45 mph.

REVISION TO STANDARD SPECIFICATIONS

SECTION 501 - QUALITY CONTROL/QUALITY ASSURANCE, QC/QA, PORTLAND CEMENT  
CONCRETE PAVEMENT, PCCP  
501.25 PAVEMENT SMOOTHNESS

At locations where the profilograph is required, all high or low point deviations which are greater than 0.30 in. shall be corrected. Corrections shall be made in accordance with 501.25(c).

**(b) 16 ft Straightedge and 10 ft Straightedge**

The Department will furnish and operate 16 ft and 10 ft straightedges as described below. The 16 ft straightedge is used to accept smoothness along the direction of mainline traffic and the 10 ft straightedge is used to accept smoothness transverse to the direction of mainline traffic. This includes longitudinal smoothness on public road approaches and median crossovers.

For contracts which include the profilograph, PCCP pay item, the 16 ft long straightedge will be used to accept longitudinal smoothness at the following locations:

1. All mainline traveled way lanes shorter than 0.1 mi.
2. All mainline traveled way lanes within smoothness sections with posted speed limits less than or equal to 45 mph throughout the entire section length.
3. All mainline traveled way lanes at locations exempted from profilograph operation in accordance with ITM 912.
4. All tapers.
5. All turn lanes, including bi-directional left turn lanes.
6. All ramps with design speeds of 45 mph or less.
7. All acceleration and deceleration lanes associated with ramps with design speeds of 45 mph or less.
8. All shoulders.

For contracts where the profilograph is not used for smoothness acceptance, the 16 ft straightedge will be used to accept longitudinal smoothness at the above locations and on all mainline traveled way lanes and ramps with design speeds greater than 45 mph. Smoothness acceptance on ramp acceleration or deceleration lanes will also be accepted by the 16 ft straightedge.

The 10 ft long straightedge shall be used for transverse slopes, approaches, and crossovers.

REVISION TO STANDARD SPECIFICATIONS

SECTION 501 - QUALITY CONTROL/QUALITY ASSURANCE, QC/QA, PORTLAND CEMENT  
CONCRETE PAVEMENT, PCCP  
501.25 PAVEMENT SMOOTHNESS

As soon as the PCCP has cured sufficiently, the smoothness may be checked. The Department may direct that the pavement profile be evaluated within 24 h following placement. When profile testing is consistently outside pavement surface tolerances, the paving operation shall be discontinued until an amended QCP is submitted.

**(c) Smoothness Correction**

Pavement smoothness variations outside specified tolerances shall be corrected by grinding with a groove type cutter or by replacement. Grinding will not be allowed until the PCCP is 10 days old or the flexural strength test is 550 psi or greater. The grinding of the pavement to correct the profile shall be accomplished in either the longitudinal or the transverse direction. The PCCP texture after grinding shall be uniform. If the grinding operation reduces the tining grooves to a depth of less than 1/16 in. and the longitudinal length of the removal area exceeds 15 ft, or two or more areas are within 30 ft of each other, the PCCP shall be re-textured in accordance with 504.03.

At locations where the profilograph is used, all areas having a high or low point deviation in excess of 0.30 in. shall be corrected. In addition, smoothness sections with a deficient profile index in accordance with 501.28(d) shall be corrected. After the corrective action is complete, the profilograph shall be operated throughout the entire affected smoothness section to verify the adequacy of the corrective action.

At locations where the 16 ft straightedge is used, the pavement variations shall be corrected to 1/4 in. or less. At locations where the 10 ft straightedge is used, the pavement variations shall be corrected to 1/8 in. or less.

COMMENTS AND ACTION

401.18(c) SMOOTHNESS CORRECTION  
501.25 PAVEMENT SMOOTHNESS

DISCUSSION:

This item was introduced and presented by Mr. Pankow who explained that the grinding of current pavement bumps over 0.3 inches, as identified by profilograph traces, has been questioned as to whether it is intended to include a range between 0.25 inches to 0.34 inches due to the presumed Department rounding range.

Mr. Pankow proposed that in order to clarify the intent of the bump correction Specification, the significant digits for a pavement bump will be increased and will be represented as 0.30 rather than 0.3. With this revision, any potential rounding of bump corrections would range from 0.295 to 0.304 inches. This range is more in line with the original intent of the bump grinding specification.

Motion: Mr. Pankow Second: Mr. Beeson Ayes: 9 Nays: 0 FHWA Approval: <b>YES</b>	Action:  <input checked="" type="checkbox"/> Passed as Submitted <input type="checkbox"/> Passed as Revised <input type="checkbox"/> Withdrawn
Standard Specifications Sections referenced and/or affected:  401.18 pg 273; 501.25 pg 348-350	<input checked="" type="checkbox"/> 2020 Standard Specifications  <input type="checkbox"/> Revise Pay Items List
Recurring Special Provision affected:  NONE	<input checked="" type="checkbox"/> Create RSP (No. <b>400-R-667</b> and <b>501-R-668</b> ) Effective <b>Feb. 01, 2018</b> Letting RSP Sunset Date: <b>2020 SS book</b>
Standard Drawing affected:  NONE	<input type="checkbox"/> Revise RSP (No. <input type="text"/> ) Effective <input type="text"/> Letting RSP Sunset Date: <input type="text"/>
Design Manual Sections affected:  NONE	<input type="checkbox"/> Standard Drawing Effective
GIFE Sections cross-references:  NONE	<input type="checkbox"/> Create RPD (No. <input type="text"/> ) Effective <input type="text"/> Letting  <input type="checkbox"/> GIFE Update  <input type="checkbox"/> SiteManager Update

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

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PROPOSAL TO STANDARDS COMMITTEE

PROBLEM(S) ENCOUNTERED: In an effort to increase traffic safety and encourage driver awareness, some Contractors, along with District Construction, have requested assistance from law enforcement officers to improve work zone safety conditions.

PROPOSED SOLUTION: Develop a Unique Special Provision which provides for the presence of law enforcement officers, with vehicles, to assist with the safe, efficient, orderly movement of traffic and to enhance worker safety.

APPLICABLE STANDARD SPECIFICATIONS: 801

APPLICABLE STANDARD DRAWINGS: N/A

APPLICABLE DESIGN MANUAL SECTION: N/A

APPLICABLE SECTION OF GIFE: N/A

APPLICABLE RECURRING SPECIAL PROVISIONS: N/A

PAY ITEMS AFFECTED: Create/define a unique pay item for Law Enforcement.

IMPACT ANALYSIS (attach report): Yes

Submitted By: Robert Goldner

Title: Construction Technical Support Manager

Organization: Indiana Department of Transportation

Phone Number: 317-232-7758

Date: September 1, 2017

APPLICABLE SUB-COMMITTEE ENDORSEMENT:

Ad hoc

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

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IMPACT ANALYSIS REPORT CHECKLIST

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

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

Does this item appear in any other specification sections? No.

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

Will this proposal improve:

Construction costs? Possibly

Construction time? No

Customer satisfaction? Possibly

Congestion/travel time? Possibly

Ride quality? N/A

Will this item improve safety:

For motorists? Yes

For construction workers? Yes

Will this proposal improve quality for:

Construction procedures/processes? N/A

Asset preservation? N/A

Design process? N/A

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

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

Is this item editorial? No.

Please provide any further information as to why this proposal should be placed on the Standards Committee meeting Agenda: The intention of this special provision is to improve work zone safety, providing for safer conditions for both construction workers and the motoring public.

REVISION TO STANDARD PROVISIONS

801-R-xxx LAW ENFORCEMENT OFFICER FOR WORK ZONE SAFETY

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801-R-xxx LAW ENFORCEMENT OFFICER FOR WORK ZONE SAFETY

(Adopted xx-xx-17)

**Description**

This work shall consist of providing a Law Enforcement Officer, LEO, to assist with the safe, efficient, orderly movement of traffic and to enhance worker safety during construction activities.

**Materials**

Materials shall be in accordance with 801.02 and as described herein.

**Construction Requirements**

Traffic Control and work zone safety shall be in accordance with 801.

Some uses for the LEO may include: ~~providing a presence during~~ set up; tear down; substantial traffic shifts; or when new lane closure arrangements are initiated for long term lane closures or shifts, for the first and last day of major changes in traffic control set up. ~~Use of a LEO shall be required during the entire advance preparation. In addition, other-Other~~ unique project uses may be specified so that overall worker and motorist safety is enhanced. Use of a LEO by the Contractor other than the uses specified will not be allowed at project cost without the prior approval of the Engineer. The LEO shall not be used where the MUTCD specifies that flaggers shall be used.

**Equipment**

Any LEO shall have a fully marked police vehicle with emergency flashing lights and complete markings of the appropriate law enforcement agency. The fully marked police vehicle shall be equipped with an 800 MHz radio/portable radio that contains the local and statewide mutual aid channels within the area the LEO is working.

The Contractor shall establish direct communication with the LEO prior to the start of their shift. The method of communication ~~will~~ shall be at the discretion of the Contractor and may include the exchange of mobile telephone numbers or dedicated communication devices, such as mobile phones and walkie talkies. Dedicated communication devices shall be returned to the Contractor at the end of the LEO's shift.

**Personnel**

The LEO shall be in full police uniform and shall be a graduate of the Indiana Law Enforcement Academy.

In accordance with Indiana Code IC 8-23-2-15(b), the duties of a police officer hired under this special provision shall be:

- (1) Limited to those duties that the police officer normally performs while on active duty; and
- (2) Do not include the duties of a
  - a. Flagman; or

REVISION TO STANDARD PROVISIONS

801-R-xxx LAW ENFORCEMENT OFFICER FOR WORK ZONE SAFETY

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b. Security Officer.

When outside the vehicle, the LEO shall wear the correct ANSI certified high-visibility safety apparel provided by their department.

**Operation**

The Contractor shall be responsible for securing the services of the LEO with the appropriate agency and communicating the intentions of the plans with respect to duties of the LEO.

The Contractor and the LEO shall follow the standards for placement of LEO in work zones set forth by the Federal Highway Administration and the National Cooperative Highway Research Project **Report 746**. Prior to beginning work on a contract, the LEO shall confirm completion of the following National Highway Institute web based training:

Safe and Effective Use of Law Enforcement in Work Zones. FHWA-NHI-13119. Accessible at:

[http://ops.fhwa.dot.gov/wz/traffic\\_mgmt/wzsm.htm](http://ops.fhwa.dot.gov/wz/traffic_mgmt/wzsm.htm)

At least one representative from the Contractor, who has also completed this training, shall be onsite whenever a LEO is present.

~~The Engineer-Contractor shall be informed of responsible for the LEO's duties and placement, and be made aware shall inform the Engineer of any issues that may arise. Duties and placement of the LEO shall be as approved or as directed are subject to approval by the Engineer.~~

The LEO shall report to the Contractor prior to the start of the shift, in order to receive instructions regarding specific work assignments. The LEO shall stay at the project site for the entire duration of their shift and report to the Contractor at the end of the shift. Once the LEO has completed the duties described above and still has time remaining on their shift, the LEO may be asked to patrol through the work zone, with flashing lights off, or be placed at a location to deter motorists from speeding or following too closely. When necessary to leave the project site, the LEO shall first notify the Contractor. The Contractor shall then notify the appropriate Department personnel.

All LEOs shall follow the procedures for infraction and ordinance violation enforcement established by IC 9-21-5-11 while working within the work zone, such as issuing citations for infractions or detaining individuals in violation of traffic laws when and where appropriate.

The LEOs shall not forgo their traffic control responsibilities to apprehend motorists for routine traffic violations, except that enforcement action is encouraged as a mechanism to enhance motorist compliance and increase driver awareness. However, if a motorist's actions are considered to be reckless or endangering to the workers or to the motoring public, then pursuit of the motorist is appropriate. LEOs shall also provide a response to any incident or situation that involves public safety near or within the project limits to ensure the safety of the parties involved, and the motoring public.



REVISION TO STANDARD PROVISIONS

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801-R-xxx LAW ENFORCEMENT OFFICER FOR WORK ZONE SAFETY

**Method of Measurement**

Law enforcement officer for work zone safety will be measured by the number of hours during the phase or phases of traffic control that require the LEO's presence. Each portion of an hour will be measured as a whole hour.

If a LEO is directed by their agency to respond to a situation that is not related to the contract, the time involved in responding to that situation will not be measured for payment.

**Basis of Payment**

Law enforcement officers will be paid for at the contract unit price per hour, at no more than of \$34 per hour.

Payment will be made under:

**Pay Item**

**Pay Unit Symbol**

Law Enforcement Officer.....HR

Though the Contractor is free to pay LEO a higher rate, the Department will only reimburse the Contractor at a rate of \$34.00 per hour.

COMMENTS AND ACTION

801-R-xxx LAW ENFORCEMENT OFFICER FOR WORK ZONE SAFETY

DISCUSSION:

This item was introduced and presented by Mr. Goldner who expressed that in an effort to increase traffic safety and encourage driver awareness, some Contractors, along with District Construction, have requested assistance from law enforcement officers to improve work zone safety conditions.

Mr. Goldner therefore proposed that the committee approve the above shown Special Provision which provides for the presence of law enforcement officers, with vehicles, to assist with the safe, efficient, orderly movement of traffic and to enhance worker safety.

Further discussion ensued with Mr. Guy Boruff, Mr. Koch and Mr. Goldner to ensure proper language exists to ensure public safety as well as traffic control. Additional revisions as discussed and approved, are as shown, with concurrence by Ms. Schwer from the Department's legal division. All agreed that this issue requires additional discussions apart from this meeting.

This item has been withdrawn pending further review.

<p>Motion: Mr. Goldner  Second: Mr.  Ayes:  Nays:  FHWA Approval:</p>	<p>Action:</p> <p>_____ Passed as Submitted  _____ Passed as Revised  <u>_____ X _____</u> Withdrawn</p>
<p>Standard Specifications Sections referenced and/or affected:</p> <p>801 begin pg 751</p> <p>Recurring Special Provision affected:</p> <p>PROPOSED NEW</p> <p>Standard Drawing affected:</p> <p>NONE</p> <p>Design Manual Sections affected:</p> <p>NONE</p> <p>GIFE Sections cross-references:</p> <p>NONE</p>	<p>_____ 2020 Standard Specifications</p> <p>_____ Revise Pay Items List</p> <p>_____ Create RSP (No. _____)  Effective _____ Letting  RSP Sunset Date:</p> <p>_____ Revise RSP (No. _____)  Effective _____ Letting  RSP Sunset Date:</p> <p>_____ Standard Drawing  Effective</p> <p>_____ Create RPD (No. _____)  Effective _____ Letting</p> <p>_____ GIFE Update</p> <p>_____ SiteManager Update</p>