



Illinois Department of Transportation

Memorandum

To: *

From: Rich Dotson *RD*

Subject: **Special Provision Changes**

Date: May 3, 2012

The following special provisions have been revised for the August 3, 2012 and September 21, 2012 lettings. Please revise your special provision books accordingly.

Recurring Special Provisions

Replace Designer Notes with updated sheets for 2012.
Minor correction was made to Note #14.

Interim Special Provisions

ISP Number	Description
Alphabetic ISP Index (Revised)	Remove existing alphabetic index and insert revised index.
Numerical ISP Index (Revised)	Remove existing numeric index and insert revised index.
100.00 (Revised)	"Errata for the 2012 Standard Specifications (BDE)" Revised to address additional errors.
107.23 (New)	"Tracking the Use of Pesticides (BDE)" Insert new special into all contracts.
108.00 (Revised)	"Payrolls and Payroll Records (BDE)" Revised Designer Note.
253.00 (Revised)	"Planting Woody Plants (BDE)" Revised to include missing pay items.
303.00 (Revised)	"Aggregate Subgrade Improvement (BDE)" Revised to clarify Basis of Payment.
503.19 (Revised)	"Bridge Relief Joint Sealer (BDE)" Revised for a typo.
504.00 (Revised)	"Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet (BDE)" Revised Designer Note.
504.04 (Revised)	"Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews > 30 Degrees with Design Fills > 5 Feet (BDE)" Revised Designer Note.
1020.01 (Revised)	"Self-Consolidating Concrete for Cast-in-Place Construction (BDE)" Revised Designer Note.

Interim Special Provisions (Continued)

ISP Number	Description
1020.16 (Revised)	“Quality Control/Quality Assurance of Concrete Mixtures (BDE)” Revised Designer Note.
1031.00 (Revised)	“Reclaimed Asphalt Pavement (RAP) (BDE)” Correcting a typo.

District Special Provisions & General Notes

District Number	Description
Alphabetic District Index (Revised)	Remove existing alphabetic index and insert revised index.
Numerical District Index (Revised)	Remove existing numeric index and insert revised index.
1004.00 (New)	“Aggregate Optimization of Class PV Mix for Slipform Paving” New District Special to provide and improve aggregate gradation for slipforming.
1004.02 (Revised)	“Concrete Superstructure Aggregate Optimization” Revised special for new requirements.
1030.04 (New)	“Hot-Mix Asphalt – Mixture Design Verification” New Special to require use of Hamburg Wheel for testing.

RD:tdp:\mgr1\winword\progdev\special provisions\interim spec provs\specprovchnngsmemo.doc

Attachment(s)

cc: *N. Jack	Team 2	Team 6	Team 10	Galesburg Design
K. Emert	Team 3	Team 7	Team 11	Local Roads (M. Augspurger)
T. Phillips	Team 4	Team 8	Geometrics	Materials (H. Shoup)
Team 1	Team 5	Team 9	Bridge (T. Inglis)	

SPECIAL PROVISIONS CHECK LIST
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Designer: _____ **FAP:** _____
Contract No.: _____ **Section:** _____
County: _____

√	Dir	File Name	Spec Title	Spec Dates
	BRG\	APSLRP-1.DOC	Approach Slab Repair	E 3/13/97
	DES\	100400.doc	Aggregate Optimization of Class PV Mix for Slipform Paving	E 8/3/12
	DES\	100401.doc	Coarse Aggregate Fill	E 4/29/11
	DES\	100402.doc	Concrete Superstructure Aggregate Optimization	E 8/4/06 R 8/3/12
	DES\	100403b.doc	Coarse Aggregate for Bituminous Courses, Class A	E 6/29/93 R 1/1/07
	DES\	100404.doc	Aggregate Quality	E 7/1/90 R 9/23/96
	DES\	103004.doc	Hot-Mix Asphalt - Mixture Design Verification and Production	E 8/3/12
	DES\	10500.doc	Construction Station Layout	E 7/30/10
	DES\	10506.doc	Prestage Site Construction Meetings	E 6/1/92
	DES\	10507.doc	Removal of Abandoned Underground Utilities	E 1/15/96 R 11/21/96
	DES\	10507a.doc	Status of Utilities/Utilities To Be Adjusted	E 1-21-05
	DES\	10700a.doc	Nationwide 404 Permit Requirements	E 1/22/01 R 8/2/02
	DES\	10731.doc	Location of Underground State Maintained Facilities	E 8/3/07 R 7/31/09
	DES\	10732.doc	Right-of-Way Restrictions	E 7/1/94
	DES\	10803.doc	Delayed Start of Multiple Contracts	E 11/1/01
	DES\	10805a.doc	Date of Completion	E 3/1/90 R 4/28/08
	DES\	10805b.doc	Date of Completion (Plus Working Days)	E 3/1/90 R 7/1/94
	DES\	110303.doc	PCC Automatic Batching Equipment	E 4/23/10
	DES\	20400.doc	Borrow and Furnished Excavation	E 3/7/00 R 4/27/07
	DES\	20500.doc	Geotechnical Reinforcement	E 6/10/93 R 1/1/07
	DES\	20504.doc	Embankment (Restrictions)	E 1/21/05 R 8/3/07
	DES\	20505.doc	Embankment	E 7/1/90 R 8/3/07
	DES\	20505a.doc	Embankment (Small Embankment)	E 10/1/99 R 1/1/07
	DES\	25000.doc	Seeding, Minor Areas	E 7/1/90 R 1/1/07
	DES\	25006a.doc	Mowing	E 12/11/01 R 1/1/12
	DES\	25006b.doc	Mowing	E 12/11/01 R 1/1/12
	DES\	25300.doc	Tree Whip Mixture	E 8/15/91 R 4/25/08
	DES\	25300b.doc	Seedling Mixture A	E 5/5/00 R 11/1/08
	DES\	28100.doc	Grout for Use With Riprap	E 7/30/10
	DES\	28104.doc	Stone Dumped Riprap*	E 4/15/91 R 1/1/07
	DES\	28106.doc	Stone Riprap	E 11/5/10
	DES\	28303.doc	Aggregate Ditch	E 4/15/91 R 10/15/01
	DES\	30101.doc	Proof Rolling	E 4/23/04 R 1/1/07
	DES\	30103.doc	Subgrade Treatment	E 7/1/90 R 4/28/08
	DES\	30200.doc	Soil Modification	E 7/1/90 R 7/30/10
	DES\	31100.doc	Rock Fill	E 10/15/95 R 4/28/08

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DES\	31101.doc	Subbase Granular Material	E 11/5/04
DES\	35500d.doc	Temporary Pavement	E 10/1/95 R 4/23/10
DES\	40600.doc	Clean Existing Pavement Edge Joint	E 1/3/00 R 1/1/07
DES\	40601.doc	Anti-Strip Additive for Hot-Mix Asphalt	E 7/30/10
DES\	40602.doc	Hot-Mix Asphalt - Prime Coat	E 4/29/11
DES\	40604a.doc	Hot-Mix Asphalt Surface Course Surface Tests	E 11/1/03 R 1/1/07
DES\	40613.doc	Payment for Use of Material Transfer Device	E 4/23/10
DES\	40706.doc	Bituminous Prime Coat for Hot-Mix Asphalt Pavement (Full-Depth)	E 8/3/07 R 4/23/10
DES\	40713.doc	Grooved-in Rumble Strip	E 11/16/07 R 7/30/10
DES\	42020.doc	Railroad Approach Pavement	E 10/1/95 R 1/1/07
DES\	42401.doc	Sidewalk Drains	E 3/1/91 R 1/1/07
DES\	42402.doc	Temporary Sidewalks	E 3/1/91 R 2/1/96
DES\	44001.doc	Bridge Wearing Surface Removal	E 7/1/90 R 1/1/07
DES\	44003.doc	Protection of Frames and Lids of Utility Structures	E 3/6/91 R 1/1/07
DES\	44003a.doc	Hot-Mix Asphalt Surface Removal, *** (** mm)	E 3/1/93 R 7/31/09
DES\	44003b.doc	Hot-Mix Asphalt Surface Removal, *** (** mm)	E 2/5/93 R 7/31/09
DES\	44003c.doc	Center Joint Repair System	E 3/1/91 R 1/1/07
DES\	44003d.doc	Pavement Drainage After Cold Milling	E 3/15/96 R 1/1/07
DES\	44003e.doc	Pavement Patching with Hot-Mix Asphalt Surface Removal	E 3/1/97 R 1/1/07
DES\	44003f.doc	Hot-Mix Asphalt Concrete Milling Material	E 11/1/03 R 8/3/07
DES\	44200.doc	Class (*) Patches, Type (**),(***) "	E 1/1/99 R 11/1/07
DES\	44300.doc	Reflective Crack Control Treatment	E 3/1/96 R 1/1/07
DES\	45100.doc	Crack and Joint Sealing	E 6/15/97 R 1/1/07
DES\	48205.doc	Hot-Mix Asphalt Shoulder Resurfacing Required to be Constructed Simultaneously with Mainline Paving	E 4/23/10
DES\	48206.doc	Hot-Mix Asphalt Shoulder Resurfacing Constructed Simultaneously with Mainline Paving	E 1/22/01 R 1/1/07
DES\	50103.doc	Concrete Headwall Removal	E 7/1/90
DES\	50104.doc	Concrete Handrail Removal	E 7/1/90 R 1/1/07
DES\	50300.doc	Bin-Type Retaining Wall	E 7/1/90 R 1/1/07
DES\	50301.doc	Concrete Wearing Surface	E 7/1/90 R 1/1/07
DES\	50302.doc	Surface Filler, Special (Gallon)	E 4/23/10
DES\	50312.doc	Plug Existing Deck Drains	E 1/1/96 R 3/22/01
DES\	50312a.doc	Floor Drain Extension	E 3/22/01
DES\	50317.doc	Bridge Floor Finishing Machine	E 5/1/95 R 1/1/07
DES\	50319.doc	Protective Coat, Special	E 4/23/10
DES\	52100b.doc	Jack and Reposition Bearings	E 11/15/93 R 1/1/09

SPECIAL PROVISIONS CHECK LIST

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Contract No.: _____ **Section:** _____
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DES\	52100c.doc	Jacking and Cribbing	E 1/1/94 R 1/1/07
DES\	54200.doc	Seepage Collar	E 12/1/96
DES\	54201.doc	Remove and Relay Pipe Culverts	E 7/1/90 R 1/1/07
DES\	54204.doc	Pipe Culverts	E 7/1/90 R 1/1/07
DES\	54204e.doc	Backfill - Pipe Culverts	E 10/15/95 R 1/1/07
DES\	55000.doc	Storm Sewer, (Water Main Quality Pipe)	E 1/1/11 R 1/1/12
DES\	55002.doc	Storm Sewer (Special)	E 7/1/90 R 1/1/07
DES\	55007.doc	Backfill, Building Removal	E 8/20/91 R 1/1/07
DES\	55200.doc	Steel Pipe Culvert, Special (Jacked) * inches (* mm)	E 7/1/94 R 1/1/07
DES\	55201.doc	(*Storm Sewer/Pipe Culvert) Jacked in Place, ** inches (** mm)	E 7/1/94 R 1/1/07
DES\	56100.doc	Steel Casings * inches (* mm)	E 7/1/90 R 1/1/07
DES\	60101.doc	Pipe Underdrain	E 8/1/03
DES\	60200a.doc	Inlets, Type G-1	E 10/1/95 R 1/1/07
DES\	60200b.doc	Inlets, Type G-1, Special	E 10/1/95 R 1/1/07
DES\	60200c.doc	Inlets, Type G-1, Double, Special	E 10/1/95 R 1/1/07
DES\	60200d.doc	Inlet Manhole, Type G-1, 4' (1.2 m) Diameter	E 10/1/95 R 1/1/07
DES\	60200e.doc	Inlet-Manhole, Type G-1, 4' (1.2 m) Diameter, Special	E 10/1/95 R 1/1/07
DES\	60200f.doc	Inlet-Manhole, Type G-1, 5' (1.5 m) Diameter	E 10/1/95 R 1/1/07
DES\	60200g.doc	Inlet-Manhole, Type G-1, 5' (1.5 m) Diameter, Special	E 10/1/95 R 1/1/07
DES\	60200h.doc	Inlet-Manhole, Type G-1, 5' (1.5 m) Diameter, Double, Special	E 10/1/95 R 1/1/07
DES\	60200i.doc	Inlet-Manhole, Type G-1, 8' (2.4 m) Diameter, Double, Special	E 10/1/95 R 1/1/07
DES\	60200j.doc	Manhole to be Adjusted with New Type G-1 Frame and Grate	E 10/1/95 R 1/1/07
DES\	60200k.doc	Temporary Inlet Drainage Treatment	E 1/1/97
DES\	60200l.doc	Inlets, Type G-2	E 11/1/03 R 1/1/07
DES\	60200m.doc	Inlets, Type G-1, Double	E 7/31/09
DES\	60504.doc	Filling Existing Inlets	E 7/1/90 R 7/1/94
DES\	60504a.doc	Filling Existing Culverts	E 10/15/95 R 1/1/07
DES\	60504b.doc	Filling Existing Drainage Structures	E 10/15/95 R 1/1/07
DES\	60608.doc	Island Pavement Constructed on Existing Pavement	E 1/1/97 R 1/1/07
DES\	60612.doc	Drainage Holes	E 7/1/90 R 1/1/07
DES\	63000.doc	Erosion Control Curb	E 4/1/91 R 1/1/07
DES\	63001.doc	Guardrail Aggregate Erosion Control	E 2/1/93 R 1/1/07
DES\	63008.doc	Steel Plate Beam Guardrail, Type A, 6.75 Foot Posts	E 7/31/09 R 4/27/12
DES\	63104.doc	Traffic Barrier Terminals, Type 1, Special (Flared) or (Tangent)	E 7/31/09
DES\	63107.doc	Traffic Barrier Terminals, Type 6	E 7/31/09

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DES\	63111c.doc	Traffic Barrier Terminals	E 2/1/96 R 11/5/04
DES\	63114.doc	Traffic Barrier Terminals, Type 2	E 7/31/09
DES\	63200.doc	Guard Post Removal	E 7/1/90 R 1/1/07
DES\	63500.doc	Flexible Delineator Maintenance	E 5/5/92 R 1/1/94
DES\	63501.doc	Flexible Delineators	E 10/1/95 R 1/1/07
DES\	66704.doc	Permanent Survey Marker, Type 1, Bridge Placement	E 7/1/90 R 3/11/11
DES\	66802.doc	Permanent Survey Ties	E 4/1/91 R 4/27/12
DES\	67005.doc	Equipment Vault for Nuclear Testing Equipment	E 6/24/93 R 7/1/94
DES\	68000.doc	Railroad Track Removal	E 11/1/94 R 1/1/07
DES\	68000a.doc	Railroad Ties Removal and Disposal	E 11/1/94 R 10/1/95
DES\	68300.doc	Mortared Stone Wall	E 3/1/91 R 1/1/07
DES\	70100.doc	Traffic Control Plan	E R
DES\	70106.doc	Speeding Penalty	E 1/21/05
DES\	70108b.doc	Traffic Control and Protection Standard 701331 (Special)	E 10/15/95 R 7/31/09
DES\	70114.doc	Width Restriction Signing	E 11/1/07 R 1/1/12
DES\	70120.doc	Traffic Control and Protection BLR 21 and BLR 21 (Special)	E 4/25/08
DES\	70121.doc	Traffic Control and Protection BLR 22 and BLR 22 (Special)	E 4/25/08 R 7/31/09
DES\	70122.doc	Traffic Control and Protection Standard 701606 (Special)	E 7/31/09
DES\	70300.doc	Pavement Marking Removal/Work Zone Pavement Marking Removal	E 4/29/05
DES\	70400.doc	Temporary Concrete Barrier, State Owned and Temporary Concrete Barrier Terminal Sections, State Owned	E 5/1/91 R 1/1/07
DES\	70400a.doc	Temporary Concrete Barrier Reflectors	E 1/21/05
DES\	78000.doc	Thermoplastic Pavement Marking Equipment	E 7/1/90 R 1/1/07
DES\	78002.doc	Grooving For Recessed Pavement Marking	E 1/1/11
DES\	78007.doc	Preformed Plastic Pavement Markings	E 7/31/09
DES\	78100.doc	Temporary Raised Reflective Pavement Marker	E 10/1/95 R 1/1/07
DES\	81000.doc	Conduit, Pushed or Trenched	E 10/1/91 R 1/1/07
DES\	81500.doc	Trench & Backfill, Special for Conduit Installation Beneath Bituminous Shoulders	E 3/21/94 R 1/1/07
DES\	86300.doc	Terminal Facility	E 3/21/94 R 1/1/07
DES\	87300.doc	Electric Cable in Conduit, Lead-In, No. 18	E 3/21/94 R 10/15/01
DES\	88600.doc	Detector Loop, Special for Traffic Counters	E 3/21/94 R 1/1/07
DES\	88600a.doc	Detector Loops, Type 1	E 3/1/96 R 8/3/07

Designer Notes
Recurring Special Provisions

Designer Notes for January 1, 2012 Recurring Special Provisions

(Updated for August 3, 2012 letting)

1. Designer Note: This check sheet is required in all contracts that involve Federal funds.
2. Designer Note: This check sheet is required in all Federal contracts.
3. Designer Note: This check sheet is required in all contracts.
4. Designer Note: This check sheet is required in all contracts involving State funds only.
5. Designer Note: This check sheet is required in all contracts involving State funds only.
6. Designer Note: Include in all contracts where Asbestos Bearing Pad Removal is part of the structure work.
7. Designer Note: Include in all contracts where the existing bridge deck HMA surface is to be removed and the waterproofing membrane contains asbestos and will be removed. The designer must have in the project files a completed "Asbestos Determination Certificate" for every bridge within the project limits. The District Bridge Maintenance Engineer and/or the District Hydraulics Engineer can provide copies of these certificates. If your project has any bridge deck containing asbestos, insert this special provision as well as the General Notes entitled "Asbestos Bridge Wearing Surface Removal".
8. Designer Note: This check sheet will be required for those contracts that will involve Contractor work on haul road stream crossings, other temporary stream crossings, and in stream work pads. Contracts that would generally involve this type of work would be bridges/structures, new or rebuilt, and contracts involving earth excavation, embankment or borrow excavation. Discuss these types of work operations and any other stream related work with your Project Engineer. Any in-stream crossing or other work will require an individual 404 permit from the Corps of Engineers. Be sure to let the Hydraulics Engineer (Jim Miller) know as soon as possible that a Corps permit will be needed. The permit has a lead-time and is required for the project to proceed to letting.
9. Designer Note: (See #10 below.) Depending on IDOT manpower, this check sheet will be included as a pay item when the Contractor will be required to do all contract staking, except bridges. A large span culvert measuring more than 6 meters (20 feet) along the survey line will require a structure number be assigned to the structure. This will require that the Designer, if he is calling for Contractor staking, use the check sheet entitled Construction Layout Stakes and not the check sheet entitled Construction Layout Stakes Except for Structures. Discuss with the Bureau of Project Implementation (Construction) as to what manpower sources are available.
10. Designer Note: Depending on IDOT manpower needs, this check sheet will be included as a pay item when the Contractor will be required to do all contract staking, including bridges. This check sheet should be used for a large box culvert or a multi pipe that will require a structure number. This would be a structure that will have a span length along survey line of more than 6 meters (20 feet).

Discuss this check sheet with the Bureau of Project Implementation (Construction) as to what manpower sources are available.

11. Designer Note: This special provision specifies the requirements for geotextile fabric for use on railroad crossings.

Include only on projects where the railroad crossing is a contract pay item. Also may be required for temporary crossings.

Railroad crossings are generally (99%) handled by the Railroad through an agreement and not part of our contract. If in doubt as to how to handle, discuss with Project Support.

12. Designer Note: Use this check sheet where existing pavement is being reconstructed and voids are evident under the existing pavement that can be filled by grouting. Discuss with Maintenance Field Engineer responsible for the area.

NOTE: A detail of the slab movement detection device is included in CADD and this drawing must be included in your contract plans.

13. Designer Note: This check sheet will be required on a contract where cold milling is required but where the cold milled area will not be overlaid. Include CADD Standard 440001 in your plans. If your contract is to be cold milled and the area overlaid, you should use one of the two District special provisions on this subject, not this check sheet.

14. Designer Note: This check sheet requires that once a lift of bituminous resurfacing is placed on a lane of pavement, any adjoining bituminous shoulder shall be resurfaced with an equal thickness before any other lane is resurfaced for each lift of resurfacing. Insert this special on resurfacing projects which meet the following criteria: All four lane interstates and freeways, all four lane expressways, four lane highways with ADT > 25,000 or peak one-way VPH > 1700, two lane highways with ADT > 10,000 or peak one-way VPH > 800.

15. Designer Note: This check sheet should be used on resurfacing projects to address areas which need repair, but do not warrant full depths repair. Joints and cracks, which exhibit environmental distresses such as spalling and "D" cracking or contain maintenance patching, are eligible for using this method of repair. Joints and cracks which exhibit load related distresses such as pumping, alligator cracking, corner breaks, compression failures, subgrade failures or punch outs should not use this method of repair. Discuss use with your Project Engineer.

16. Designer Note: Intended to remove thick bituminous overlay so that the original pavement can be examined and then patched, if necessary. It also further defines specific pay items for work involved.

17. Designer Note: This check sheet was developed by Materials and Physical Research as an alternate to replacing Preformed Joint Sealer and Neoprene Expansion Joints up to 65 mm (2 ½ inches). Include with any projects that have POLYMER CONCRETE as a pay item.

18. Designer Note: This rehabilitation process can be used in a variety of gravity applications such as trenchless rehabilitation of sanitary sewers, storm sewers, and process piping. Insert this special provision if trenchless repair of the items listed above is selected. Prior to selection consult your Project Engineer. Additional information such as size of pipe to be lined, number of laterals, and manhole treatment may be necessary.
19. Designer Note: This check sheet calls for CA 16 for backfill and wrapping the trench. Discuss usage with Implementation.
20. Designer Note: This check sheet was developed by the Central Bureau of Traffic and should be incorporated into all plans containing guardrail, barrier wall or bridge rail. The designer is required to specify the color of all reflectors to be placed and to provide appropriate traffic control standards for the installation of reflectors/markers. It is the District's option to select the type of reflector marker for use on guardrail and barrier walls, and the type of terminal marker for guardrail. This option should be specified by the pay item used. The District prefers use of the top mounted reflector Type C on barrier walls. Include Highway Standards 635006 and 635011 in the plans if this Check Sheet is used.
21. Designer Note: This check sheet was developed to obtain the desired pipe coating on bike racks. Use on all projects with bike racks.
22. Designer Note: This special provision covers the installation of temporary glare screens on temporary concrete barrier. Glare screens may be needed on temporary concrete barriers separating opposing lanes of traffic, especially on horizontal and vertical curves where oncoming headlight glare could be a problem. Discuss usage with your project engineer.
23. Designer Note: This special provision is for use on bridge contracts where staging is required and the District wants the contractor to have an option to post-mounting the temporary bridge and traffic signals. Discuss use with the District Traffic Control Technician.
24. Designer Note: Intended for use on all freeway/expressway contracts with lane closures as shown on Highway Standard 701400. It may also be used at the District's discretion on high visibility projects and/or projects that will require several months to complete.
25. Designer Note: This check sheet should be included for all projects containing roadway lighting. The designer should also include CADD Standard 701301-D4 in the plans.
26. Designer Note: This check sheet was developed to address difficulties with obtaining metric sized bolts. Include in all metric projects, which contain or could contain any type of bolted connection.
27. Designer Note: This check sheet was developed to address difficulties with obtaining metric sized reinforcement bars. Include in all metric projects containing reinforcement bars.

28. Designer Note: This special provision not to be used in District Four. Not recommended for use on recently constructed pavements or bridge decks. This is not recommended when there is steel in the patches due to the corrosion the calcium chloride causes.
29. Designer Note: Insert into contracts where a PCC inlay or overlay is selected. This method is for locations where excessive rutting has become a problem. Discuss with the Project Engineer, Operations, and Implementation before using. Also, refer to BDE Manual, Chapter 53 before using.
30. Designer Note: Do not use Check Sheet #30 unless requested by Materials.
31. Designer Note: Do not use Check #31. Use BDE special instead. This check sheet has been modified by BDE Special "Quality Control/Quality Assurance of Concrete Mixtures."

**Index for
Supplemental Specifications
and
Recurring Special Provisions**

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2012

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS and frequently used RECURRING SPECIAL PROVISIONS.

SUPPLEMENTAL SPECIFICATIONS

Std. Spec. Sec.

Page No.

No Supplemental Specifications this year.

RECURRING SPECIAL PROVISIONS

The following RECURRING SPECIAL PROVISIONS indicated by an "X" are applicable to this contract and are included by reference:

<u>CHECK SHEET #</u>	<u>PAGE NO.</u>
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BDE Special Provisions Checklist

August 3, 2012 & September 21, 2012 Letting

Note: Specials that go in every contract have already been marked with an "X" for you.

Designer: _____
Contract No.: _____
Letting: _____

FAP: _____
Section: _____
County: _____

BDE SPECIAL PROVISIONS
 For the August 3 and September 21, 2012 Lettings

The following special provisions indicated by an "x" are applicable to this contract and will be included by the Project Development and Implementation Section of the BD&E. An * indicates a new or revised special provision for the letting.

<u>File Name</u>	<u>#</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80240	1	Above Grade Inlet Protection	July 1, 2009	Jan. 1, 2012
80099	2	Accessible Pedestrian Signals (APS)	April 1, 2003	Jan. 1, 2007
80275	3	Agreement to Plan Quantity	Jan. 1, 2012	
* 80274	4	Aggregate Subgrade Improvement	April 1, 2012	Aug. 1, 2012
80192	5	Automated Flagger Assistance Device	Jan. 1, 2008	
80173	6	Bituminous Materials Cost Adjustments	Nov. 2, 2006	Jan. 1, 2012
80241	7	Bridge Demolition Debris	July 1, 2009	
* 80276	8	Bridge Relief Joint Sealer (NOTE: This special provision was previously named "Concrete Joint Sealer".)	Jan. 1, 2012	Aug. 1, 2012
50261	9	Building Removal-Case I (Non-Friable and Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50481	10	Building Removal-Case II (Non-Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50491	11	Building Removal-Case III (Friable Asbestos)	Sept. 1, 1990	April 1, 2010
50531	12	Building Removal-Case IV (No Asbestos)	Sept. 1, 1990	April 1, 2010
80291	13	Calcium Chloride Accelerator for Class PP-2 Concrete	April 1, 2012	
80292	14	Coarse Aggregate in Bridge Approach Slabs/Footings	April 1, 2012	
80198	15	Completion Date (via calendar days)	April 1, 2008	
80199	16	Completion Date (via calendar days) Plus Working Days	April 1, 2008	
80293	17	Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet	April 1, 2012	
80294	18	Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews > 30 Degrees with Design Fills > 5 Feet	April 1, 2012	
80277	19	Concrete Mix Design – Department Provided	Jan. 1, 2012	
80261	20	Construction Air Quality – Diesel Retrofit	June 1, 2010	
80237	21	Construction Air Quality – Diesel Vehicle Emissions Control	April 1, 2009	Jan. 2, 2012
80239	22	Construction Air Quality – Idling Restrictions	April 1, 2009	
80177	23	Digital Terrain Modeling for Earthwork Calculations	April 1, 2007	
80029	24	Disadvantaged Business Enterprise Participation	Sept. 1, 2000	Aug. 2, 2011
80272	25	Drainage and Inlet Protection Under Traffic	April 1, 2011	Jan. 1, 2012
* 80296	26	X Errata for the 2012 Standard Specifications	April 1, 2012	Aug. 1, 2012
80228	27	Flagger at Side Roads and Entrances	April 1, 2009	
80265	28	Friction Aggregate	Jan. 1, 2011	
80229	29	Fuel Cost Adjustment	April 1, 2009	July 1, 2009
80169	30	High Tension Cable Median Barrier	Jan. 1, 2007	April 1, 2009
80246	31	Hot-Mix Asphalt – Density Testing of Longitudinal Joints	Jan. 1, 2010	April 1, 2012
80109	32	Impact Attenuators	Nov. 1, 2003	Jan. 1, 2012
80110	33	Impact Attenuators, Temporary	Nov. 1, 2003	Jan. 1, 2012
80045	34	Material Transfer Device	June 15, 1999	Jan. 1, 2009
80203	35	Metal Hardware Cast into Concrete	April 1, 2008	Jan. 1, 2012
80297	36	Modified Urethane Pavement Marking	April 1, 2012	
80165	37	Moisture Cured Urethane Paint System	Nov. 1, 2006	Jan. 1, 2010
80253	38	Movable Traffic Barrier	Jan. 1, 2010	Jan. 1, 2012
80231	39	Pavement Marking Removal	April 1, 2009	
80298	40	Pavement Marking Tape Type IV	April 1, 2012	
80254	41	Pavement Patching	Jan. 1, 2010	

Note: Specials that go in every contract have already been marked with an "X" for you.

<u>File Name</u>	<u>#</u>	<u>Special Provision Title</u>	<u>Effective</u>	<u>Revised</u>
80022	42	X Payments to Subcontractors	June 1, 2000	Jan. 1, 2006
80290	43	Payrolls and Payroll Records	Jan. 2, 2012	
* 80278	44	Planting Woody Plants	Jan. 1, 2012	Aug. 1, 2012
80279	45	Portland Cement Concrete	Jan. 1, 2012	
80299	46	Portland Cement Concrete Inlay or Overlay	April 1, 2012	
80280	47	Portland Cement Concrete Sidewalk	Jan. 1, 2012	
80300	48	Preformed Plastic Pavement Marking Type D - Inlaid	April 1, 2012	
80218	49	Preventive Maintenance – Bituminous Surface Treatment	Jan. 1, 2009	April 1, 2012
80219	50	Preventive Maintenance – Cape Seal	Jan. 1, 2009	April 1, 2012
80220	51	Preventive Maintenance – Micro-Surfacing	Jan. 1, 2009	April 1, 2012
80221	52	Preventive Maintenance – Slurry Seal	Jan. 1, 2009	April 1, 2012
80281	53	Quality Control/Quality Assurance of Concrete Mixtures	Jan. 1, 2012	
34261	54	Railroad Protective Liability Insurance	Dec. 1, 1986	Jan. 1, 2006
80157	55	Railroad Protective Liability Insurance (5 and 10)	Jan. 1, 2006	
* 80172	56	Reclaimed Asphalt Pavement (RAP)	Jan. 1, 2007	Aug. 1, 2012
80282	57	Reclaimed Asphalt Shingles (RAS)	Jan. 1, 2012	
80283	58	Removal and Disposal of Regulated Substances	Jan. 1, 2012	
80224	59	Restoring Bridge Approach Pavements Using High-Density Foam	Jan. 1, 2009	Jan. 1, 2012
80271	60	Safety Edge	April 1, 2011	
80152	61	Self-Consolidating Concrete for Cast-In-Place Construction	Nov. 1, 2005	April 1, 2012
80132	62	Self-Consolidating Concrete for Precast and Precast Prestressed Products (NOTE: This special provision was previously named "Self-Consolidating Concrete for Precast Products")	July 1, 2004	April 1, 2012
80284	63	Shoulder Rumble Strips	Jan. 1, 2012	
80285	64	Sidewalk, Corner or Crosswalk Closure	Jan. 1, 2012	
80127	65	Steel Cost Adjustment	April 2, 2004	April 1, 2009
80255	66	Stone Matrix Asphalt	Jan. 1, 2010	Jan. 1, 2012
80143	67	X Subcontractor Mobilization Payments	April 2, 2005	April 1, 2011
80075	68	Surface Testing of Pavements	April 1, 2002	Jan. 1, 2007
80286	69	Temporary Erosion and Sediment Control	Jan. 1, 2012	
80225	70	Temporary Raised Pavement Marker	Jan. 1, 2009	
80256	71	Temporary Water Filled Barrier	Jan. 1, 2010	Jan. 1, 2012
* 80301	72	Tracking the Use of Pesticides	Aug. 1, 2012	
80287	73	Type G Inlet Box	Jan. 1, 2012	
80273	74	Traffic Control Deficiency Deduction	Aug. 1, 2011	
20338	75	Training Special Provisions	Oct. 15, 1975	
80270	76	X Utility Coordination and Conflicts	April 1, 2011	Jan. 1, 2012
80288	77	Warm Mix Asphalt	Jan. 1, 2012	
80289	78	Wet Reflective Thermoplastic Pavement Marking	Jan. 1, 2012	
80071	79	Working Days	Jan. 1, 2002	

The following special provisions are either in the 2012 Standard Specifications, the 2012 Recurring Special Provisions, or the special provision Portland Cement Concrete:

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80186	Alkali-Silica Reaction for Cast-in-Place Concrete	The special provision Portland Cement Concrete	Aug. 1, 2007	Jan. 1, 2009
80213	Alkali-Silica Reaction for Precast and Precast Prestressed Concrete	The special provision Portland Cement Concrete	Jan. 1, 2009	
80207	Approval of Proposed Borrow Areas, Use Areas, and/or Waste Areas	Article 107.22	Nov. 1, 2008	Nov. 1, 2010
80166	Cement	Section 1001	Jan. 1, 2007	April 1, 2011
80260	Certification of Metal Fabricator	Article 106.08	July 1, 2010	

Note: Specials that go in every contract have already been marked with an "X" for you.

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80094	Concrete Admixtures	Section 1021 and the special provision Portland Cement Concrete	Jan. 1, 2003	April 1, 2009
80226	Concrete Mix Designs	The special provision Portland Cement Concrete	April 1, 2009	
80227	Determination of Thickness	Articles 353.12, 353.13, 353.14, 354.09, 355.09, 356.07, 407.10, 482.06, and 483.07	April 1, 2009	
80179	Engineer's Field Office Type A	Articles 670.02 and 670.07	April 1, 2007	Jan. 1, 2011
80205	Engineer's Field Office Type B	Articles 670.04 and 670.07	Aug. 1, 2008	Jan. 1, 2011
80189	Equipment Rental Rates	Articles 105.07 and 109.04	Aug. 2, 2007	Jan. 2, 2008
80249	Frames and Grates	Articles 609.02 and 609.04	Jan. 1, 2010	
80194	HMA – Hauling on Partially Completed Full-Depth Pavement	Article 407.08	Jan. 1, 2008	
80245	Hot-Mix Asphalt – Anti-Stripping Additive	Article 1030.04	Nov. 1, 2009	
80250	Hot-Mix Asphalt – Drop-Offs	Article 701.07	Jan. 1, 2010	
80259	Hot Mix Asphalt – Fine Aggregate	Articles 1003.01 and 1003.03	April 1, 2010	
80252	Improved Subgrade	Articles 302.04, 302.07, 302.08, 302.10, 302.11, 310.04, 310.08, 310.10, 310.11, and 311.05	Jan. 1, 2010	
80266	Lane Closure, Multilane, Intermittent or Moving Operation, for Speeds ≤ 40 MPH	Article 701.19	Jan. 1, 2011	Jan. 2, 2011
80230	Liquidated Damages	Article 108.09	April 1, 2009	April 1, 2011
80267	Long-Span Guardrail over Culvert	Articles 630.07 and 630.08	Jan. 1, 2011	
80262	Mulch and Erosion Control Blankets	Articles 251.03, 251.04, 251.06, 251.07, and 1081.06	Nov. 1, 2010	April 1, 2011
80180	National Pollutant Discharge Elimination System / Erosion and Sediment Control Deficiency Deduction	Article 105.03	April 1, 2007	Nov. 1, 2009
80208	Nighttime Work Zone Lighting	Section 702	Nov. 1, 2008	
80232	Pipe Culverts	Articles 542.03, 542.04, 542.11, and 1040.04	April 1, 2009	April 1, 2010
80263	Planting Perennial Plants	Section 254 and Article 1081.02	Jan. 1, 2011	
80210	Portland Cement Concrete Inlay or Overlay	Recurring CS #29	Nov. 1, 2008	
80217	Post Clips for Extruded Aluminum Signs	Article 1090.03	Jan. 1, 2009	
80268	Post Mounting of Signs	Article 701.14	Jan. 1, 2011	
80171	Precast Handling Holes	Articles 540.02, 540.06, 542.02, 542.04, 550.02, 550.06, 602.02, 602.07, and 1042.16	Jan. 1, 2007	
80015	Public Convenience and Safety	Article 107.09	Jan. 1, 2000	
80247	Raised Reflective Pavement Markers	Article 781.03	Nov. 1, 2009	April 1, 2010
80131	Seeding	Articles 250.07 and 1081.04	July 1, 2004	July 1, 2010
80264	Selection of Labor	Recurring CS #5	July 2, 2010	
80234	Storm Sewers	Articles 550.02, 550.03, 550.06, 550.07, 550.08, and 1040.04	April 1, 2009	April 1, 2010
80087	Temporary Erosion Control	Articles 280.02, 280.03, 280.04, 280.07, 280.08, and 1081.15	Nov. 1, 2002	Jan. 1, 2011
80257	Traffic Barrier Terminal, Type 6	Article 631.07	Jan. 1, 2010	
80269	Traffic Control Surveillance	Article 701.10	Jan. 1, 2011	

Note: Specials that go in every contract have already been marked with an "X" for you.

<u>File Name</u>	<u>Special Provision Title</u>	<u>New Location</u>	<u>Effective</u>	<u>Revised</u>
80258	Truck Mounted/Trailer Mounted Attenuators	Articles 701.03, 701.15, and 1106.02	Jan. 1, 2010	

The following special provisions require additional information from the designer. The additional information needs to be included in a separate document attached to this check sheet. The Project Development and Implementation section will then include the information in the applicable special provision. The Special Provisions are:

- Bridge Demolition Debris
- Building Removal-Case I
- Building Removal-Case II
- Building Removal-Case III
- Building Removal-Case IV
- Completion Date
- Completion Date Plus Working Days
- DBE Participation
- Material Transfer Device
- Railroad Protective Liability Insurance
- Training Special Provisions
- Working Days

BDE Special Provisions

Numeric Index

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NUMERIC DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

Get a copy of the current check list from the Program Development Secretary, indicate which ISP's are to be included in your set of special provisions, fill in any blanks as indicated on the check list, and include with your set of special provisions to be sent to Springfield where they will be inserted.

<u>Standard Spec. No.</u>	<u>PC No.</u>	<u>Item</u>
100.00	10000	Errata for the 2012 Standard Specifications
105.04	10504	Traffic Control Deficiency Deduction
105.07	10507	Utility Coordination and Conflicts
107.00	10700	Construction Air Quality – Diesel Vehicle Emissions Control
107.01	10701	Construction Air Quality – Diesel Retrofit
107.11a	10711a	Railroad Protective Liability Insurance
107.11b	10711b	Railroad Protective Liability Insurance (5 and 10)
107.19a	10719a	Building Removal Case I
107.19b	10719b	Building Removal Case II
107.19c	10719c	Building Removal Case III
107.19d	10719d	Building Removal Case IV
107.23	10723	Tracking the Use of Pesticides
107.37	10737	Construction Air Quality – Idling Restrictions
107.38	10738	Bridge Demolition Debris
108.00	10800	Payrolls and Payroll Records
108.05	10805	Working Days
108.05a	10805a	Completion Date (Via Calendar Days)
108.05b	10805b	Completion Date (Via Calendar Days) Plus Working Days
108.06	10806	Training Special Provision
108.06a	10806a	Disadvantaged Business Enterprise Participation
109.00a	10900a	Steel Cost Adjustment
109.01	10901	Bituminous Materials Cost Adjustments

NUMERIC DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

Standard Spec. No.	PC No.	Item
109.03	10903	Fuel Cost Adjustment
109.07	10907	Payments to Subcontractors
202.07	20207	Digital Terrain Modeling for Earthwork Calculations
202.07a	20207a	Agreement to Plan Quantity
253.00	25300	Planting Woody Plants
280.02	28002	Above Grade Inlet Protection
280.04	28004	Temporary Erosion and Sediment Control
303.00	30300	Aggregate Subgrade Improvement
312.26	31226	Portland Cement Concrete
400.01	40001	Preventive Maintenance – Cape Seal
400.02	40002	Preventive Maintenance – Micro-Surfacing
400.03	40003	Preventive Maintenance – Slurry Seal
400.04	40004	Preventive Maintenance – Bituminous Surface Treatment
406.00	40600	Warm Mix Asphalt
406.00f	40600f	Material Transfer Device
406.05	40605	Safety Edge
406.06	40606	Stone Matrix Asphalt
406.07	40607	Hot-Mix Asphalt – Density Testing of Longitudinal Joints
406.21	40621	Surface Testing of Interstate Pavements
420.00	42000	Portland Cement Concrete Inlay or Overlay
420.07	42007	Portland Cement Concrete Sidewalk
420.16	42016	Restoring Bridge Approach Pavements Using High-Density Foam
442.00	44200	Calcium Chloride Accelerator for Class PP-2 Concrete
503.02	50302	Metal Hardware Cast Into Concrete

NUMERIC DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

Standard Spec. No.	PC No.	Item
503.19	50319	Bridge Relief Joint Sealer
504.00	50400	Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet
504.04	50404	Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews >30 Degrees with Design Fills > 5 Feet
603.02	60302	Drainage and Inlet Protection Under Traffic
610.09	61009	Type G Inlet Box
642.05	64205	Shoulder Rumble Strips
643.00	64300	High Tension Cable Median Barrier
669.01	69901	Removal and Disposal of Regulated Substances
671.00	67100	Subcontractor Mobilization Payments
701.00	70100	Automated Flagger Assistance Devices
701.13	70113	Flagger at Side Roads and Entrances
701.15	70115	Sidewalk, Corner or Crosswalk Closure
701.17	70117	Pavement Patching
702.00c	70200c	Impact Attenuators
702.00d	70200d	Impact Attenuators, Temporary
703.00	70300	Temporary Raised Pavement Marker
703.02	70302	Pavement Marking Tape Type IV
780.01	78001	Modified Urethane pavement Marking
780.02	78002	Preformed Plastic Pavement Marking Type D - Inlaid
781.00	78100	Wet Reflective Thermoplastic Pavement Marking
783.03	78303	Pavement Marking Removal
888.00	88800	Accessible Pedestrian Signals (APS)
1004.01	100401	Friction Aggregate
1004.02	100402	Coarse Aggregate in Bridge Approach Slabs/Footings

NUMERIC DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

Standard Spec. No.	PC No.	Item
1008.27	100827	Moisture Cured Urethane Paint System
1020.00	102000	Self-Consolidating Concrete for Precast and Precast Prestressed Products
1020.01	102001	Self-Consolidating Concrete for Cast-in-Place Construction
1020.05a	102005a	Concrete Mix Design – Department Provided
1020.16	102016	Quality Control/Quality Assurance of Concrete Mixtures
1031.00	103100	Reclaimed Asphalt Pavement (RAP)
1031.01	103101	Reclaimed Asphalt Shingles (RAS)
1106.02i	110602i	Movable Traffic Barrier
1106.02k	110602k	Temporary Water Filled Barrier

BDE Special Provisions

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ALPHABETIC LIST OF DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

Get a copy of the current check list from the Program Development Secretary, indicate which ISP's are to be included in your set of special provisions, fill in any blanks as indicated on the check list, and include with your set of special provisions to be sent to Springfield where they will be inserted.

<u>Standard Spec. No.</u>	<u>PC No.</u>	<u>Item</u>
280.02	28002	Above Grade Inlet Protection
888.00	88800	Accessible Pedestrian Signals (APS)
303.00	30300	Aggregate Subgrade Improvement
202.07a	20207a	Agreement to Plan Quantity
701.00	70100	Automated Flagger Assistance Devices
109.01	10901	Bituminous Materials Cost Adjustment
107.38	10738	Bridge Demolition Debris
503.19	50319	Bridge Relief Joint Sealer
107.19a	10719a	Building Removal Case I
107.19b	10719b	Building Removal Case II
107.19c	10719c	Building Removal Case III
107.19d	10719d	Building Removal Case IV
442.00	44200	Calcium Chloride Accelerator for Class PP-2 Concrete
1004.02	100402	Coarse Aggregate in Bridge Approach Slabs/Footings
108.05a	10805a	Completion Date (Via Calendar Days)
108.05b	10805b	Completion Date (Via Calendar Days) Plus working Days
504.00	50400	Concrete Box Culverts with Skews > 30 Degrees and Design Fills ≤ 5 Feet
504.04	50404	Concrete Box Culverts with Skews ≤ 30 Degrees Regardless of Design Fill and Skews >30 Degrees with Design Fills > 5 Feet
503.19	50319	Concrete Joint Sealer
1020.05a	102005a	Concrete Mix Design – Department Provided

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ALPHABETIC LIST OF DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

<u>Standard Spec. No.</u>	<u>PC No.</u>	<u>Item</u>
107.00	10700	Construction Air Quality – Diesel Vehicle Emissions Control
107.01	10701	Construction Air Quality – Diesel Retrofit
107.37	10737	Construction air Quality – Idling Restrictions
202.07	20207	Digital Terrain Modeling for Earthwork Calculations
108.06a	10806a	Disadvantaged Business Enterprise Participation
603.02	60302	Drainage and Inlet Protection Under Traffic
100.00	10000	Errata for the 2012 Standard Specifications
701.13	70113	Flagger at Side Roads and Entrances
1004.01	100401	Friction Aggregate
109.03	10903	Fuel Cost Adjustment
643.00	64300	High Tension Cable Median Barrier
406.07	40607	Hot-Mix Asphalt-Density Testing of Longitudinal Joints
702.00c	70200c	Impact Attenuators
702.00d	70200d	Impact Attenuators, Temporary
406.00f	40600f	Material Transfer Device
503.02	50302	Metal Hardware Cast into Concrete
780.01	78001	Modified Urethane Pavement Marking
1008.27	100827	Moisture Cured Urethane Paint System
1106.02i	110602i	Movable Traffic Barrier
783.03	78303	Pavement Marking Removal
703.02	70302	Pavement Marking Tape Type IV
701.17	70117	Pavement Patching
109.07	10907	Payments to Subcontractors

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ALPHABETIC LIST OF DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

Standard Spec. No.	PC No.	Item
108.00	10800	Payrolls and Payroll Records
253.00	25300	Planting Woody Plants
312.26	31226	Portland Cement Concrete
420.00	42000	Portland Cement Concrete Inlay or Overlay
420.07	42007	Portland Cement Concrete Sidewalk
780.00	78000	Preformed Plastic Pavement Marking Type D - Inlaid
400.04	40004	Preventive Maintenance - Bituminous Surface Treatment
400.01	40001	Preventive Maintenance – Cape Seal
400.02	40002	Preventive Maintenance – Micro-Surfacing
400.03	40003	Preventive Maintenance – Slurry Seal
1020.16	102016	Quality Control/Quality Assurance of Concrete Mixtures
107.11	10711a	Railroad Protective Liability Insurance
107.11	10711b	Railroad Protective Liability Insurance (5 and 10)
1031.00	103100	Reclaimed Asphalt Pavement (RAP)
1031.01	103101	Reclaimed Asphalt Shingles (RAS)
669.01	66901	Removal and Disposal of Regulated Substances
420.16	42016	Restoring Bridge Approach Pavements Using High-Density Foam
406.05	40605	Safety Edge
1020.01	102001	Self-Consolidating Concrete for Cast-in-Place Construction
1020.00	102000	Self-Consolidating Concrete for Precast and Precast Prestressed Products
642.05	64205	Shoulder Rumble Strips
701.15	70115	Sidewalk, Corner or Crosswalk Closure

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ALPHABETIC LIST OF DESIGN INTERIM SPECIAL PROVISIONS (ISP's)

Standard Spec. No.	PC No.	Item
109.00	10900a	Steel Cost Adjustment
406.06	40606	Stone Matrix Asphalt
671.00	67100	Subcontractor Mobilization Payments
406.21	40621	Surface Testing of Pavements
280.04	28004	Temporary Erosion and Sediment Control
703.00	70300	Temporary Raised Pavement Marker
1106.02k	110602k	Temporary Water Filled Barrier
107.23	10723	Tracking the Use of Pesticides
105.04	10504	Traffic Control Deficiency Deduction
108.06	10806	Training Special Provision
610.09	61009	Type G Inlet Box
105.07	10507	Utility Coordination and Conflicts
406.00	40600	Warm Mix Asphalt
780.00	78000	Wet Reflective Thermoplastic Pavement Marking
108.05	10805	Working Days

BDE Special Provisions

Designer Note: Insert into all contracts.

ERRATA FOR THE 2012 STANDARD SPECIFICATIONS (BDE)

Effective: April 1, 2012

Revised: August 1, 2012

- Page 182 Article 354.12. In the second line of the first paragraph change "Article 353.12" to "Article 353.13".
- Page 183 Article 355.10. In the second line of the first paragraph change "Article 353.12" to "Article 353.13".
- Page 185 Article 356.10. In the second line of the first paragraph change "Article 353.12" to "Article 353.13".
- Page 337 Article 505.04. Revise the subparagraph "(i) Match Making." to "(i) Match Marking.".
- Page 360 Article 506.07. In the first line of the second paragraph change "AASHTO/AWS D1.5/D1.5:" to "AASHTO/AWS D1.5M/D1.5:".
- Page 361 Article 506.08. In the third line of the sixth paragraph change "506.08(a)" to "506.08(b)".
- Page 531 Article 609.07. In the first paragraph delete "TYPE B, C, or D INLET BOX STANDARD 609001 or".
- Page 601 Article 701.18(h). In the first line of the first paragraph change "Standard 701426." "Standard 701426 and 701427.".
- Page 609 Article 703.05. In the first line of the second paragraph delete "or Type II".
- Page 989 Article 1083.02(a). In the seventh line of the first paragraph change "Table 14.7.5.2-2" to "Table 14.7.5.2-1".
- Page 1019 Article 1095.01(b)(1)e. In the table for daylight reflectance for the color yellow, change "75 % min." to "45 % min.".

10723

107.23

Designer Notes: Insert into all contracts.

TRACKING THE USE OF PESTICIDES (BDE)

Effective: August 1, 2012

Add the following paragraph after the first paragraph of Article 107.23 of the Standard Specifications:

“Within 48 hours of the application of pesticides, including but not limited to herbicides, insecticides, algaecides, and fungicides, the Contractor shall complete and return to the Engineer, Operations form “OPER 2720”.”

Designer Note: Insert into all State only funds contracts. Recurring Check Sheet #5 should also be marked.

PAYROLLS AND PAYROLL RECORDS (BDE)

Effective: January 2, 2012

Revise Section IV of Check Sheet #5 of the Recurring Special Provisions to read:

"IV. COMPLIANCE WITH THE PREVAILING WAGE ACT

1. **Prevailing Wages.** All wages paid by the Contractor and each subcontractor shall be in compliance with The Prevailing Wage Act (820 ILCS 130), as amended, except where a prevailing wage violates a federal law, order, or ruling, the rate conforming to the federal law, order, or ruling shall govern. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto. If the Department of Labor revises the wage rates, the Contractor will not be allowed additional compensation on account of said revisions.
2. **Payroll Records.** The Contractor and each subcontractor shall make and keep, for a period of three years from the later of the date of final payment under the contract or completion of the contract, records of the wages paid to his/her workers. The payroll records shall include each worker's name, address, telephone number, social security number, classification, rate of pay, number of hours worked each day, starting and ending times of work each day, total hours worked each week, itemized deductions made, and actual wages paid. Upon seven business days' notice, these records shall be available at a location within the State, during reasonable hours, for inspection by the Department; the Department of Labor; and Federal, State or local law enforcement agencies and prosecutors.
3. **Submission of Payroll Records.** The Contractor and each subcontractor shall submit payroll records to the Engineer each week from the start to the completion of their respective work, except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall include an identification number for each employee (e.g., the last four digits of the employee's social security number). In addition, starting and ending times of work each day may be omitted from the payroll records submitted to the Engineer. The submittals shall be on the Department's form SBE 48, or an approved facsimile. When there has been no activity during a work week, a payroll record shall still be submitted with the appropriate box ("No Work", "Suspended", or "Complete") checked on the form.

Each submittal shall be accompanied by a statement signed by the Contractor or subcontractor, or an officer, employee or officer thereof, which avers that: (i) he or she has examined the records and such records are true and accurate; (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the Act; and (iii) the Contractor or subcontractor is aware that filing a payroll record that he/she knows to be false is a Class A misdemeanor.

4. Employee Interviews. The Contractor and each subcontractor shall permit his/her employees to be interviewed on the job, during working hours, by compliance investigators of the Department or the Department of Labor.”

Designer Note: Insert into all contracts with woody plants.

PLANTING WOODY PLANTS (BDE)

Effective: January 1, 2012

Revised: August 1, 2012

Revise the second sentence of Article 253.01 of the Standard Specifications to read:

“This work shall consist of furnishing, transporting, and planting woody plants such as trees, shrubs, evergreens, vines, and seedlings.”

Revise Article 253.02(a) of the Standard Specifications to read:

“(a) Trees, Shrubs, Evergreens, Vines and Seedlings1081.01”

Revise the first sentence of Article 253.08(a) of the Standard Specifications to read:

“(a) Excavation for Deciduous Trees and Evergreen Trees.”

Revise the first sentence of Article 253.08(b) of the Standard Specifications to read:

“(b) Excavation for Deciduous Shrubs, Evergreen Shrubs, Vines, and Seedlings.”

Revise the first sentence of Article 253.13 of the Standard Specifications to read:

“All deciduous and evergreen trees, with the exception of multi-stem or clump form specimens, over 8 ft (2.5 m) in height shall require three 6 ft (2 m) long steel posts so placed that they are equidistant from each other and adjacent to the outside of the ball.”

Revise the first sentence of the second paragraph of Article 253.14 of the Standard Specifications to read:

“This period of establishment for the plants shall not delay acceptance of the entire project and final payment due if the contractor requires and receives from the subcontractor a third party performance bond naming the Department as obligee in the full amount of the planting quantities subject to this period of establishment, multiplied by their contract unit prices.”

Revise the third sentence of Article 253.16 of the Standard Specifications to read:

“Trees, shrubs, evergreens, and vines will be measured as each individual plant.”

Revise Article 253.17 of the Standard Specifications to read:

“**253.17 Basis of Payment.** This work will be paid for at the contract unit price per each for TREES, SHRUBS, EVERGREENS, or VINES, of the species, root type, and plant size specified; and per unit for SEEDLINGS. Payment will be made according to the following schedule.

- (a) Initial Payment. Upon completion of planting, mulch covering, wrapping, and bracing, 90 percent of the pay item(s) will be paid.
- (b) Final Payment. Upon inspection and acceptance of the plant material, or upon execution of a third party bond, the remaining ten percent of the pay item(s) will be paid.”

Revise the first paragraph of Article 1081.01 of the Standard Specifications to read:

“1081.01 Trees, Shrubs, Evergreens, Vines, and Seedlings. Trees, shrubs, evergreens, vines, and seedlings shall be according to the current standards adopted by the ANLA.”

Designer Note: Insert into all projects utilizing aggregate subgrade improvements. When using also include BDE special "Reclaimed Asphalt Pavement (RAP)." Check with district Soils Engineer to determine thickness.

AGGREGATE SUBGRADE IMPROVEMENT (BDE)

Effective: April 1, 2012
Revised: August 1, 2012

Add the following Section to the Standard Specifications:

"SECTION 303. AGGREGATE SUBGRADE IMPROVEMENT

303.01 Description. This work shall consist of constructing an aggregate subgrade improvement.

303.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Coarse Aggregate	1004.06
(b) Reclaimed Asphalt Pavement (RAP) (Notes 1, 2, and 3)	1031

Note 1. RAP shall not contain more than 10 percent steel slag or any materials considered expansive by the Department.

Note 2. Crushed RAP, from either full depth or single lift removal, may be mechanically blended with aggregate gradations CS 01, CS 02, and RR 01 but shall not exceed 40 percent of the total product. The top size of the RAP shall be less than 4 in. (100 mm) and well graded.

Note 3. RAP having 100 percent passing the 1 1/2 in. (37.5 mm) sieve and being well graded, may be used as capping aggregate in the top 3 in. (75 mm) when aggregate gradations CS 01, CS 02, or RR 01 are used in lower lifts.

303.03 Equipment. The vibratory machine shall be according to Article 1101.01, or as approved by the Engineer.

303.04 Soil Preparation. The stability of the soil shall be according to the Department's Subgrade Stability Manual for the aggregate thickness specified.

303.05 Placing Aggregate. The maximum nominal lift thickness of aggregate gradations CA 02, CA 06, or CA 10 shall be 12 in. (300 mm). The maximum nominal lift thickness of aggregate gradations CS 01, CS 02, and RR 01 shall be 24 in. (600 mm).

303.06 Capping Aggregate. The top surface of the aggregate subgrade shall consist of a minimum 3 in. (75 mm) of aggregate gradations CA 06 or CA 10. When the contract specifies that a granular subbase is to be placed on the aggregate subgrade improvement, the 3 in. (75 mm) of capping aggregate shall be the same gradation and may be placed with the underlying aggregate subgrade improvement material.

303.07 Compaction. All aggregate lifts shall be compacted to the satisfaction of the Engineer. If the moisture content of the material is such that compaction cannot be obtained, sufficient water shall be added so that satisfactory compaction can be obtained.

303.08 Finishing and Maintenance of Aggregate Subgrade Improvement. The aggregate subgrade improvement shall be finished to the lines, grades, and cross sections shown on the plans, or as directed by the Engineer. The aggregate subgrade improvement shall be maintained in a smooth and compacted condition.

303.09 Method of Measurement. This work will be measured for payment according to Article 311.08.

303.10 Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) or ton (metric ton) for AGGREGATE SUBGRADE IMPROVEMENT or at the contract unit price per square yard (square meter) for AGGREGATE SUBGRADE IMPROVEMENT, of the thickness specified.”

Add the following to Section 1004 of the Standard Specifications:

“1004.06 Coarse Aggregate for Aggregate Subgrade Improvement. The aggregate shall be according to Article 1004.01 and the following.

- (a) Description. The coarse aggregate shall be crushed gravel, crushed stone, or crushed concrete.
- (b) Quality. The coarse aggregate shall consist of sound durable particles reasonably free of deleterious materials.
- (c) Gradation.
 - (1) The coarse aggregate gradation for total subgrade thickness less than or equal to 12 in. (300 mm) shall be CA 2, CA 6, CA 10, or CS 01.

The coarse aggregate gradation for total subgrade thickness more than 12 in. (300 mm) shall be CS 01, CS 02 or RR 01(see Article 1005.01(c)).

COARSE AGGREGATE SUBGRADE GRADATIONS						
Grad No.	Sieve Size and Percent Passing					
	8"	6"	4"	2"	#4	#200
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20	5 ± 5
CS 02		100	80 ± 10	25 ± 15		

COARSE AGGREGATE SUBGRADE GRADATIONS (Metric)						
Grad No.	Sieve Size and Percent Passing					
	200 mm	150 mm	100 mm	50 mm	4.75 mm	75 µm
CS 01	100	97 ± 3	90 ± 10	45 ± 25	20 ± 20	5 ± 5
CS 02		100	80 ± 10	25 ± 15		

- (2) The 3 in. (75 mm) capping aggregate shall be gradation CA 6 or CA 10.”

Designer Note: Insert in projects involving sawed or formed relief joints, in both HMA and concrete overlays, typically detailed over piers and abutments of deck beam-type structures. This was previously named "Concrete Joint Sealer."

BRIDGE RELIEF JOINT SEALER (BDE)

Effective: January 1, 2012

Revised: August 1, 2012

Add the following to the end of the second paragraph of Article 503.19 of the Standard Specifications:

"After the surface is clean and before applying protective coat, relief joints being sealed according to Section 588 shall be covered with a masking tape to prevent protective coat from contacting the vertical faces of the joint."

Revise Section 588 of the Standard Specifications to read:

"SECTION 588. BRIDGE RELIEF JOINT SEALER

588.01 Description. This work shall consist of sealing transverse relief joints in the bridge decks.

588.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Hot-Poured Joint Sealer	1050.02

CONSTRUCTION REQUIREMENTS

588.03 General. The relief joint opening shall be formed to produce a reservoir for the sealing material and shall be 1/4 in. (6 mm) wide by 3/4 in. (20 mm) deep. For concrete surfaces the relief joint shall be formed into the concrete. For HMA surfaces the relief joint shall be sawed into the surface. Immediately prior to pouring the sealer the joint opening shall be cleaned with compressed air so that it is free of all foreign and loose material and in a dry condition. The bridge deck relief joints to be sealed shall be free of cracked or spalled areas. Any cracked areas shall be chipped back to sound material before placing joint sealer.

The hot-poured joint sealer shall not be placed when the air temperature in the shade is below 40 °F (5 °C) or when foggy or rainy, unless approved by the Engineer.

Hot-poured joint sealer shall be stirred during heating to prevent localized overheating. The sealing material shall be applied to each joint opening according to the details shown on the plans or as directed by the Engineer, without spilling on the exposed deck surfaces.

All bridge relief joints shall be filled with sufficient sealer compound so that the top of the seal is flush with the top of the finished deck or wearing surface.

Any sealing compound that is not bonded to the relief joint wall or face 24 hours after placing shall be removed and the joint shall be cleaned and resealed.

588.04 Basis of Payment. This work will not be paid for as a separate item, but shall be considered as included in the unit price bid for the major item of construction involved.”

Revise Section 589 of the Standard Specifications to read:

“SECTION 589. Reserved”

Designer Note: Insert into contracts with precast concrete or cast-in-place box culvert having a skew > 30 degrees and a design fill \leq 5 feet. Also read All Bridge Designer Memo for LRFD Design Requirements for Precast and CIP Concrete Box Culverts to ensure the proper information is shown on the plans.

CONCRETE BOX CULVERTS WITH SKEWS > 30 DEGREES AND DESIGN FILLS \leq 5 FEET (BDE)

Effective: April 1, 2012

Revise the second paragraph of Article 540.04 of the Standard Specifications to read:

“Unless otherwise noted on the plans, the Contractor shall have the option, when a cast-in-place concrete box culvert is specified, of constructing the box culvert using precast box culvert sections when the design cover is 6 in. (150 mm) minimum. The precast box culvert sections shall be designed for the same design cover shown on the plans for cast-in-place box culvert; shall be of equal or larger size opening, and shall satisfy the design requirements of ASTM C 1577.”

Revise the fourth paragraph of Article 540.06 of the Standard Specifications to read:

“The excavation and backfilling for precast concrete box culverts shall be according to the requirements of Section 502, except where the design fill is less than or equal to 8 ft (2.4 m), or the design fill is less than the clear span of the box. In these cases ASTM C 1577 requires a select granular backfill (porous granular material) over the box. If a porous granular backfill is required but is not detailed on the plans for the culvert(s), the Contractor shall have the option of either furnishing porous granular backfill where required to satisfy ASTM C 1577, or submitting an alternate design, sealed by an Illinois licensed Structural Engineer, which precludes the use of a porous granular backfill. In addition for all precast boxes a layer of porous granular material, at least 6 in. (150 mm) in thickness, shall be placed below the elevation of the bottom of the box. The porous granular material shall extend at least 2 ft (600 mm) beyond each side of the box. The precast concrete box culvert shall be laid according to the applicable requirements of Article 542.04(d). After installation, the interior and exterior joint gap between precast concrete box culvert sections shall be a maximum of 1 1/2 in. (38 mm).”

Add the following after the seventh paragraph of Article 540.06 of the Standard Specifications:

“Precast concrete box culverts with skews greater than 30 degrees and having design covers less than or equal to 5 feet are not covered by the standard design table shown in ASTM C 1577. The design table provided herein is provided to address this design range. The same notes, reinforcement configurations, clearances, and requirements of ASTM C 1577 apply to this special design table. A box designated 7 x 6 x 8 indicates a span of 7 ft, a rise of 6 ft, and top slab, bottom slab, walls and haunches of 8 in. unless otherwise noted on the tables.

3 ft by 2 ft by 4 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.168	0.900	0.295	0.096	0.269	0.168	0.853	0.144	
2<3	0.134	0.180	0.182	0.096					31
3-5	0.096	0.115	0.117	0.096					29

*top slab 7 in., bottom slab 6.0 in.

3 ft by 3 ft by 4 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.168	0.956	0.326	0.096	0.290	0.168	0.849	0.144	
2<3	0.101	0.214	0.218	0.096					31
3-5	0.096	0.136	0.140	0.096					31

*top slab 7.0 in., bottom slab 6.0 in.

4 ft by 2 ft by 5 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.204	0.790	0.262	0.120	0.268	0.180	0.846	0.144	
2<3	0.201	0.203	0.196	0.120					32
3-5	0.129	0.134	0.136	0.120					32

*top slab 7.5 in., bottom slab 6.0 in.

4 ft by 3 ft by 5 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.180	0.876	0.303	0.120	0.305	0.180	0.831	0.144	
2<3	0.160	0.245	0.238	0.120					38
3-5	0.120	0.161	0.165	0.120					35

*top slab 7.5 in., bottom slab 6.0 in.

4 ft by 4 ft by 5 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.180	0.927	0.334	0.120	0.327	0.180	0.822	0.144	
2<3	0.130	0.277	0.270	0.120					38
3-5	0.120	0.181	0.188	0.120					38

*top slab 7.5 in., bottom slab 6.0 in.

5 ft by 3 ft by 6 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.197	0.682	0.269	0.144	0.280	0.192	0.705	0.168	
2<3	0.206	0.259	0.246	0.144					37
3-5	0.144	0.180	0.179	0.144					35

*top slab 8.0 in., bottom slab 7.0 in.

5 ft by 4 ft by 6 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.192	0.735	0.299	0.144	0.307	0.192	0.693	0.168	
2<3	0.180	0.294	0.282	0.144					46
3-5	0.144	0.204	0.205	0.144					40

*top slab 8.0 in., bottom slab 7.0 in.

5 ft by 5 ft by 6 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.192	0.774	0.324	0.144	0.327	0.192	0.685	0.168	
2<3	0.155	0.322	0.312	0.144					45
3-5	0.144	0.224	0.228	0.144					45

*top slab 8.0 in., bottom slab 7.0 in.

6 ft by 3 ft by 7 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.270	0.566	0.257	0.168	0.263	0.192	0.575	0.168	
2<3	0.260	0.269	0.273	0.168					41
3-5	0.186	0.192	0.197	0.168					39

*top slab 8.0 in.

6 ft by 4 ft by 7 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.245	0.617	0.297	0.168	0.293	0.192	0.565	0.168	
2<3	0.225	0.305	0.313	0.168					42
3-5	0.168	0.220	0.227	0.168					41

*top slab 8.0 in.

6 ft by 5 ft by 7 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in. / ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.226	0.657	0.331	0.168	0.317	0.192	0.551	0.168	
2<3	0.198	0.338	0.348	0.168					59
3-5	0.168	0.242	0.252	0.168					48

*top slab 8.0 in.

6 ft by 6 ft by 7 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2*	0.208	0.692	0.363	0.168	0.337	0.192	0.540	0.168	
2<3	0.176	0.364	0.379	0.168					52
3-5	0.168	0.261	0.275	0.168					52

*top slab 8.0 in.

9 ft by 5 ft by 9 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.361	0.411	0.416	0.216	0.275	0.216	0.465	0.216	
2<3	0.425	0.484	0.496	0.216					49
3-5	0.306	0.348	0.360	0.216					49

9 ft by 6 ft by 9 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in. / ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.335	0.439	0.455	0.216	0.294	0.216	0.467	0.216	
2<3	0.390	0.524	0.541	0.216					55
3-5	0.282	0.376	0.393	0.216					52

9 ft by 7 ft by 9 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in. / ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.313	0.464	0.491	0.216	0.311	0.216	0.453	0.216	
2<3	0.360	0.561	0.583	0.216					64
3-5	0.262	0.402	0.423	0.216					58

9 ft by 8 ft by 9 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.286	0.488	0.514	0.216	0.327	0.216	0.454	0.216	
2<3	0.336	0.594	0.621	0.216					72
3-5	0.244	0.426	0.453	0.216					73

9 ft by 9 ft by 9 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.274	0.511	0.557	0.216	0.342	0.216	0.452	0.216	
2<3	0.316	0.625	0.659	0.216					72
3-5	0.231	0.448	0.481	0.216					72

10 ft by 5 ft by 10 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.370	0.393	0.392	0.240	0.263	0.240	0.240	0.240	
2<3	0.492	0.509	0.522	0.240					52
3-5	0.354	0.366	0.379	0.240					52

10 ft by 6 ft by 10 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.348	0.420	0.432	0.240	0.282	0.240	0.418	0.240	
2<3	0.455	0.552	0.570	0.240					56
3-5	0.329	0.397	0.414	0.240					52

10 ft by 7 ft by 10 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.321	0.445	0.463	0.240	0.298	0.240	0.240	0.240	
2<3	0.423	0.591	0.614	0.240					59
3-5	0.307	0.425	0.447	0.240					56

10 ft by 8 ft by 10 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in. / ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.301	0.469	0.496	0.240	0.314	0.240	0.240	0.240	
2<3	0.394	0.627	0.655	0.240					72
3-5	0.288	0.451	0.478	0.240					66

10 ft by 9 ft by 10 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.284	0.492	0.527	0.240	0.329	0.240	0.240	0.240	
2<3	0.371	0.660	0.694	0.240					79
3-5	0.272	0.475	0.508	0.240					85

10 ft by 10 ft by 10 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.272	0.514	0.559	0.240	0.344	0.240	0.240	0.240	
2<3	0.353	0.691	0.732	0.240					79
3-5	0.259	0.497	0.537	0.240					79

11 ft by 4 ft by 11 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.414	0.341	0.333	0.264	0.264	0.264	0.264	0.264	
2<3	0.609	0.481	0.491	0.264					60
3-5	0.436	0.348	0.357	0.264					56

11 ft by 6 ft by 11 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.356	0.399	0.407	0.264	0.265	0.264	0.264	0.264	
2<3	0.521	0.580	0.597	0.264					56
3-5	0.377	0.418	0.435	0.264					56

11 ft by 8 ft by 11 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.314	0.449	0.471	0.264	0.298	0.264	0.264	0.264	
2<3	0.457	0.659	0.687	0.264					67
3-5	0.333	0.475	0.502	0.264					63

11 ft by 10 ft by 11 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.285	0.494	0.532	0.264	0.328	0.264	0.264	0.264	
2<3	0.409	0.727	0.769	0.264					86
3-5	0.300	0.524	0.565	0.264					86

11 ft by 11 ft by 11 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.276	0.516	0.562	0.264	0.342	0.264	0.264	0.264	
2<3	0.391	0.758	0.808	0.264					86
3-5	0.289	0.548	0.596	0.264					86

12 ft by 4 ft by 12 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.426	0.329	0.316	0.288	0.288	0.288	0.321	0.288	
2<3	0.682	0.503	0.512	0.288					64
3-5	0.489	0.364	0.373	0.288					60

12 ft by 6 ft by 12 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.367	0.385	0.387	0.288	0.288	0.288	0.320	0.288	
2<3	0.590	0.606	0.624	0.288					60
3-5	0.427	0.438	0.456	0.288					56

12 ft by 8 ft by 12 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.326	0.435	0.449	0.288	0.288	0.288	0.288	0.288	
2<3	0.521	0.690	0.719	0.288					67
3-5	0.381	0.499	0.527	0.288					64

12 ft by 10 ft by 12 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.298	0.481	0.507	0.288	0.305	0.288	0.288	0.288	
2<3	0.467	0.762	0.804	0.288					93
3-5	0.344	0.551	0.592	0.288					79

12 ft by 12 ft by 12 in.

Design Earth Cover, ft.	Circumferential Reinforcement Areas, sq in./ ft.								"M", in.
	As1	As2	As3	As4	As5	As6	As7	As8	
0<2	0.288	0.525	0.566	0.288	0.333	0.288	0.288	0.288	
2<3	0.431	0.827	0.886	0.288					93
3-5	0.320	0.599	0.656	0.288					93"

Designer Note: Insert into contracts with precast concrete or cast-in-place concrete box culverts with skew ≤ 30 degrees regardless of the design fill **and** also skews > 30 degrees with design fill > 5 feet. Also read All Bridge Designer Memo for LRFD Design Requirements for Precast and CIP Concrete Box Culverts to ensure the proper information is shown on the plans.

CONCRETE BOX CULVERTS WITH SKEWS ≤ 30 DEGREES REGARDLESS OF DESIGN FILL AND SKEWS > 30 DEGREES WITH DESIGN FILLS > 5 FEET (BDE)

Effective: April 1, 2012

Revise the second paragraph of Article 540.04 of the Standard Specifications to read:

“Unless otherwise noted on the plans, the Contractor shall have the option, when a cast-in-place concrete box culvert is specified, of constructing the box culvert using precast box culvert sections when the design cover is 6 in. (150 mm) minimum. The precast box culvert sections shall be designed for the same design cover shown on the plans for cast-in-place box culvert; shall be of equal or larger size opening, and shall satisfy the design requirements of ASTM C 1577.”

Revise the fourth paragraph of Article 540.06 of the Standard Specifications to read:

“The excavation and backfilling for precast concrete box culverts shall be according to the requirements of Section 502, except where the design fill is less than or equal to 8 ft (2.4 m), or the design fill is less than the clear span of the box. In these cases ASTM C 1577 requires a select granular backfill (porous granular material) over the box. If a porous granular backfill is required but is not detailed on the plans for the culvert(s), the Contractor shall have the option of either furnishing porous granular backfill where required to satisfy ASTM C 1577, or submitting an alternate design, sealed by an Illinois licensed Structural Engineer, which precludes the use of a porous granular backfill. In addition for all precast boxes a layer of porous granular material, at least 6 in. (150 mm) in thickness, shall be placed below the elevation of the bottom of the box. The porous granular material shall extend at least 2 ft (600 mm) beyond each side of the box. The precast concrete box culvert shall be laid according to the applicable requirements of Article 542.04(d). After installation, the interior and exterior joint gap between precast concrete box culvert sections shall be a maximum of 1 1/2 in. (38 mm).”

Designer Note: Insert in all projects with cast-in-place concrete items. Also include BDE Special 1020.16 "Quality Control/Quality Assurance of Concrete Mixtures" when using this special.

SELF-CONSOLIDATING CONCRETE FOR CAST-IN-PLACE CONSTRUCTION (BDE)

Effective: November 1, 2005

Revised: April 1, 2012

Description. This work shall consist of constructing cast-in-place items involving Class DS or SI concrete with self-consolidating concrete. The concrete shall be according to the special provision, "Portland Cement Concrete", except as modified herein.

Definition. Self-consolidating concrete is a flowable mixture that does not require mechanical vibration for consolidation.

Mix Design Criteria. Article 1020.04 shall apply, except as follows:

- (a) The slump requirements shall not apply.
- (b) The concrete mixture shall be uniformly graded, and information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures" shall be used to develop the uniformly graded mix design. The coarse aggregate gradations shall be CA 11, CA 13, CA 14, CA 16, or a blend of these gradations. However, the final gradation when using a single coarse aggregate or combination of coarse aggregates shall have 100 percent pass the 1 in. (25 mm) sieve, and 95 percent pass the 3/4 in. (19 mm) sieve. The fine aggregate proportion shall be a maximum 50 percent by weight (mass) of the total aggregate used.
- (c) The slump flow range shall be 22 in. (560 mm) minimum to 28 in. (710 mm) maximum.
- (d) The visual stability index shall be a maximum of 1.
- (e) The J-ring value shall be a maximum of 2 in. (50 mm).
- (f) The L-box blocking ratio shall be a minimum of 80 percent.
- (g) The hardened visual stability index shall be a maximum of 1.

Test Methods. Illinois Test Procedures SCC-1, SCC-2, SCC-3, SCC-4, SCC-6, SCC-8 (Option C) and Illinois Modified AASHTO T 22, 23, 121, 141, 152, 177, 196, and 309 shall be used for testing of self-consolidating concrete mixtures.

Mixing Portland Cement Concrete. In addition to Article 1020.11, the mixing time for central-mixed concrete shall not be reduced as a result of a mixer performance test. Truck-mixed or shrink-mixed concrete shall be mixed in a truck mixer for a minimum of 100 revolutions.

The batch sequence, mixing speed, and mixing time shall be appropriate to prevent cement balls and mix foaming for central-mixed, truck-mixed, and shrink-mixed concrete.

Falsework and Forms. In addition to Articles 503.05 and 503.06 of the Standard Specifications, the Contractor shall ensure the design of the falsework and forms is adequate for the additional form pressure caused by the fluid concrete. Forms shall be tight to prevent leakage of fluid concrete.

When the form height for placing the self-consolidating concrete is greater than 10.0 ft (3.0 m), direct monitoring of form pressure shall be performed according to Illinois Test Procedure SCC-10. The monitoring requirement is a minimum, and the Contractor shall remain responsible for adequate design of the falsework and forms. The Contractor shall record the formwork pressure during concrete placement. This information shall be used by the Contractor to prevent the placement rate from exceeding the maximum formwork pressure allowed, to monitor the thixotropic change in the concrete during the pour, and to make appropriate adjustments to the mix design. This information shall be provided to the Engineer during the pour.

Placing and Consolidating. Concrete placement and consolidation shall be according to Article 503.07 of the Standard Specifications, except as follows:

Revise the third paragraph of Article 503.07 of the Standard Specifications to read:

“Open troughs and chutes shall extend as nearly as practicable to the point of deposit. The drop distance of concrete shall not exceed 5 ft (1.5 m). If necessary, a tremie shall be used to meet this requirement. The maximum distance of horizontal flow from the point of deposit shall be 25 ft (7.6 m). However, when the maximum distance of horizontal flow from the point of discharge exceeds 15 ft (4.6 m), the dynamic segregation index shall be a maximum 10.0 percent. If the maximum is exceeded, the maximum distance of horizontal flow from the point of deposit will not be allowed to exceed 15 ft (4.6 m). For drilled shafts, free fall placement will not be permitted.”

Delete the seventh, eighth, ninth, and tenth paragraphs of Article 503.07 of the Standard Specifications.

Add to the end of the eleventh paragraph of Article 503.07 of the Standard Specifications the following:

“Concrete shall be rodded with a piece of lumber, conduit, or vibrator if the material has lost its fluidity prior to placement of additional concrete. The vibrator will be permitted if it can be used in a manner that does not cause coarse aggregate separation from the mortar as determined by the Engineer. Any other method for restoring the fluidity of the concrete shall be approved by the Engineer.”

If the contract requires QC/QA for concrete, the following four sections shall supplement the special provision Quality Control/Quality Assurance of Concrete Mixtures. If QC/QC is not required, the following four sections shall be disregarded by the Contractor and the Engineer will perform QA testing as appropriate.

Quality Control by Contractor at Plant. The specified test frequencies for aggregate gradation, aggregate moisture, air content, unit weight/yield, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed as needed to control production. The hardened visual stability index test will not be required to be performed at the plant.

Quality Control by Contractor at Jobsite. The specified test frequencies for air content, strength, and temperature shall be performed as indicated in the contract.

Slump flow, visual stability index, and J-ring or L-box tests shall be performed on the first two truck deliveries of the day, and every 50 cu yd (40 cu m) thereafter. The Contractor shall select either the J-ring or L-box test for jobsite testing.

If the self-consolidating concrete horizontal flow will exceed 15 ft (4.6 m), the dynamic segregation index test shall be performed at start of production for each mix design and per contract.

The hardened visual stability index test shall be performed on the first truck delivery of the day, and every 300 cu yd (230 cu m) thereafter. Slump flow, visual stability index, J-ring value or L-box blocking ratio, air content, and concrete temperature shall be recorded for each hardened visual stability index test.

The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.

If mix foaming or other potential detrimental material is observed during placement or at the completion of the pour, the material shall be removed while the concrete is still plastic.

Quality Assurance by Engineer at Plant. For air content and aggregate gradation, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, and J-ring or L-box tests, quality assurance independent sample testing and split sample testing will be performed as determined by the Engineer.

Quality Assurance by Engineer at Jobsite. For air content and strength, quality assurance independent sample testing and split sample testing will be performed as indicated in the contract.

For slump flow, visual stability index, J-ring or L-box, dynamic segregation index, and hardened visual stability index tests, quality assurance independent sample testing will be performed as determined by the Engineer.

For slump flow and visual stability index quality assurance split sample testing, the Engineer will perform tests at the beginning of the project on the first three tests performed by the Contractor. Thereafter, a minimum of ten percent of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design. The acceptable limit of precision will be 1.5 in. (40 mm) for slump flow and a limit of precision will not apply to the visual stability index.

For the J-ring or the L-box quality assurance split sample testing, a minimum of 80 percent of the total tests required of the Contractor will be witnessed by the Engineer per plant, which will

include a minimum of one witnessed test per mix design. The Engineer reserves the right to conduct quality assurance split sample testing. The acceptable limit of precision will be 1.5 in. (40 mm) for the J-ring value and ten percent for the L-box blocking ratio.

For dynamic segregation index, quality assurance split sample testing will be performed as determined by the Engineer. The acceptable limit of precision will be 1.0 percent.

For each hardened visual stability index test performed by the Contractor, the cut cylinders shall be presented to the Engineer for determination of the rating. The Engineer reserves the right to conduct quality assurance split sample testing. A limit of precision will not apply to the hardened visual stability index.

Designer Note: Insert into all contracts with cast-in-place concrete. This special replaces Recurring Check Sheet #31 of the same name, so don't use Check Sheet #31.

QUALITY CONTROL/QUALITY ASSURANCE OF CONCRETE MIXTURES (BDE)

Effective: January 1, 2012

Add the following to Section 1020 of the Standard Specifications:

"1020.16 Quality Control/Quality Assurance of Concrete Mixtures. This Article specifies the quality control responsibilities of the Contractor for concrete mixtures (except Class PC and PS concrete), cement aggregate mixture II, and controlled low-strength material incorporated in the project, and defines the quality assurance and acceptance responsibilities of the Engineer.

A list of quality control/quality assurance (QC/QA) documents is provided in Article 1020.16(g), Schedule D.

A Level I Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete testing.

A Level II Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete proportioning.

A Level III Portland Cement Concrete (PCC) Technician shall be defined as an individual who has successfully completed the Department's training for concrete mix design.

A Concrete Tester shall be defined as an individual who has successfully completed the Department's training to assist with concrete testing and is monitored on a daily basis.

Aggregate Technician shall be defined as an individual who has successfully completed the Department's training for gradation testing involving aggregate production and mixtures.

Mixture Aggregate Technician shall be defined as an individual who has successfully completed the Department's training for gradation testing involving mixtures.

Gradation Technician shall be defined as an individual who has successfully completed the Department's training to assist with gradation testing and is monitored on a daily basis.

- (a) Equipment/Laboratory. The Contractor shall provide a laboratory and test equipment to perform their quality control testing.

The laboratory shall be of sufficient size and be furnished with the necessary equipment, supplies, and current published test methods for adequately and safely performing all required tests. The laboratory will be approved by the Engineer according to the current Bureau of Materials and Physical Research Policy Memorandum "Minimum Private Laboratory Requirements for Construction Materials Testing or Mix Design". Production of a mixture shall not begin until the Engineer provides written approval of the laboratory.

The Contractor shall refer to the Department's "Required Sampling and Testing Equipment for Concrete" for equipment requirements.

Test equipment shall be maintained and calibrated as required by the appropriate test method, and when required by the Engineer. This information shall be documented on the Department's "Calibration of Concrete Testing Equipment" form.

Test equipment used to determine compressive or flexural strength shall be calibrated each 12 month period by an independent agency, using calibration equipment traceable to the National Institute of Standards and Technology (NIST). The Contractor shall have the calibration documentation available at the test equipment location.

The Engineer will have unrestricted access to the plant and laboratory at any time to inspect measuring and testing equipment, and will notify the Contractor of any deficiencies. Defective equipment shall be immediately repaired or replaced by the Contractor.

- (b) Quality Control Plan. The Contractor shall submit, in writing, a proposed Quality Control (QC) Plan to the Engineer. The QC Plan shall be submitted a minimum of 45 calendar days prior to the production of a mixture. The QC Plan shall address the quality control of the concrete, cement aggregate mixture II, and controlled low-strength material incorporated in the project. The Contractor shall refer to the Department's "Model Quality Control Plan for Concrete Production" to prepare a QC Plan. The Engineer will respond in writing to the Contractor's proposed QC Plan within 15 calendar days of receipt.

Production of a mixture shall not begin until the Engineer provides written approval of the QC Plan. The approved QC Plan shall become a part of the contract between the Department and the Contractor, but shall not be construed as acceptance of any mixture produced.

The QC Plan may be amended during the progress of the work, by either party, subject to mutual agreement. The Engineer will respond in writing to a Contractor's proposed QC Plan amendment within 15 calendar days of receipt. The response will indicate the approval or denial of the Contractor's proposed QC Plan amendment.

- (c) Quality Control by Contractor. The Contractor shall perform quality control inspection, sampling, testing, and documentation to meet contract requirements. Quality control includes the recognition of obvious defects and their immediate correction. Quality control also includes appropriate action when passing test results are near specification limits, or to resolve test result differences with the Engineer. Quality control may require increased testing, communication of test results to the plant or the jobsite, modification of operations, suspension of mixture production, rejection of material, or other actions as appropriate. The Engineer shall be immediately notified of any failing tests and subsequent remedial action. Passing tests shall be reported no later than the start of the next work day.

When a mixture does not comply with specifications, the Contractor shall reject the material; unless the Engineer accepts the material for incorporation in the work, according to Article 105.03.

- (1) Personnel Requirements. The Contractor shall provide a Quality Control (QC) Manager who will have overall responsibility and authority for quality control. The jobsite and plant personnel shall be able to contact the QC Manager by cellular phone, two-way radio or other methods approved by the Engineer.

The QC Manager shall visit the jobsite a minimum of once a week. A visit shall be performed the day of a bridge deck pour, the day a non-routine mixture is placed as determined by the Engineer, or the day a plant is anticipated to produce more than 1000 cu yd (765 cu m). Any of the three required visits may be used to meet the once per week minimum requirement.

The Contractor shall provide personnel to perform the required inspections, sampling, testing and documentation in a timely manner. The Contractor shall refer to the Department's "Qualifications and Duties of Concrete Quality Control Personnel" document.

A Level I PCC Technician shall be provided at the jobsite during mixture production and placement, and may supervise concurrent pours on the project. For concurrent pours, a minimum of one Concrete Tester shall be required at each pour location. If the Level I PCC Technician is at one of the pour locations, a Concrete Tester is still required at the same location. Each Concrete Tester shall be able to contact the Level I PCC Technician by cellular phone, two-way radio or other methods approved by the Engineer. A single Level I PCC Technician shall not supervise concurrent pours for multiple contracts.

A Level II PCC Technician shall be provided at the plant, or shall be available, during mixture production and placement. A Level II PCC Technician may supervise a maximum of three plants. Whenever the Level II PCC Technician is not at the plant during mixture production and placement, a Concrete Tester or Level I PCC Technician shall be present at the plant to perform any necessary concrete tests. The Concrete Tester, Level I PCC Technician, or other individual shall also be trained to perform any necessary aggregate moisture tests, if the Level II PCC Technician is not at the plant during mixture production and placement. The Concrete Tester, Level I PCC Technician, plant personnel, and jobsite personnel shall have the ability to contact the Level II PCC Technician by cellular phone, two-way radio, or other methods approved by the Engineer.

For a mixture which is produced and placed with a mobile portland cement concrete plant as defined in Article 1103.04, a Level II PCC Technician shall be provided. The Level II PCC Technician shall be present at all times during mixture production and placement.

A Concrete Tester, Mixture Aggregate Technician, and Aggregate Technician may provide assistance with sampling and testing. A Gradation Technician may provide assistance with testing. A Concrete Tester shall be supervised by a Level I or Level II PCC Technician. A Gradation Technician shall be supervised by a Level II PCC Technician, Mixture Aggregate Technician, or Aggregate Technician.

- (2) Required Plant Tests. Sampling and testing shall be performed at the plant, or at a location approved by the Engineer, to control the production of a mixture. The

required minimum Contractor plant sampling and testing is indicated in Article 1020.16(g) Schedule A.

- (3) Required Field Tests. Sampling and testing shall be performed at the jobsite to control the production of a mixture, and to comply with specifications for placement. For standard curing, after initial curing, and for strength testing; the location shall be approved by the Engineer. The required minimum Contractor jobsite sampling and testing is indicated in Article 1020.16(g), Schedule B.
- (d) Quality Assurance by Engineer. The Engineer will perform quality assurance tests on independent samples and split samples. An independent sample is a field sample obtained and tested by only one party. A split sample is one of two equal portions of a field sample, where two parties each receive one portion for testing. The Engineer may request the Contractor to obtain a split sample. Aggregate split samples and any failing strength specimen shall be retained until permission is given by the Engineer for disposal. The results of all quality assurance tests by the Engineer will be made available to the Contractor. However, Contractor split sample test results shall be provided to the Engineer before Department test results are revealed. The Engineer's quality assurance independent sample and split sample testing is indicated in Article 1020.16(g), Schedule C.
- (1) Strength Testing. For strength testing, Article 1020.09 shall apply, except the Contractor and Engineer beam strength specimens may be cured in the same tank.
- (2) Comparing Test Results. Differences between the Engineer's and the Contractor's split sample test results will not be considered extreme if within the following limits:

Test Parameter	Acceptable Limits of Precision
Slump	0.75 in. (20 mm)
Air Content	0.9%
Compressive Strength	900 psi (6200 kPa)
Flexural Strength	90 psi (620 kPa)
Aggregate Gradation	See "Guideline for Sample Comparison" in Appendix "A" of the Manual of Test Procedures for Materials.

When acceptable limits of precision have been met, but only one party is within specification limits, the failing test shall be resolved before the material may be considered for acceptance.

- (3) Test Results and Specification Limits.
- a. Split Sample Testing. If either the Engineer's or the Contractor's split sample test result is not within specification limits, and the other party is within specification limits; immediate retests on a split sample shall be performed for slump, air content, or aggregate gradation. A passing retest result by each party will require no further action. If either the Engineer's or Contractor's slump, air content, or aggregate gradation split sample retest result is a failure; or if either the Engineer's or Contractor's strength test result is a failure, and the other party

is within specification limits; the following actions shall be initiated to investigate the test failure:

1. The Engineer and the Contractor shall investigate the sampling method, test procedure, equipment condition, equipment calibration, and other factors.
2. The Engineer or the Contractor shall replace test equipment, as determined by the Engineer.
3. The Engineer and the Contractor shall perform additional testing on split samples, as determined by the Engineer.

For aggregate gradation, jobsite slump, and jobsite air content; if the failing split sample test result is not resolved according to 1., 2., or 3., and the mixture has not been placed, the Contractor shall reject the material; unless the Engineer accepts the material for incorporation in the work according to Article 105.03. If the mixture has already been placed, or if a failing strength test result is not resolved according to 1., 2., or 3., the material will be considered unacceptable.

If a continued trend of difference exists between the Engineer's and the Contractor's split sample test results, or if split sample test results exceed the acceptable limits of precision, the Engineer and the Contractor shall investigate according to items 1., 2., and 3.

- b. Independent Sample Testing. For aggregate gradation, jobsite slump, and jobsite air content; if the result of a quality assurance test on a sample independently obtained by the Engineer is not within specification limits, and the mixture has not been placed, the Contractor shall reject the material, unless the Engineer accepts the material for incorporation in the work according to Article 105.03. If the mixture has already been placed or the Engineer obtains a failing strength test result, the material will be considered unacceptable.
- (e) Acceptance by the Engineer. Final acceptance will be based on the Standard Specifications and the following:
- (1) The Contractor's compliance with all contract documents for quality control.
 - (2) Validation of Contractor quality control test results by comparison with the Engineer's quality assurance test results using split samples. Any quality control or quality assurance test determined to be flawed may be declared invalid only when reviewed and approved by the Engineer. The Engineer will declare a test result invalid only if it is proven that improper sampling or testing occurred. The test result is to be recorded and the reason for declaring the test invalid will be provided by the Engineer.
 - (3) Comparison of the Engineer's quality assurance test results with specification limits using samples independently obtained by the Engineer.

The Engineer may suspend mixture production, reject materials, or take other appropriate action if the Contractor does not control the quality of concrete, cement aggregate mixture II, or

controlled low-strength material for acceptance. The decision will be determined according to (1), (2), or (3).

(f) Documentation.

- (1) Records. The Contractor shall be responsible for documenting all observations, inspections, adjustments to the mix design, test results, retest results, and corrective actions in a bound hardback field book, bound hardback diary, or appropriate Department form, which shall become the property of the Department. The documentation shall include a method to compare the Engineer's test results with the Contractor's results. The Contractor shall be responsible for the maintenance of all permanent records whether obtained by the Contractor, the consultants, the subcontractors, or the producer of the mixture. The Contractor shall provide the Engineer full access to all documentation throughout the progress of the work.

The Department's form MI 504M, form BMPR MI654, and form BMPR MI655 shall be completed by the Contractor, and shall be submitted to the Engineer weekly or as required by the Engineer. A correctly completed form MI 504M, form BMPR MI654, and form BMPR MI655 are required to authorize payment by the Engineer, for applicable pay items.

- (2) Delivery Truck Ticket. The following information shall be recorded on each delivery ticket or in a bound hardback field book: initial/final revolution counter reading, at the jobsite, if the mixture is truck-mixed; time discharged at the jobsite; total amount of each admixture added at the jobsite; total amount of water added at the jobsite; and total amount of cement added at the jobsite if the air content needed adjustment.
- (g) Basis of Payment and Schedules. Quality Control/Quality Assurance of portland cement concrete mixtures will not be paid for separately, but shall be considered as included in the cost of the various concrete contract items.

SCHEDULE A

CONTRACTOR PLANT SAMPLING AND TESTING			
Item	Test	Frequency	IL Modified AASHTO or Department Test Method ^{1/}
Aggregates (Arriving at Plant)	Gradation ^{2/}	As needed to check source for each gradation number	T 2, T 11, T 27, and T 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Gradation ^{2/}	2,500 cu yd (1,900 cu m) for each gradation number ^{3/}	T 2, T 11, T 27, and T 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Moisture ^{4/} : Fine Aggregate	Once per week for moisture sensor, otherwise daily for each gradation number	Flask, Dunagan, Pycnometer Jar, or T 255
	Moisture ^{4/} : Coarse Aggregate	As needed to control production for each gradation number	Dunagan, Pycnometer Jar, or T 255
Mixture ^{5/}	Slump, Air Content, Unit Weight / Yield, and Temperature	As needed to control production	T 141 and T 119 T 141 and T 152 or T 196 T 141 and T 121 T 141 and T 309

- 1/ Refer to the Department's "Manual of Test Procedures for Materials".
- 2/ All gradation tests shall be washed. Testing shall be completed no later than 24 hours after the aggregate has been sampled.
- 3/ One per week (Sunday through Saturday) minimum unless the stockpile has not received additional aggregate material since the previous test.

One per day minimum for a bridge deck pour unless the stockpile has not received additional aggregate material since the previous test. The sample shall be taken and testing completed prior to the pour. The bridge deck aggregate sample may be taken the day before the pour or as approved by the Engineer.
- 4/ If the moisture test and moisture sensor disagree by more than 0.5 percent, retest. If the difference remains, adjust the moisture sensor to an average of two or more moisture tests, using the Dunagan or Illinois Modified AASHTO T 255 test method. The Department's "Water/Cement Ratio Worksheet" form shall be completed when applicable.
- 5/ The Contractor may also perform strength testing according to Illinois Modified AASHTO T 141, T 23, and T 22 or T 177; or water content testing according to Illinois Modified AASHTO T 318; or other tests at the plant to control mixture production.

SCHEDULE B

CONTRACTOR JOBSITE SAMPLING & TESTING ^{1/}			
Item	Measured Property	Random Sample Testing Frequency per Mix Design and per Plant ^{2/}	IL Modified AASHTO Test Method
Pavement, Shoulder, Base Course, Base Course Widening, Driveway Pavement, Railroad Crossing, Cement Aggregate Mixture II	Slump ^{3/ 4/}	1 per 500 cu yd (400 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/} _{6/}	1 per 100 cu yd (80 cu m) or minimum 1/day	T 141 And T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 1250 cu yd (1000 cu m) or minimum 1/day	T 141, T 22 and T 23 Or T 141, T 177 and T 23
Bridge Slab ^{9/} , Bridge Deck ^{9/} , Bridge Deck Overlay ^{9/} , Superstructure ^{9/} , Substructure, Culvert, Miscellaneous Drainage Structures, Retaining Wall, Building Wall, Drilled Shaft Pile & Encasement Footing, Foundation, Pavement Patching, Structural Repairs	Slump ^{3/ 4/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/} _{6/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 And T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141, T 22 and T 23 Or T 141, T 177 and T 23
Seal Coat	Slump ^{3/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 6/}	As needed to control production	T 141 And T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 250 cu yd (200 cu m) or minimum 1/day	T 141, T 22 and T 23 Or T 141, T 177 and T 23

If the correction factor is 3.0 percent or more, the Contractor shall take corrective action to reduce the loss of air content during transport by the pump or conveyor. The Contractor shall record all air content test results, correction factors and corrected air contents. The corrected air content shall be reported on form BMPR MI654.

- 6/ If the Contractor's or Engineer's air content test result is within the specification limits, and 0.2 percent or closer to either limit, the next truck load delivered shall be tested by the Contractor. For example, if the specified air content range is 5.0 to 8.0 percent and the test result is 5.0, 5.1, 5.2, 7.8, 7.9 or 8.0 percent, the next truck shall be tested by the Contractor.

If the Contractor's or Engineer's air content or slump test result is not within the specification limits, all subsequent truck loads delivered shall be tested by the Contractor until the problem is corrected.

- 7/ The test of record for strength shall be the day indicated in Article 1020.04. For cement aggregate mixture II, a strength requirement is not specified and testing is not required. Additional strength testing to determine early falsework and form removal, early pavement or bridge opening to traffic, or to monitor strengths is at the discretion of the Contractor. Strength shall be defined as the average of at least two cylinder or two beam breaks for field tests.
- 8/ In addition to the strength test, an air test, slump test, and temperature test shall be performed on the same sample. For mixtures pumped or conveyed, the Contractor shall sample according to Illinois Modified AASHTO T 141.
- 9/ The air content test will be required for each delivered truck load.
- 10/ For fabric formed concrete revetment mat, the slump test is not required and the flexural strength test is not applicable.

SCHEDULE C

ENGINEER QUALITY ASSURANCE INDEPENDENT SAMPLE TESTING		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins, Slump and Air Content	As determined by the Engineer.
Jobsite	Slump, Air Content and Strength	As determined by the Engineer.

ENGINEER QUALITY ASSURANCE SPLIT SAMPLE TESTING		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins ^{2/}	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 10% of total tests required of the Contractor will be performed per aggregate gradation number and per plant.
	Slump and Air Content	As determined by the Engineer.
Jobsite	Slump ^{2/} and Air Content ^{2/ 3/}	At the beginning of the project, the first three tests performed by the Contractor. Thereafter, a minimum of 20% of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design.
	Strength ^{2/}	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 20% of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design.

- 1/ The Engineer will perform the testing throughout the period of quality control testing by the Contractor.
- 2/ The Engineer will witness and take immediate possession of or otherwise secure the Department's split sample obtained by the Contractor.
- 3/ Before transport by pump or conveyor, a minimum of 20 percent of total tests required of the Contractor will be performed per mix design and per plant. After transport by pump or conveyor, a minimum of 20 percent of total tests required of the Contractor will be performed per mix design and per plant.

SCHEDULE D

CONCRETE QUALITY CONTROL AND QUALITY ASSURANCE DOCUMENTS

- (a) Model Quality Control Plan for Concrete Production (*)
- (b) Qualifications and Duties of Concrete Quality Control Personnel (*)
- (c) Development of Gradation Bands on Incoming Aggregate at Mix Plants (*)
- (d) Required Sampling and Testing Equipment for Concrete (*)
- (e) Method for Obtaining Random Samples for Concrete (*)
- (f) Calibration of Concrete Testing Equipment (BMPR PCCQ01 through BMPR PCCQ09) (*)
- (g) Water/Cement Ratio Worksheet (BMPR PCCW01) (*)
- (h) Field/Lab Gradations (MI 504M) (*)
- (i) Concrete Air, Slump and Quantity (BMPR MI654) (*)
- (j) P.C. Concrete Strengths (BMPR MI655) (*)
- (k) Aggregate Technician Course or Mixture Aggregate Technician Course (*)
- (l) Portland Cement Concrete Tester Course (*)
- (m) Portland Cement Concrete Level I Technician Course - Manual of Instructions for Concrete Testing (*)
- (n) Portland Cement Concrete Level II Technician Course - Manual of Instructions for Concrete Proportioning (*)
- (o) Portland Cement Concrete Level III Technician Course - Manual of Instructions for Design of Concrete Mixtures (*)
- (p) Manual of Test Procedures for Materials

* Refer to Appendix C of the Manual of Test Procedures for Materials for more information.”

Designer Note: Insert into all HMA contracts.

RECLAIMED ASPHALT PAVEMENT (RAP) (BDE)

Effective: January 1, 2007

Revised: January 1, 2012 August 1, 2012

Revise Section 1031 of the Standard Specifications to read:

"SECTION 1031. RECLAIMED ASPHALT PAVEMENT

1031.01 Description. Reclaimed asphalt pavement (RAP) is from the material produced by cold milling or crushing of an existing hot-mix asphalt (HMA) pavement. The Contractor shall supply written documentation that the RAP originated from routes or airfields under federal, state, or local agency jurisdiction.

1031.02 Stockpiles. The Contractor shall construct individual, sealed RAP stockpiles meeting one of the following definitions. No additional RAP shall be added to the pile after the pile has been sealed. Stockpiles shall be sufficiently separated to prevent intermingling at the base. Stockpiles shall be identified by signs indicating the type as listed below (i.e. "Homogeneous Surface").

Prior to milling, the Contractor shall request the District to provide verification of the quality of the RAP to clarify appropriate stockpile.

- (a) Fractionated RAP (FRAP). FRAP shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures. The coarse aggregate in FRAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. All FRAP shall be fractionated prior to testing by screening into a minimum of two size fractions with the separation occurring on or between the #4 (4.75 mm) and 1/2 in. (12.5 mm) sieves. Agglomerations shall be minimized such that 100 percent of the RAP shall pass the sieve size specified below for the mix the FRAP will be used in.

Mixture FRAP will be used in:	Sieve Size that 100% of FRAP Shall Pass
IL-25.0	2 in. (50 mm)
IL-19.0	1 1/2 in. (40 mm)
IL-12.5	1 in. (25 mm)
IL-9.5	3/4 in. (20 mm)
IL-4.75	1/2 in. (13 mm)

- (b) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures and represent: 1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content. If approved by the Engineer, combined single pass surface/binder millings may be considered "homogenous" with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.

- (c) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, HMA (High and Low ESAL) mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (d) Conglomerate "D" Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, HMA (High or Low ESAL), or "All Other" (as defined by Article 1030.04(a)(3)) mixtures. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.
- (e) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as "Non-Quality".

RAP/FRAP containing contaminants, such as earth, brick, sand, concrete, sheet asphalt, bituminous surface treatment (i.e. chip seal), pavement fabric, joint sealants, etc., will be unacceptable unless the contaminants are removed to the satisfaction of the Engineer. Sheet asphalt shall be stockpiled separately.

1031.03 Testing. When used in HMA, the RAP/FRAP shall be sampled and tested either during or after stockpiling.

For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2,000 tons (1,800 metric tons) and one sample per 2,000 tons (1,800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4,000 tons (3,600 metric tons).

For testing after stockpiling, the Contractor shall submit a plan for approval to the District proposing a satisfactory method of sampling and testing the RAP/FRAP pile either in-situ or by restockpiling. The sampling plan shall meet the minimum frequency required above and detail the procedure used to obtain representative samples throughout the pile for testing.

Before extraction, each field sample shall be split to obtain two samples of test sample size. One of the two test samples from the final split shall be labeled and stored for Department use. The Contractor shall extract the other test sample according to Department procedure. The Engineer reserves the right to test any sample (split or Department-taken) to verify Contractor test results.

Evaluation of Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation and, when applicable G_{mm} . Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	FRAP/Homogeneous /Conglomerate	Conglomerate "D" Quality
1 in. (25 mm)		± 5 %
1/2 in. (12.5 mm)	± 8 %	± 15 %
No. 4 (4.75 mm)	± 6 %	± 13 %

No. 8 (2.36 mm)	± 5 %	
No. 16 (1.18 mm)		± 15 %
No. 30 (600 μm)	± 5 %	
No. 200 (75 μm)	± 2.0 %	± 4.0 %
Asphalt Binder	± 0.4 % ^{1/}	± 0.5 %
G _{mm}	± 0.03	

1/ The tolerance for FRAP shall be ±0.3 %.

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt binder content test results fall outside the appropriate tolerances, the RAP/FRAP shall not be used in HMA unless the RAP/FRAP representing the failing tests is removed from the stockpile. All test data and acceptance ranges shall be sent to the District for evaluation.

With the approval of the Engineer, the ignition oven may be substituted for extractions according to the Illinois Test Procedure, "Calibration of the Ignition Oven for the Purpose of Characterizing Reclaimed Asphalt Pavement (RAP)".

1031.04 Quality Designation of Aggregate in RAP/FRAP.

(a) The aggregate quality of the RAP for homogenous, conglomerate, and conglomerate "D" quality stockpiles shall be set by the lowest quality of coarse aggregate in the RAP stockpile and are designated as follows.

- (1) RAP from Class I, Superpave (High ESAL)/HMA (High ESAL), or HMA (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.
- (2) RAP from Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.
- (3) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.
- (4) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

(b) The aggregate quality of FRAP shall be determined as follows.

- (1) If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer. If the quality is not known, the quality shall be determined according to Article 1031.04(b)(2).
- (2) Coarse and fine FRAP stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5000 tons (4500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lbs. (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant prequalified by the Department for the specified testing. The consultant shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the BMPR

Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 327. A maximum loss of 15.0 percent will be applied for all HMA applications.”

1031.05 Use of RAP/FRAP in HMA. The use of RAP/FRAP shall be a Contractor’s option when constructing HMA in all contracts. The use of RAP/FRAP in HMA shall be as follows.

- (a) Coarse Aggregate Size. The coarse aggregate in all RAP shall be equal to or less than the nominal maximum size requirement for the HMA mixture to be produced.
- (b) Steel Slag Stockpiles. RAP stockpiles containing steel slag or other expansive material, as determined by the Department, shall be homogeneous and will be approved for use in HMA (High ESAL and Low ESAL) surface mixtures only.
- (c) Use in HMA Surface Mixtures (High and Low ESAL). RAP/FRAP stockpiles for use in HMA surface mixtures (High and Low ESAL) shall be FRAP or homogeneous in which the coarse aggregate is Class B quality or better. RAP/FRAP shall be considered equivalent to limestone for frictional considerations unless produced/screened to minus 3/8 in. (10 mm).
- (d) Use in HMA Binder Mixtures (High and Low ESAL), HMA Base Course, and HMA Base Course Widening. RAP/FRAP stockpiles for use in HMA binder mixtures (High and Low ESAL), HMA base course, and HMA base course widening shall be FRAP, homogeneous, or conglomerate, in which the coarse aggregate is Class C quality or better.
- (e) Use in Shoulders and Subbase. RAP/FRAP stockpiles for use in HMA shoulders and stabilized subbase (HMA) shall be FRAP, homogeneous, conglomerate, or conglomerate DQ.
- (f) When the Contractor chooses the RAP option, the percentage of RAP shall not exceed the amounts indicated in the table below for a given N Design.

Max RAP Percentage

HMA Mixtures ^{1/, 2/}	Maximum % RAP		
	Binder/Leveling Binder	Surface	Polymer Modified
Ndesign 30	30	30	10
50	25	15	10
70	15 / 25 ^{2/}	10 / 15 ^{2/}	10
90	10	10	10
105	10	10	10

1/ For HMA “All Other” (shoulder and stabilized subbase) N-30, the amount of RAP shall not exceed 50% of the mixture.

2/ Value of Max % RAP if homogeneous RAP stockpile of IL-9.5 RAP is utilized.

3/ When RAP exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275°F (135°C) the high and low virgin asphalt binder grades shall each be reduced by one grade when

RAP exceeds 25 percent (i.e. 26 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

- (g) When the Contractor chooses the FRAP option, the percentage of FRAP shall not exceed the amounts indicated in the table below for a given N Design.

(1) Level 1 Maximum FRAP Percentage.

HMA Mixtures ^{1/, 2/}	Level 1 - Maximum % FRAP		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified ^{3/, 4/}
30	35	35	10
50	30	25	10
70	25	20	10
90	20	15	10
105	10	10	10

- 1/ For HMA "All Other" (shoulder and stabilized subbase) N30, the amount of FRAP shall not exceed 50 percent of the mixture.
- 2/ When FRAP exceeds 20 percent for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275°F (135°C) the high and low virgin asphalt binder grades shall each be reduced by one grade when FRAP exceeds 25 percent (i.e. 26 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).
- 3/ For SMA the maximum FRAP shall be 20 percent. When the FRAP usage in SMA exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).
- 4/ For IL-4.75 mix the amount of minus #4 fine fraction FRAP shall not exceed 20 percent. When the FRAP usage in IL-4.75 exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

(2) Level 2 Maximum FRAP percentage.

HMA Mixtures ^{1/, 2/}	Level 1 2 - Maximum % FRAP		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified ^{3/, 4/}
30	40	40	10
50	40	30	10
70	30	20	10
90	30	20	10
105	30	15	10

- 1/ For HMA "All Other" (shoulder and stabilized subbase) N30, the amount of FRAP shall not exceed 50 percent of the mixture.
- 2/ When FRAP exceeds 20 percent for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275°F (135°C) the high and low virgin asphalt binder grades shall each be reduced by one grade when FRAP exceeds 25 percent (i.e. 26 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).
- 3/ For SMA the maximum FRAP shall be 20 percent. When the FRAP usage in SMA exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).
- 4/ For IL-4.75 mix the amount of minus #4 fine fraction FRAP shall not exceed 30 percent. When the FRAP usage in IL-4.75 exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

1031.06 HMA Mix Designs. At the Contractor's option, HMA mixtures may be constructed utilizing RAP/FRAP material meeting the above detailed requirements.

FRAP mix designs exceeding the Level 1 FRAP percentages shall be tested prior to submittal for verification, according to Illinois Modified AASHTO T324 (Hamburg Wheel) and shall meet the following requirements.

Asphalt Binder Grade	# Repetitions	Max. Rut Depth in. (mm)
PG76-XX	20,000	1/2 (12.5)
PG70-XX	15,000	1/2 (12.5)
PG64-XX	10,000	1/2 (12.5)
PG58-XX	10,000	1/2 (12.5)

RAP/FRAP designs shall be submitted for volumetric verification. If additional RAP/FRAP stockpiles are tested and found that no more than 20 percent of the results, as defined under "Testing" herein, are outside of the control tolerances set for the original RAP/FRAP stockpile and HMA mix design, and meets all of the requirements herein, the additional RAP/FRAP stockpiles may be used in the original mix design at the percent previously verified.

1031.07 HMA Production. Mixture production where the FRAP percentage exceeds the Level 1 limits shall be sampled within the first 500 tons (450 metric tons) on the first day of production with a split reserved for the Department. The mix sample shall be tested according to the Illinois Modified AASHTO T324 and shall meet the requirements specified herein. FRAP mix production shall not exceed 1,500 tons (1,350 metric tons) or one days production, whichever comes first, until the testing is completed and the mixture is found to be in conformance. The requirement to cease mix production may be waived if the plant produced FRAP mixture conformance is demonstrated prior to start of mix production for the contract.

The coarse aggregate in all RAP used shall be equal to or less than the nominal maximum size requirement for the HMA mixture being produced.

To remove or reduce agglomerated material, a scalping screen, gator, crushing unit, or comparable sizing device approved by the Engineer shall be used in the RAP feed system to remove or reduce oversized material. If material passing the sizing device adversely affects the mix production or quality of the mix, the sizing device shall be set at a size specified by the Engineer.

If the RAP/FRAP control tolerances or QC/QA test results require corrective action, the Contractor shall cease production of the mixture containing RAP/FRAP and either switch to the virgin aggregate design or submit a new RAP/FRAP design.

HMA plants utilizing RAP/FRAP shall be capable of automatically recording and printing the following information.

(a) Dryer Drum Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (4) Accumulated dry weight of RAP/FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).
- (5) Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.
- (6) Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.
- (7) Residual asphalt binder in the RAP/FRAP material as a percent of the total mix to the nearest 0.1 percent.
- (8) Aggregate and RAP/FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAP/FRAP are printed in wet condition.)

(b) Batch Plants.

- (1) Date, month, year, and time to the nearest minute for each print.
- (2) HMA mix number assigned by the Department.
- (3) Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).
- (4) Mineral filler weight to the nearest pound (kilogram).
- (5) RAP/FRAP weight to the nearest pound (kilogram).
- (6) Virgin asphalt binder weight to the nearest pound (kilogram).

- (7) Residual asphalt binder in the RAP/FRAP material as a percent of the total mix to the nearest 0.1 percent.

The printouts shall be maintained in a file at the plant for a minimum of one year or as directed by the Engineer and shall be made available upon request. The printing system will be inspected by the Engineer prior to production and verified at the beginning of each construction season thereafter.

1031.08 RAP in Aggregate Surface Course and Aggregate Shoulders. The use of RAP in aggregate surface course and aggregate shoulders shall be as follows.

- (a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except "Non-Quality" and "FRAP". The testing requirements of Article 1031.03 shall not apply.
- (b) Gradation. One hundred percent of the RAP material shall pass the 1½ in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted."

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RIGHT-OF-WAY RESTRICTIONS	107.32	10732
ROCKFILL	311.00	31100
RUMBLE STRIP	407.14	40714
SEEDING, MINOR AREAS	250.00	25000
SEEDLING MIXTURE A	253.00b	15300b
SEEPAGE COLLAR	542.00	54200
SIDEWALK DRAINS	424.01	42401

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STATUS OF UTILITIES/UTILITIES TO BE ADJUSTED	105.07	10507
STEEL CASINGS ** (* MM)	561.00	56100
STEEL PIPE CULVERT, SPECIAL (JACKED) ** (* MM)	552.00	55200
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6.75 FOOT POSTS	630.08	63008
STONE DUMPED RIPRAP*	281.04	28104
STONE RIPRAP	281.06	28106
STORM SEWER (SPECIAL)	550.02	55002
STORM SEWER/PIPE CULVERT) JACKED IN PLACE *** (** MM)	552.01	55201
STORM SEWER (WATER MAIN QUALITY PIPE)	550.00	55000
SUBBASE GRANULAR MATERIAL	311.01	31101
SUBGRADE TREATMENT	301.03	30103
SURFACE FILLER, SPECIAL (GALLON)	503.02	50302
TEMPORARY CONCRETE BARRIER REFLECTORS	704.00a	70400a
TEMPORARY CONCRETE BARRIER, STATE OWNED & TEMPORARY CONCRETE BARRIER TERMINAL SECTIONS, STATE OWNED	704.00d	70400d
TEMPORARY INLET DRAINAGE TREATMENT	602.00k	60200k
TEMPORARY PAVEMENT	355.00	35500
TEMPORARY RAISED REFLECTIVE PAVEMENT MARKER, TYPE II	781.00	78100
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District Special Provisions

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105.07	REMOVAL OF ABANDONED UNDERGROUND UTILITIES	10507
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107.32	RIGHT-OF-WAY RESTRICTIONS	10732
108.03	DELAYED START OF MULTIPLE CONTRACTS	10803
108.05a	DATE OF COMPLETION	10805a
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District Special Provisions

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205.00	GEOTECHNICAL REINFORCEMENT	20500
205.05	EMBANKMENT	20505
205.04	EMBANKMENT (RESTRICTIONS)	20504
205.05a	EMBANKMENT (SMALL EMBANKMENTS)	20505a
250.00	SEEDING, MINOR AREAS	25000
250.06a	MOWING	25006a
250.06b	MOWING	250.06b
253.00	TREE WHIP MIXTURE	25300
253.00b	SEEDLING MIXTURE A	25300b
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281.04	STONE DUMPED RIPRAP *	28104
281.06	STONE RIPRAP	28106
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District Special Provisions

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District Special Provisions

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442.00	CLASS (*) PATCHES, TYPE (**), (***)	44200
443.00	REFLECTIVE CRACK CONTROL TREATMENT	44300
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District Special Provisions

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503.00	BIN-TYPE RETAINING WALL	50300
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503.19	PROTECTING COAT, SPECIAL	50319
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521.00c	JACKING AND CRIBBING	52100c
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542.01	REMOVE AND RELAY PIPE CULVERTS	54201
542.04	PIPE CULVERTS	54204
542.04e	BACKFILL - PIPE CULVERTS	54204e
550.00	STORM SEWER (WATER MAIN QUALITY PIPE)	55000
550.02	STORM SEWER (SPECIAL)	55002
550.07	BACKFILL, BUILDING REMOVAL	55007
552.00	STEEL PIPE CULVERT, SPECIAL (JACKED) ** (* MM)	55200
552.01	(*STORM SEWER/PIPE CULVERT) JACKED IN PLACE, ** (* MM)	55201
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District Special Provisions

<u>Standard Specifications</u>	<u>Item/Description</u>	<u>Doc. #</u>
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602.00i	INLET-MANHOLE, TYPE G-1, 8' (2.4 M) DIAMETER, DOUBLE, SPECIAL	60200i
602.00e	INLET-MANHOLE, TYPE G-1, 4' (1.2 M) DIAMETER, SPECIAL	60200e
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District Special Provisions

<u>Standard Specifications</u>	<u>Item/Description</u>	<u>Doc. #</u>
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631.07	TRAFFIC BARRIER TERMINALS, TYPE 6	63107
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670.05	EQUIPMENT VAULT FOR NUCLEAR TESTING EQUIPMENT	67005
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683.00	MORTARED STONE WALL	68300

SECTION 700

District Special Provisions

<u>Standard Specifications</u>	<u>Item/Description</u>	<u>Doc. #</u>
701.00	TRAFFIC CONTROL PLAN	70100
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701.08b	TRAFFIC CONTROL AND PROTECTION STANDARD 701331 (SPECIAL)	70108b
701.14	WIDTH RESTRICTION SIGNING	70114
701.20	TRAFFIC CONTROL AND PROTECTION STANDARD BLR 21 AND BLR 21 (SPECIAL)	70120
701.21	TRAFFIC CONTROL AND PROTECTION STANDARD BLR 22 AND BLR 22 (SPECIAL)	70121
701.22	TRAFFIC CONTROL AND PROTECTION STANDARD 701606 (SPECIAL)	70122
703.00	PAVEMENT MARKING REMOVAL/WORK ZONE PAVEMENT MARKING REMOVAL	70300
704.00a	TEMPORARY CONCRETE BARRIER REFLECTORS	70400a
704.00	TEMPORARY CONCRETE BARRIER, STATE OWNED AND TEMPORARY CONCRETE BARRIER TERMINAL SECTIONS, STATE OWNED	70400
780.00	THERMOPLASTIC PAVEMENT MARKING EQUIPMENT	78000
780.02	GROOVING FOR RECESSED PAVEMENT MARKINGS	78002
780.07	PREFORMED PLASTIC PAVEMENT MARKINGS	78007
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SECTION 800

District Special Provisions

<u>Standard Specifications</u>	<u>Item/Description</u>	<u>Doc. #</u>
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815.00	TRENCH & BACKFILL, SPECIAL FOR CONDUIT INSTALLATION BENEATH BITUMINOUS SHOULDERS	81500
863.00	TERMINAL FACILITY	86300
873.00	ELECTRIC CABLE CONDUIT NO. 18	87300
886.00	DETECTOR LOOP, SPECIAL FOR TRAFFIC COUNTERS	88600
886.00a	DETECTOR LOOPS, TYPE 1	88600a

5/2/2012

SECTION 900

District Special Provisions

Standard
Specifications

Item/Description

Doc. #

SECTION 1000

District Special Provisions

<u>Standard Specifications</u>	<u>Item/Description</u>	<u>Doc. #</u>
1004.00	AGGREGATE OPTIMIZATION OF CLASS PV MIX FOR SLIPFORM PAVING	100400
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1004.03b	COARSE AGGREGATE FOR BITUMINOUS COURSES, CLASS A	d100403b
1004.04	AGGREGATE QUALITY	d100404
1030.04	HOT-MIX ASPHALT – MIXTURE DESIGN VERIFICATION AND PRODUCTION	103004
1103.03	PCC AUTOMATIC BATCHING EQUIPMENT	110303

District Special Provisions

100400

1004.00

Designer Note: Insert into any project with Concrete Pavement pay items.

AGGREGATE OPTIMIZATION OF CLASS PV MIX FOR SLIPFORM PAVING

Effective August 3, 2012

Delete Note 8/ of Article 1004.01(c) and replace Article 1004.02(d)(1) with the following:
For the slipform paving of concrete pavement, the Class PV concrete shall be uniformly graded. This may be accomplished by using a uniformly graded single coarse aggregate, or by blending two or more coarse aggregate sizes. As a minimum for multiple coarse aggregate sizes, CA 7 or CA 11 shall be blended with CA 13, CA 14, or CA 16. The final single coarse aggregate or combined coarse aggregate gradation shall have minimum 45 percent and maximum 60 percent passing the 1/2 in. (12.5 mm) sieve. However, the Contractor may propose for approval by the Engineer an alternate uniformly graded concrete mixture using the information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures".

100402

1004.02

Designer Note: Insert into all new construction bridge projects involving the Concrete Superstructure and Concrete Wearing Surface pay items.

CONCRETE SUPERSTRUCTURE AGGREGATE OPTIMIZATION

Effective: August 4, 2006 Revised: August 3, 2012

Delete Note 8/ of Article 1004.01(c) and replace Article 1004.02(d)(1) with the following:

For the bridge superstructure and bridge approach slab, the Class BS concrete shall be uniformly graded.

This may be accomplished by using a uniformly graded single coarse aggregate, or by blending two or more coarse aggregate sizes. As a minimum for multiple coarse aggregate sizes, CA 7 or CA 11 shall be blended with CA 13, CA 14, or CA 16. The final single coarse aggregate or combined coarse aggregate gradation shall have minimum 45 percent and maximum 60 percent passing the 1/2 in. (12.5 mm) sieve. However, the Contractor may propose for approval by the Engineer an alternate uniformly graded concrete mixture using the information in the "Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures".

Concrete Superstructures Aggregate Optimization will not be paid for separately, but shall be considered as included in the unit cost of CONCRETE SUPERSTRUCTURES.

Designer Note: Insert into any projects with HMA pay items. This is a special provision developed by BMPR, but not added to the BDE's yet.

HOT-MIX ASPHALT - MIXTURE DESIGN VERIFICATION AND PRODUCTION

Effective: August 3, 2012

Description. This special provision states the requirements for Hamburg Wheel and Tensile Strength testing for High ESAL, IL-4.75, and SMA hot mix asphalt (HMA) mixes during mix design verification and production. This special provision also states the plant requirements for hydrated lime addition systems used in the production of High ESAL, IL-4.75, and SMA mixes.

When the options of Warm Mix Asphalt, Reclaimed Asphalt Shingles, or Reclaimed Asphalt Pavement are used by the Contractor, the Hamburg Wheel and tensile strength requirements in this special provision will be superseded by the special provisions for Warm Mix Asphalt, Reclaimed Asphalt Shingles, or Reclaimed Asphalt Pavement as applicable.

In addition to the requirements in the December 1, 2011 HMA Special Provisions for Pay for Performance Using Percent Within Limits, a Hamburg Wheel test and tensile strength test will be conducted during mix design on mixtures used for Pay For Performance projects.

Mix Design Testing. Add the following to Article 1030.04 of the Standard Specifications:

- “(d) Verification Testing. High ESAL, IL-4.75, and SMA mix designs submitted for verification will be tested to ensure that the resulting mix designs will pass the required criteria for the Hamburg Wheel Test (IL mod AASHTO T-324) and the Tensile Strength Test (IL mod AASHTO T-283). The Department will perform a verification test on gyratory specimens compacted by the Contractor. If the mix fails the Department's verification test, the Contractor shall make necessary changes to the mix and provide passing Hamburg Wheel and Tensile Strength test results from a private lab. The Department will verify the passing results.

All new and renewal mix designs shall meet the following requirements for verification testing.

- (1) Hamburg Wheel Test criteria. The maximum allowable rut depth shall be 0.5 in. (12.5 mm). The minimum number of wheel passes at the 0.5 in. (12.5 mm) rut depth criteria shall be based on the high temperature binder grade of the mix as specified in the plans for the mix design.

PG Grade	Number of Passes
PG 64-xx (or lower)	10,000
PG 70-xx	15,000
PG 76-xx (or higher)	20,000

- (2) Tensile Strength Criteria. The minimum allowable conditioned tensile strength shall be 415 kPa (60 psi) for non-polymer modified performance graded (PG) asphalt binder and 550 kPa (80 psi) for polymer modified PG asphalt binder. The maximum allowable unconditioned tensile strength shall be 1380 kPa (200 psi).”

Production Testing. Add the following to Article 1030.06 of the Standard Specifications:

“(c) Hamburg Wheel Test. A Hamburg Wheel test will be conducted on each High ESAL, IL-4.75, and SMA mix produced that has been verified by the Hamburg Wheel process.

The Contractor shall obtain a sample during the startup for each mix and compact gyratory specimens to the air void percentage as specified in IL-modified AASHTO T-324 to be provided to the Department for testing. The Department may conduct additional Hamburg Wheel Tests on production material as determined by the Engineer.”

System for Hydrated Lime Addition. Revise the last sentence of the third paragraph of Article 1030.04(c) of the Standard Specifications to read:

“The method of application shall be according to Article 1102.01(a)(10).”

Revise the first three sentences of the second paragraph of Article 1102.01(a)(10) of the Standard Specifications to read:

“When hydrated lime is used as the anti-strip additive, a separate bin or tank and feeder system shall be provided to store and accurately proportion the lime onto the aggregate either as a slurry, as dry lime applied to damp aggregates, or as dry lime injected onto the hot aggregates prior to adding the liquid asphalt cement. If the hydrated lime is added either as a slurry or as dry lime on damp aggregates, the lime and aggregates shall be mixed by a power driven pugmill to provide a uniform coating of the lime prior to entering the dryer. If dry hydrated lime is added to the hot dry aggregates in a drum plant, the lime will be added in such a manner that the lime will not become entrained into the air stream of the dryer and that thorough dry mixing will occur prior to the injection point of the liquid asphalt. When a batch plant is used, the hydrated lime shall be added to the mixture in the weigh hopper or as approved by the Engineer.”

Basis of Payment. Revise the seventh paragraph of Article 406.14 of the Standard Specifications to read:

“For mixes designed and verified under the Hamburg Wheel criteria, the cost of furnishing and introducing anti-stripping additives in the HMA will not be paid for separately, but shall be considered as included in the contract unit price of the HMA item involved.

If an anti-stripping additive is required for any other HMA mix, the cost of the additive will be paid for according to Article 109.04. The cost incurred in introducing the additive into the HMA will not be paid for separately, but shall be considered as included in the contract unit price of the HMA item involved.

No additional compensation will be awarded to the Contractor because of reduced production rates associated with the addition of the anti-stripping additive.”