

Supplemental Specifications and Recurring Special Provisions

Adopted January 1, 2017



Illinois Department of Transportation

INTRODUCTION

This book contains a copy of SUPPLEMENTAL SPECIFICATIONS and frequently used RECURRING SPECIAL PROVISIONS.

The SUPPLEMENTAL SPECIFICATIONS included herein supplement the "Standard Specifications for Road and Bridge Construction", adopted April 1, 2016. The SUPPLEMENTAL SPECIFICATIONS are applicable to, and included by reference in, all contracts advertised and awarded by the Department.

The frequently used RECURRING SPECIAL PROVISIONS included herein may be included, by reference, in selected contracts advertised and awarded by the Department.

Bidding proposals issued by the Department may contain a "Check Sheet for Recurring Special Provisions" which specifies the RECURRING SPECIAL PROVISIONS applicable to and included in contracts by reference.

The units of measure used shall correspond to the units used in the contract.

INDEX
FOR
SUPPLEMENTAL SPECIFICATIONS
AND RECURRING SPECIAL PROVISIONS

Adopted January 1, 2017

This index contains a listing of SUPPLEMENTAL SPECIFICATIONS, frequently used RECURRING SPECIAL PROVISIONS, and LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS.

ERRATA Standard Specifications for Road and Bridge Construction
(Adopted 4-1-16) (Revised 1-1-17)

SUPPLEMENTAL SPECIFICATIONS

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RECURRING SPECIAL PROVISIONS

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LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

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ERRATA
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

Adopted: April 1, 2016
Revised: January 1, 2017

- Page 84 Article 204.02. In the seventh line of the first paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”.
- Page 90 Article 205.06. In the first sentence of the third paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”.
- Page 91 Article 205.06. In the first sentence of the fourth paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”, and in the second sentence change “AASHTO T 224” to “Illinois Modified AASHTO T 99 (Annex A1)”.
- Page 91 Article 205.06. In the second line of the fifth paragraph change “AASHTO T 191” to “Illinois Modified AASHTO T 191”.
- Page 91 Article 205.06. In the sixth line of the eighth paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”.
- Page 148 Article 302.09. In the second sentence of the fifth paragraph change “AASHTO T 191” to “Illinois Modified AASHTO T 191”, and in the third sentence change “AASHTO T 99” to “Illinois Modified AASHTO T 99”.
- Page 152 Article 310.09. In the second sentence of the second paragraph change “AASHTO T 191” to “Illinois Modified AASHTO T 191”, and in the third sentence change “AASHTO T 99” to “Illinois Modified AASHTO T 99”.
- Page 155 Article 311.05(a). In the first sentence of the fifth paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”, and in the second sentence change “AASHTO T 224” to “Illinois Modified AASHTO T 99 (Annex A1)”.
- Page 155 Article 311.05(a). In the second line of the sixth paragraph change “AASHTO T 191” to “Illinois Modified AASHTO T 191”.
- Page 163 Article 351.05(a). In the second sentence of the fifth paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”, and in the third sentence change “AASHTO T 224” to “Illinois Modified AASHTO T 99 (Annex A1)”.

- Page 163 Article 351.05(a). In the second line of the sixth paragraph change "AASHTO T 191" to "Illinois Modified AASHTO T 191".
- Page 169 Article 352.11. In the second sentence of the fourth paragraph change "AASHTO T 191" to "Illinois Modified AASHTO T 191", and in the third sentence change "AASHTO T 134 (Method B)" to "Illinois Modified AASHTO T 134 (Method B)".
- Page 169 Article 352.12. In the first sentence of the first paragraph change "AASHTO T 22" to "Illinois Modified AASHTO T 22", and in the second sentence change "AASHTO T 134 (Method B)" to "Illinois Modified AASHTO T 134 (Method B)".
- Page 196 Article 406.07(a). After the footnotes in Table 1 - Minimum Roller Requirements for HMA add the following:

"EQUIPMENT DEFINITION

- V_s - Vibratory roller, static mode, minimum 125 lb/in. (2.2 kg/mm) of roller width. Maximum speed = 3 mph (5 km/h) or 264 ft/min (80 m/min). If the vibratory roller does not eliminate roller marks, its use shall be discontinued and a tandem roller, adequately ballasted to remove roller marks, shall be used.
- V_D - Vibratory roller, dynamic mode, operated at a speed to produce not less than 10 impacts/ft (30 impacts/m).
- P - Pneumatic-tired roller, max. speed 3 1/2 mph (5.5 km/h) or 308 ft/min (92 m/min). The pneumatic-tired roller shall have a minimum tire pressure of 80 psi (550 kPa) and shall be equipped with heat retention shields. The self-propelled pneumatic-tired roller shall develop a compression of not less than 300 lb (53 N) nor more than 500 lb (88 N) per in. (mm) of width of the tire tread in contact with the HMA surface.
- T_B - Tandem roller for breakdown rolling, 8 to 12 tons (7 to 11 metric tons), 250 to 400 lb/in. (44 to 70 N/mm) of roller width, max. speed = 3 1/2 mph (5.5 km/h) or 308 ft/min (92 m/min).
- T_F - Tandem roller for final rolling, 200 to 400 lb/in. (35 to 70 N/mm) of roller width with minimum roller width of 50 in. (1.25 m). Ballast shall be increased if roller marks are not eliminated. Ballast shall be decreased if the mat shoves or distorts.
- 3W - Three wheel roller, max. speed = 3 mph (5 km/h) or 264 ft/min (80 m/min), 300 to 400 lb/in. (53 to 70 N/mm) of roller width. The three-wheel roller shall weigh 10 to 12 tons (9 to 11 metric tons)."

- Page 253 Article 442.06(a)(2). In the third line of the sixth paragraph delete “transverse”.
- Page 331 Article 505.04(p). Under Range of Clearance in the first table change “in. x 10⁻⁶” to “in. x 10⁻³”.
- Page 444 Article 542.03. In the Notes in Table IIIB add “CPP Corrugated Polypropylene (CPP) pipe with smooth interior”.
- Page 445 Article 542.03. In the fourth column in Table IIIB (metric) change the heading for Type 5 pipe from “CPE” to “CPP”.
- Page 445 Article 542.03. In the Notes in Table IIIB (metric) change “PE Polyethylene (PE) pipe with a smooth interior” to “CPP Corrugated Polypropylene (CPP) pipe with smooth interior”.
- Page 449 Article 542.04(f)(2). In the third line of the second paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”.
- Page 450 Article 542.04(h). In the third sentence of the second paragraph change “in the table below” to “per the Contractor’s design”.
- Page 544 Article 639.03. In the first sentence of the first paragraph change “AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, Traffic Signals,” to “AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals,”.
- Page 546 Article 640.03. In the first sentence of the first paragraph change “AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals” to “AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals”.
- Page 548 Article 641.03. In the first sentence of the first paragraph change “AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaire and Traffic Signals,” to “AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals,”.
- Page 621 Article 727.03. In the first sentence of the third paragraph change “AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals” to “AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals”.
- Page 629 Article 734.03(a). In the fourth line of the second paragraph change “AASHTO T 99 (Method C)” to “Illinois Modified AASHTO T 99 (Method C)”.

- Page 649 Article 801.02. In the first sentence of the first paragraph change “AASHTO’s Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals” to “AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals”.
- Page 742 Article 1003.04(c). Under Gradation in the table change “(see Article 1003.02(c))” to “(see Article 1003.01(c))”.
- Page 755 Article 1004.03(b). Revise the third sentence of the first paragraph to read “For Class A (seal or cover coat), and other binder courses, the coarse aggregate shall be Class C quality or better.”.
- Page 755 Article 1004.03(c). In the table for Class A-1, 2, & 3, change the Gradation No. “CA 16” to “CA 16 or CA 20”.
- Page 777 Article 1006.29(d). Revise the third sentence of the third paragraph to read “Stainless steel washers shall be plain flat, conforming to ANSI/ASME B18.22.1, Type A or B as appropriate, or MS 15795, and made of 18-8 stainless steel.”
- Page 809 Article 1020.04(e). In the third line of the first paragraph change “ITP SCC-3” to “ITP SCC-4”.
- Page 810 Article 1020.05(b). In the second line of the first paragraph change “according to the qualified products list” to “according to the qualified products list.”.
- Page 810 Article 1020.05(b). Delete the first sentence of the second paragraph.
- Page 836 Article 1020.15(b)(1)c. Replace the fourth sentence of the first paragraph with the following: “The Contractor shall provide freeze/thaw test results according to AASHTO T 161, and the relative dynamic modulus of elasticity of the mix design shall be a minimum of 80 percent. Testing shall be performed by an independent laboratory accredited by the AASHTO Materials Reference Laboratory (AMRL) for Portland Cement Concrete.”
- Page 852 Article 1030.05(a)(6). Change “Hot-Mix Asphalt QC/QA Start-Up Procedures” to “Hot-Mix Asphalt Test Strip Procedures”.
- Page 945 Article 1069.05. In the first sentence of the tenth paragraph change ““Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals”” to “AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals”.
- Page 961 Article 1070.04(b)(1). In the third sentence of the first paragraph change ““Standard Specifications of Structural Supports for Highway Signs, Luminaires and Traffic Signals” published by AASHTO” to “AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals”.

- Page 989 Article 1077.01. In the second sentence of the first paragraph change “Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, as published by AASHTO” to “AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals”.
- Page 1121 Article 1103.13(a). In the first line of the first paragraph change “Bridge Deck Approach Slabs.” to “Bridge Deck and Approach Slabs.”.

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SUPPLEMENTAL SPECIFICATION
FOR
SECTION 106. CONTROL OF MATERIALS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

106.08 Certification of Metal Fabricator. Revise this Article to read:

“106.08 Certification of Metal Fabricator. All fabricators performing work on metal components of structures shall be certified under the appropriate category of the AISC Certification Program for Steel Bridge Fabricators as follows.

- (a) Fabricators of the main load carrying steel components of box girder, trusses over 200 ft (61 m) in length, arch, cable supported, moveable, and curved (radii under 1000 ft (305 m)) structures shall be certified under Category Advanced Bridges.
- (b) Fabricators of the main load carrying steel components of spliced rolled beams, welded plate girders, either simple span or continuous, trusses under 200 ft (61 m) in length, and curved (radii over 1000 ft (305 m)) structures, shall be certified under Category Intermediate Bridges.
- (c) Fabricators of the main load carrying steel components of unspliced rolled beam sections shall be certified under Category Simple Bridges.
- (d) Fabricators of overhead sign structures shall be on the Department's list of pre-qualified Overhead Sign Structure Fabricators and certified under either (a), (b), (c) or Category Bridge and Highway Metal Component Manufacturers.
- (e) Fabricators of steel or other non-ferrous metal components of structures, not certified under (a), (b), or (c) above, shall be certified under the AISC program for Bridge and Highway Metal Component Manufacturers.

In addition, fabricators of fracture critical main load carrying steel components of bridges shall also have the Fracture Critical Endorsement.”

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SUPPLEMENTAL SPECIFICATION
FOR
SECTION 403. BITUMINOUS SURFACE TREATMENT (CLASS A-1, A-2, A-3)

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

403.01 Description. Add the following to the end of the first paragraph of Article 403.01(b):

“When placed on a hot-mix asphalt surfaced pavement, the prime coat shall be eliminated.”

Add the following to the end of the first paragraph of Article 403.01(c):

“When placed on a hot-mix asphalt surfaced pavement, the prime coat shall be eliminated.”

403.07 Sequence of Work. Revise Article 403.07(b) to read:

“(b) Application of bituminous material for prime coat (A-2 and A-3 on aggregate roadways only).”

State of Illinois
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SUPPLEMENTAL SPECIFICATION
FOR
SECTION 420. PORTLAND CEMENT CONCRETE PAVEMENT

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

420.03 Equipment. Add the following to this Article:

“(k) Mechanical Side Tie Bar Inserters 1103.19”

420.05 Joints. Revise Article 420.05(b) to read:

“(b) Longitudinal Construction Joint. The tie bars shall be installed using one of the following methods.

- (1) Preformed or Drilled Holes. The tie bars shall be installed with a nonshrink grout or chemical adhesive providing a minimum pull-out strength as follows.

Bar Size	Minimum Pull-Out Strength
No. 6 (No. 19)	11,000 lb (49 kN)
No. 8 (No. 25)	19,750 lb (88 kN)

Holes shall be blown clean and dry prior to placing the grout or adhesive. If compressed air is used, the pneumatic tool lubricator shall be bypassed and a filter installed on the discharge valve to keep water and oil out of the lines. The installation shall be with methods and tools conforming to the grout or adhesive manufacturer’s recommendations.

The Contractor shall load test five percent of the first 500 tie bars installed. No further installation will be allowed until the initial five percent testing has been completed and approval to continue installation has been given by the Engineer. Testing will be required for 0.5 percent of the bars installed after the initial 500. For each bar that fails to pass the minimum requirements, two more bars selected by the Engineer shall be tested. Each bar that fails to meet the minimum load requirement shall be reinstalled and retested. The equipment and method used for testing shall meet the requirements of ASTM E 488. All tests shall be performed within 72 hours of installation. The tie bars shall be installed and approved before concrete is placed in the adjacent lane.

- (2) Inserted. The tie bars shall be installed with the use of a mechanical side tie bar inserter. The inserter shall insert the tie bars with vibration while still within the extrusion process, after the concrete has been struck off and consolidated without deformation of the slab. The inserter shall remain stationary relative to the pavement when inserting tie bars, while the formless paver continues to move in the direction of paving.

A void greater than 1/8 in. (3 mm) at any location around the tie bar shall require immediate adjustment of the paving operation. A void greater than 1/2 in. (13 mm) shall be repaired with a nonshrink grout or chemical adhesive after the concrete has hardened. If at the end of the day of paving more than 20 percent of the tie bars show a void larger than 1/8 in. (3 mm) at any point around the bar, the use of the side tie bar inserter shall be discontinued.

- (3) Formed in Place. The tie bar shall be formed in place as shown on the plans.

The sealant reservoir shall be formed either by sawing after the concrete has set according to Article 420.05(a) or by hand tools when the concrete is in a plastic state.”

State of Illinois
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SUPPLEMENTAL SPECIFICATION
FOR
SECTION 502. EXCAVATION FOR STRUCTURES

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

502.06 Cofferdams. Revise this Article to read:

“502.06 Cofferdams. A cofferdam will be defined as a temporary structure, consisting of engineered components, designed to isolate the work area from water to enable construction under dry conditions based on either the Estimated Water Surface Elevation (EWSE) or Cofferdam Design Water Elevation (CDWE) shown on the plans and as specified herein. When cofferdams are not specified on the plans and conditions are encountered where the excavation for the structure cannot be kept free of water for prosecuting the work by pumping and/or diverting water, the Contractor, with the written permission of the Engineer, will be permitted to construct a cofferdam.

The Contractor shall submit a cofferdam plan for each cofferdam to the Engineer for approval prior to the start of construction. Cofferdams shall not be installed or removed without the Engineer's approval. Work shall not be performed in flowing water, except for the installation and removal of the cofferdam. The cofferdam plan shall address the following:

- (a) Cofferdam (Type 1). The Contractor shall submit a cofferdam plan which addresses the proposed methods of construction and removal, the construction sequence including staging, dewatering methods, erosion and sediment control measures, disposal of excavated material, effluent water control measures, backfilling, and the best management practices to prevent reintroduction of excavated material into the aquatic environment. The design and method of construction shall provide, within the measurement limits specified in Article 502.12, necessary clearance for forms, inspection of exterior of the forms, pumping, and protection of fresh concrete from water. For Type 1 cofferdams, it is anticipated the design will be based on the EWSE shown on the plans.
- (b) Cofferdam (Type 2). In addition to the requirements of Article 502.06(a), the Contractor's submittal shall include detailed drawings and design calculations, prepared and sealed by an Illinois Licensed Structural Engineer. For Type 2 cofferdams, it is anticipated the design will be based on the CDWE shown on the plans.
- (c) Seal Coat. The seal coat concrete, when shown on the plans, is based on design assumptions in order to establish an estimated quantity. When seal

coat is required, it shall be considered an integral part of the overall cofferdam system and, therefore, its design shall be included in the overall cofferdam design submittal. If a seal coat was not specified but determined to be necessary, it shall be added to the contract by written permission of the Engineer. The seal coat concrete shall be constructed according to Article 503.14. After the excavation within the cofferdam has been completed and the piles have been driven (if applicable), and prior to placing the seal coat, the elevation of the bottom of the proposed seal coat shall be verified by soundings. The equipment and methods used to conduct the soundings shall meet the approval of the Engineer. Any material within the cofferdam above the approved bottom of the seal coat elevation shall be removed.

No component of the cofferdam shall extend into the substructure concrete or remain in place without written permission of the Engineer. Removal shall be according to the previously approved procedure.”

502.12 Method of Measurement. Revise the first paragraph of Article 502.12(b) to read:

“(b) Measured Quantities. Structure excavation, when specified, will be measured for payment in its original position and the volume computed in cubic yards (cubic meters). Horizontal dimensions will not extend beyond vertical planes 2 ft (600 mm) outside of the edges of footings of bridges and walls. The vertical dimension for structure excavation will be the average depth from the surface of the material to be excavated to the bottom of the footing as shown on the plans or ordered in writing by the Engineer. The volume of any unstable and/or unsuitable material removed within the structure excavation will be measured for payment in cubic yards (cubic meters).”

Revise the ninth paragraph of Article 502.12(b) to read:

“Cofferdam excavation will be measured for payment in cubic yards (cubic meters) in its original position within the cofferdam. The horizontal dimensions used in computing the volume will not extend beyond vertical planes 2 ft (600 mm) outside of the edges of the substructure footings or 4 ft (1.2 m) outside of the faces of the substructure stem wall, whichever is greater. The vertical dimensions will be the average depth from the surface of the material to be excavated to the elevation shown on the plans for bottom of the footing, stem wall, or seal coat, or as otherwise determined by the Engineer as the bottom of the excavation.”

502.13 Basis of Payment. Revise the first sentence of the sixth paragraph of this Article to read:

“Cofferdams, when specified, will be paid for at the contract unit price per each for COFFERDAM (TYPE 1) or COFFERDAM (TYPE 2), at the locations specified.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 503. CONCRETE STRUCTURES

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

503.03 Equipment. Add the following to this Article:

“(e) Underwater Concrete Placement Equipment 1103.18”

503.08 Depositing Concrete Underwater. Revise this Article to read:

“**503.08 Depositing Concrete Underwater**. Concrete shall not be exposed to the action of water before setting, or deposited in water, except with the approval of the Engineer and under his/her immediate supervision.

When concrete is deposited underwater, it shall be carefully placed in its final position by means of a tremie or concrete pump and shall not be disturbed after being deposited. Still water shall be maintained at the point of deposit and all form work designed to retain concrete underwater shall be watertight. The consistency of the concrete shall be carefully regulated and segregation of the materials shall be prevented.

When the tremie or concrete pump line is pre-lubricated with a cement/water mixture, the excess material shall be wasted.

The discharge end of the tremie or concrete pump line shall be sealed prior to starting concrete placement according to Article 1103.18. The steel pipe shall be lowered to the bottom of the excavation and filled with concrete. The steel pipe shall be lifted slightly to allow the concrete to flow out of the steel pipe and embed the discharge end in concrete. The discharge end of the steel pipe shall remain embedded in the concrete throughout concrete placement. If, at any time the discharge end is not embedded in the concrete during placement, work shall be stopped and the steel pipe brought to the surface. The steel pipe shall be resealed according to Article 1103.18 and the process restarted. All vertical movements of the steel pipe shall be done in a manner to prevent a loss of concrete embedment.

Concrete placement shall be continuous. If concrete placement is interrupted for longer than 30 minutes and resistance to flow is anticipated, the steel pipe shall be brought to the surface, the discharge end resealed according to Article 1103.18, and the process restarted.

Horizontal distribution shall be accomplished by halting placement, raising the steel pipe to the surface, then horizontally moving the steel pipe to its new location,

reestablishing the seal according to Article 1103.18, and the process restarted. Horizontal distribution may also be accomplished by simultaneously using multiple tremie pipes. The maximum distance between tremie insertions or tremie spacings shall be limited to three times the depth of the pour.

The concrete shall not be vibrated when placed underwater, and the method of depositing the concrete shall produce approximately horizontal layers.”

503.14 Seal Coats in Cofferdams. Replace the second paragraph of this Article with the following:

“The seal coat shall be constructed below the elevation of the footing and will not be considered a part of the footing. Seal coats shall be designed to withstand the hydrostatic pressure taking into account the resistance afforded by the cofferdam and foundation piles or drilled shafts. Seal coats shall be constructed of Class SC concrete.

When seal coat concrete is required underwater it shall be placed according to Article 503.08.”

503.16 Concrete Superstructures. Replace the third paragraph of this Article with the following:

“Fogging equipment shall be in operation unless the evaporation rate is less than 0.1 lb/sq ft/hour (0.5kg/sq m/hour) and the Engineer gives permission to stop. The evaporation rate shall be determined according to the following formula.

$$E = (T_c^{2.5} - rT_a^{2.5})(1 + 0.4V) \times 10^{-6} \text{ (English)}$$

$$E = 5[(T_c + 18)^{2.5} - r(T_a + 18)^{2.5}](V + 4) \times 10^{-6} \text{ (Metric)}$$

Where:

E = Evaporation Rate, lb/sq ft/h (kg/sq m/h)

T_c = Concrete Temperature, °F (°C)

T_a = Air Temperature, °F (°C)

r = Relative Humidity in percent/100

V = Wind Velocity, mph (km/h)

The Contractor shall provide temperature, relative humidity, and wind speed measuring equipment. Fogging equipment shall be adequate to reach or cover the entire pour from behind the finishing machine or vibrating screed to the point of curing covering application, and shall be operated in a manner which shall not accumulate water on the deck until the curing covering has been placed.”

Revise the third paragraph of Article 503.16(a)(1) to read:

“At the Contractor’s option, a vibrating screed may be used in lieu of a finishing machine for superstructures with a pour width less than or equal to 24 ft (7.3 m). After the concrete is placed and consolidated, it shall be struck off with a vibrating screed allowing for camber, if required. The vibrating screed shall be of a type approved by the

Engineer. A slight excess of concrete shall be kept in front of the cutting edge at all times during the striking off operation. After screeding, the entire surface shall be finished with hand-operated longitudinal floats having blades a minimum of 10 ft (3 m) in length and 6 in. (150 mm) in width. If the Contractor chooses to use a vibrating screed, straightedge testing while finishing will not be required.”

Delete the fifth paragraph of Article 503.16(a)(1).

Revise Article 503.16(a)(2) to read:

“(2) Straightedge Testing and Surface Correction. After the finishing has been completed and while the concrete is still plastic, the surface shall be tested for trueness with a 10 ft (3 m) straightedge, or a hand-operated longitudinal float having blades a minimum of 10 ft (3 m) in length and 6 in. (150 mm) in width. The Contractor shall furnish and use an accurate 10 ft (3 m) straightedge or float which has a handle not less than 3 ft (1 m) longer than 1/2 the pour width. The straightedge or float shall be held in contact with the surface and passed gradually from one side of the superstructure to the other. Advance along the surface shall be in successive stages of not more than 1/2 the length of the straightedge or float. Any depressions found shall be immediately filled with freshly mixed concrete, struck off, consolidated, and refinished. High areas shall be cut down and refinished.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 504. PRECAST CONCRETE STRUCTURES

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

504.07 Method of Measurement. Revise the second paragraph of Article 504.07(b) to read:

“Precast, prestressed concrete I-beams, Bulb T-beams, or IL-beams will be measured by the foot (meter). In determining the total length of beams to be paid for, the specified overall length of the individual beams will be used.”

504.08 Basis of Payment. Revise the first paragraph of this Article to read:

“**504.08 Basis of Payment.** This work will be paid for at the contract unit price per square foot (square meter) for PRECAST CONCRETE BRIDGE SLAB and PRECAST, PRESTRESSED CONCRETE DECK BEAMS, of the depth specified, or per foot (meter) for FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE BEAMS, of the type and depth specified.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 542. PIPE CULVERTS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

542.11 Basis of Payment. Delete the thirteenth paragraph of this Article. |

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 586. SAND BACKFILL FOR VAULTED ABUTMENTS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

Revise this Section to read:

“SECTION 586. GRANULAR BACKFILL FOR STRUCTURES

“586.01 Description. This work shall consist of furnishing, transporting and placing granular backfill for abutment structures.

586.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Fine Aggregate	1003.04
(b) Coarse Aggregates	1004.05
(c) Filter Fabric	1080.03

CONSTRUCTION REQUIREMENTS

586.03 General. This work shall be according to Article 502.10, except as modified below. The backfill volume shall be backfilled, with granular material as specified in Article 586.02, to the required elevation as shown on the plans. The backfill volume shall be placed in convenient lifts for the full width to be backfilled. Mechanical compaction will not be required. A deposit of gravel or crushed stone placed behind drain holes will not be required. Drains not covered by geocomposite wall drains or other devices to prevent loss of backfill material shall be covered by filter fabric and shall be according to Section 282 with either 6 or 8 oz/sq yd (200 or 270 g/sq m) material allowed, with free edges overlapping the drain hole by at least 12 in. (300 mm) in all directions.

The granular backfill shall be brought to the finished grade as shown on the plans. When concrete is to be cast on top of the granular backfill, the Contractor, subject to approval of the Engineer, may prepare the top surface of the fill to receive the concrete as he/she deems necessary for satisfactory placement.

586.04 Method of Measurement. This work will be measured for payment as follows.

- (a) Contract Quantities. The requirements for the use of contract quantities shall conform to Article 202.07(a).

(b) Measured Quantities. This work will be measured for payment in place and the volume computed in cubic yards (cubic meters). The volume will be determined by the method of average end areas behind the abutment.

586.05 Basis of Payment. This work will be paid for at the contract unit price per cubic yard (cubic meter) for GRANULAR BACKFILL FOR STRUCTURES.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 670. ENGINEER'S FIELD OFFICE AND LABORATORY

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

670.07 Basis of Payment. Revise the fifth sentence of the first paragraph of this Article to read:

“This price shall include all utility costs and shall reflect the salvage value of the building or buildings, equipment, and furniture which remain the property of the Contractor after release by the Engineer, except the Department will pay that portion of the monthly long distance, monthly local telephone, and online data usage that, when combined, exceed \$250.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 704. TEMPORARY CONCRETE BARRIER

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

704.02 Materials. Revise this Article to read:

“**704.02 Materials.** Materials shall be according to the following.

Item	Article/Section
(a) Precast Temporary Concrete Barrier	1042
(b) Reinforcement Bars	1006.10(a)
(c) Connecting Pins and Anchor Pins (Note 1)	
(d) Connecting Loop Bars (Note 2)	
(e) Packaged Rapid Hardening Mortar or Concrete	1018

Note 1. Connecting pins and anchor pins shall be according to the requirements of ASTM F 1554 Grade 36 (Grade 250).

Note 2. Connecting loop bars shall be smooth bars according to the requirements of ASTM A 36 (A 36M).”

704.04 Installation. Revise this Article to read:

“**704.04 Installation.** The barriers shall be seated on bare, clean pavement or paved shoulder and connected together in a smooth, continuous line at the locations provided by the Engineer.

Except on bridge decks, or where alternate anchoring details are shown on the plans, the barrier unit at each end of an installation shall be anchored to the pavement or paved shoulder using six anchor pins and protected with an impact attenuator as shown on the plans. When pinning of additional barrier units within the installation is specified, three anchor pins shall be installed in the traffic side holes of the required barriers.

Where both pinned and unpinned barrier units are used in a continuous installation, a transition shall be provided between them. The transition from pinned to unpinned barrier shall consist of two anchor pins installed in the end holes on the traffic side of the first barrier beyond the pinned section and one anchor pin installed in the middle hole on the traffic side of the second barrier beyond the pinned section. The third barrier beyond the pinned section shall then be unpinned.

Barriers located on bridge decks shall be restrained as shown on the plans. Anchor pins shall not be installed through bridge decks, unless otherwise noted.

Barriers or attachments damaged during transportation or handling, or by traffic during the life of the installation, shall be repaired or replaced. The Engineer will be the sole judge in determining which units or attachments require repair or replacement.

The barriers shall be removed when no longer required by the contract. After removal, all anchor holes in the pavement or paved shoulder shall be filled with a rapid hardening mortar or concrete. Only enough water to permit placement and consolidation by rodding shall be used and the material shall be struck-off flush.”

704.05 Method of Measurement. Add the following paragraph after the first paragraph of this Article:

“Anchor pins, except for the six anchor pins for the barrier unit at each end of an installation, will be measured for payment as each, per anchor pin installed.”

704.06 Materials. Add the following paragraph after the second paragraph of this Article:

“Anchor pins, except for the six anchor pins for the barrier unit at each end of an installation, will be paid for at the contract unit price per each for PINNING TEMPORARY CONCRETE BARRIER.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 888. PEDESTRIAN PUSH-BUTTON

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

888.03 Installation. Revise this Article to read:

“**888.03 Installation.** The pedestrian push-button shall be located next to the curb ramp, sidewalk, or a paved clear space with a minimum size of 2.5 ft x 4.0 ft (760 mm x 1.22 m). The front face of the push-button should be even with the nearest edge of the curb ramp, sidewalk, or clear space but shall in no case be further away than 10 in. (250 mm). The height of the push-button should be 36 in. (900 mm) above the paved surface but shall in no case be less than 30 in. (760 mm) or more than 42 in. (1.05 m). The housing of the push-button shall be completely in contact with the post, pole, or extension arm on which it is mounted. The Contractor shall apply an anti-seize paste compound on all nuts and bolts prior to assembly. The methods of mounting both the pedestrian push-button and the sign shall be approved by the Engineer.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1003. FINE AGGREGATES

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

1003.01 Materials. Revise the second sentence of Article 1003.01(a)(8) to read:

“Crushed steel slag shall be the nonmetallic product which is developed in a molten condition simultaneously with steel in an open hearth, basic oxygen, or electric arc furnace.”

1003.04 Fine Aggregate for Bedding, Backfill, Trench Backfill, Embankment, Porous Granular Backfill, and French Drains. Revise Article 1003.04(a) to read:

“(a) Description. The fine aggregate shall consist of sand, stone sand, chats, wet bottom boiler slag, slag sand, or granulated slag sand. Crushed concrete sand, construction and demolition debris sand, and steel slag sand produced from an electric arc furnace may be used in lieu of the above for trench backfill.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1004. COARSE AGGREGATES

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

1004.01. Materials. Revise Article 1004.01(b) to read:

“(b) Quality. The coarse aggregate shall be according to the quality standards listed in the following table.

COARSE AGGREGATE QUALITY				
QUALITY TEST	CLASS			
	A	B	C	D
Na ₂ SO ₄ Soundness 5 Cycle, ITP 104 ^{1/} , % Loss max.	15	15	20	25 ^{2/}
Los Angeles Abrasion, ITP 96 ^{11/} , % Loss max.	40 ^{3/}	40 ^{4/}	40 ^{5/}	45
Minus No. 200 (75 μm) Sieve Material, ITP 11	1.0 ^{6/}	---	2.5 ^{7/}	---
Deleterious Materials ^{10/}				
Shale, % max.	1.0	2.0	4.0 ^{8/}	---
Clay Lumps, % max.	0.25	0.5	0.5 ^{8/}	---
Coal & Lignite, % max.	0.25	---	---	---
Soft & Unsound Fragments, % max.	4.0	6.0	8.0 ^{8/}	---
Other Deleterious, % max.	4.0 ^{9/}	2.0	2.0 ^{8/}	---
Total Deleterious, % max.	5.0	6.0	10.0 ^{8/}	---
Oil-Stained Aggregate ^{10/} , % max	5.0	---	---	---

- 1/ Does not apply to crushed concrete.
- 2/ For aggregate surface course and aggregate shoulders, the maximum percent loss shall be 30.
- 3/ For portland cement concrete, the maximum percent loss shall be 45.
- 4/ Does not apply to crushed slag or crushed steel slag.
- 5/ For hot-mix asphalt (HMA) binder mixtures, except when used as surface course, the maximum percent loss shall be 45.

- 6/ For crushed aggregate, if the material finer than the No. 200 (75 μ m) sieve consists of the dust from fracture, essentially free from clay or silt, this percentage may be increased to 2.5.
- 7/ Does not apply to aggregates for HMA binder mixtures.
- 8/ Does not apply to Class A seal and cover coats.
- 9/ Includes deleterious chert. In gravel and crushed gravel aggregate, deleterious chert shall be the lightweight fraction separated in a 2.35 heavy media separation. In crushed stone aggregate, deleterious chert shall be the lightweight fraction separated in a 2.55 heavy media separation. Tests shall be run according to ITP 113.
- 10/ Test shall be run according to ITP 203.
- 11/ Does not apply to crushed slag.

All varieties of chert contained in gravel coarse aggregate for portland cement concrete, whether crushed or uncrushed, pure or impure, and irrespective of color, will be classed as chert and shall not be present in the total aggregate in excess of 25 percent by weight (mass).

Aggregates used in Class BS concrete (except when poured on subgrade), Class PS concrete, and Class PC concrete (bridge superstructure products only, excluding the approach slab) shall contain no more than two percent by weight (mass) of deleterious materials. Deleterious materials shall include substances whose disintegration is accompanied by an increase in volume which may cause spalling of the concrete.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1006. METALS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

1006.10 Reinforcement Bars, Welded Reinforcement, and Prestressing Steel Strand. Add the following paragraph after the second paragraph of Article 1006.10(a)(1)g.:

“Mechanical splicers shall have an additional requirement for total slip. The total slip of the bars within the splice sleeve of the connector after loading in tension to 30 ksi (207 MPa) and relaxing to 3 ksi (20.7 MPa) shall not exceed 0.01 in. (254 microns).”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1020. PORTLAND CEMENT CONCRETE

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

1020.04 Concrete Classes and General Mix Design Criteria. Revise the Use of Class DS Concrete in Table 1 of this Article to read:

Class of Conc.	Use
DS	Drilled Shaft Metal Shell Piles (12) Sign Structures Drilled Shaft Light Tower Foundation (12)

1020.05 Other Concrete Criteria. Delete the third sentence of the first paragraph of Article 1020.05(b)(7).

1020.14 Temperature Control for Placement. Revise Article 1020.14(b) to read:

- “(b) Concrete in Structures. Concrete may be placed when the air temperature is above 40 °F (4 °C) and rising, and concrete placement shall stop when the falling temperature reaches 45 °F (7 °C) or below, unless otherwise approved by the Engineer.
- (1) Bridge Deck Concrete. For concrete in bridge decks, slabs, and bridge approach slabs the Contractor shall schedule placing and finishing of the concrete during hours in which the ambient air temperature is forecast to be lower than 85 °F (30 °C). It shall be understood this may require scheduling the deck pour at night in order to utilize the temperature window available. The temperature of the concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 85 °F (30 °C).
 - (2) Non-Bridge Deck Concrete. Except as noted above, the temperature of the concrete immediately before placement shall be a minimum of 50 °F (10 °C) and a maximum of 90 °F (32 °C).

If concrete is pumped, the temperature restrictions above shall be considered at point of placement. When insulated forms are used according

to Article 1020.13(d)(1), the maximum temperature of the concrete mixture immediately before placement shall be 80 °F (27 °C). When concrete is placed in contact with previously placed concrete, the temperature of the freshly mixed concrete may be increased by the Contractor to offset anticipated heat loss, but in no case shall the maximum concrete temperature be permitted to exceed the limits stated in this Article.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1103. PORTLAND CEMENT CONCRETE EQUIPMENT

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted April 1, 2016 and shall be construed to be a part thereof, superseding any conflicting provisions thereof applicable to the work under the contract.

1103.13 Curing and Protection. Revise Article 1103.13(a) to read:

- “(a) Bridge Deck and Approach Slabs. The finishing machine shall be equipped with: (1) a mechanical strike off device; and (2) either a rotating cylinder(s) or a longitudinal oscillating screed which transversely finishes the surface of the concrete. The finishing machine shall produce a deck surface of uniform texture, free from porous areas, and with the required surface smoothness.

The finishing machine shall be operated on rails or other supports that will not deflect under the applied loads. The maximum length of rail segments supported on top of beams and within the pour shall be 10 ft (3 m). The supports shall be adjustable for elevation and shall be completely in place to allow the finishing machine to be used for the full length of the area to be finished. The supports shall be approved by the Engineer before placing of the concrete is started.”

1103.17 Miscellaneous Equipment. Revise Article 1103.17(k) to read:

- “(k) Fogging Equipment. Fogging equipment shall be hand held fogging equipment for humidity control. The equipment shall be capable of atomizing water to produce a fog blanket by the use of pressure 2500 psi (17.24 MPa) minimum and an industrial fire hose fogging nozzle or equivalent.”

Add the following Article to this Section:

“**1103.18 Underwater Concrete Placement Equipment.** Equipment for placing concrete underwater shall be as follows.

- (a) Tremie. The tremie shall consist of a funnel shape hopper and a steel pipe with a minimum diameter of 10 in. (250 mm).
- (b) Concrete Pump and Lines. The concrete pump shall be equipped with lines having a minimum diameter of 4 in. (100 mm). The portion of the line inserted in the water shall be a steel pipe.

Aluminum parts shall not be in contact with concrete. The steel pipe shall be clean, smooth, and shall have watertight connections. The steel pipe shall have

sufficient thickness and weight to resist buoyancy when the pipe is not filled with concrete. The steel pipe shall be supported in a manner to allow for it to be raised or lowered rapidly.

To start underwater concrete placement and prevent mixing of water and concrete, the discharge end of the steel pipe shall have a steel or wood flap gate with gaskets, or a wood plug which may float to the surface. The wood plug may be beveled to hold it in place, or it may be tied to the steel pipe to keep it in place. The wood plug shall be covered with a sheet of plastic or shall have a gasket. A traveling plug will not be permitted.”

Add the following Article to this Section:

“**1103.19 Mechanical Side Tie Bar Inserters.** The mechanical side tie bar inserter shall be self-contained and supported on the formless paver with the ability to move independently from the formless paver. The insertion apparatus shall vibrate within a frequency of 2000 to 6000 vpm. A vibrating reed tachometer, hand type, shall be provided according to Article 1103.12.”

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State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
ADDITIONAL STATE REQUIREMENTS
FOR FEDERAL-AID CONSTRUCTION CONTRACTS

Effective: February 1, 1969
Revised: January 1, 2017

The following provisions are State of Illinois requirements and are in addition to the Federal requirements contained in FHWA-1273, "Required Contract Provisions Federal-Aid Construction Contracts".

"EQUAL EMPLOYMENT OPPORTUNITY

In the event of the Contractor's noncompliance with the provisions of this Equal Employment Opportunity Clause, the Illinois Human Rights Act, or the Illinois Department of Human Rights Rules and Regulations, the Contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political sub-divisions or municipal corporations, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

During the performance of this Contract, the Contractor agrees as follows:

- (1) That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, marital status, order of protection status, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, military status, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
- (2) That, if it hires additional employees in order to perform this contract or any portion hereof, it will determine the availability (in accordance with the Illinois Department of Human Rights Rules and Regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.
- (3) That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, sexual orientation, marital status, order of protection status, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, military status, or an unfavorable discharge from military service.

- (4) That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations. If any labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Department of Human Rights and IDOT and will recruit employees from other sources when necessary to fulfill its obligations thereunder.
- (5) That it will submit reports as required by the Illinois Department of Human Rights Rules and Regulations, furnish all relevant information as may from time to time be requested by the Illinois Department of Human Rights or IDOT, and in all respects comply with the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations.
- (6) That it will permit access to all relevant books, records, accounts, and work sites by personnel of IDOT and the Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations.
- (7) That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so that the provisions will be binding upon the subcontractor. In the same manner as with other provisions of this contract, the Contractor will be liable for compliance with applicable provisions of this clause by subcontractors; and further it will promptly notify IDOT and the Illinois Department of Human Rights in the event any subcontractor fails or refuses to comply with these provisions. In addition, the Contractor will not utilize any subcontractor declared by the Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations."

"STATEMENTS AND PAYROLLS

The payroll records shall include the worker's name, the worker's address, the worker's telephone number when available, the worker's social security number, the worker's classification or classifications, the worker's gross and net wages paid in each pay period, the worker's number of hours worked each day, and the worker's starting and ending times of work each day. However, any Contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employers and one or more labor organization must additionally submit the worker's hourly wage rate, the worker's hourly overtime wage rate, the worker's hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit, if applicable.

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

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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."

"SUBLETTING OR ASSIGNING THE CONTRACT

The requirements of Section VI of FHWA-1273 are hereby made applicable to Secondary Road Plan Projects."

State of Illinois
Department of Transportation

**SPECIAL PROVISION
FOR
SUBLETTING OF CONTRACTS
(FEDERAL-AID CONTRACTS)**

Effective: January 1, 1988

Revised: January 1, 2014

This Special Provision supersedes paragraph VI of FHWA-1273, "Required Contract Provisions Federal-Aid Construction Contracts".

"The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the contract or contracts or any portion thereof, or of his/her right, title, or interest therein, without written consent of the Engineer. In case such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform with the Contractor's own organization, work amounting to not less than 50 percent of the total contract cost, except any items designated in the contract as "specialty items" may be performed by subcontract and the cost of any such specialty items so performed by subcontract may be deducted from the total cost before computing the amount of work required to be performed by the Contractor with his/her own organization. Materials purchased or produced by the Contractor must be incorporated into the project by the Contractor's own organization if their cost is to be applied to the 50 percent requirement.

No subcontracts, or transfer of contract, shall in any case release the Contractor of his/her liability under the contract and bonds. All transactions of the Engineer will be with the Contractor. The Contractor shall have a representative on the job at all times when either contract or subcontract work is being performed.

All requests to subcontract shall contain a certification the subcontract agreement exists in writing and physically contains the required Federal and State Equal Employment Opportunity provisions and Labor compliance provisions, including the contract minimum wage requirements. The Contractor shall permit Department or Federal representatives to examine the subcontract agreements upon notice."

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State of Illinois
Department of Transportation

**SPECIAL PROVISION
FOR
EEO**

Effective: July 21, 1978
Revised: November 18, 1980

The requirements of the following provisions written for federally-assisted construction contracts, including all goals and timetables and affirmative action steps, shall also apply to all State-funded construction contracts awarded by the Illinois Department of Transportation.

Notice of Requirement for Affirmative Action to Ensure
Equal Employment Opportunity (Executive Order 11246)

1. The offeror's or bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

APPENDIX A

The following goal for female utilization in each construction craft and trade shall apply to all Contractors holding federal and federally-assisted construction contracts and subcontracts in excess of \$10,000. The goal is applicable to the Contractor's total on-site construction workforce, regardless of whether or not part of that workforce is performing work on a federal, federally assisted or nonfederally related construction contract or subcontract.

Area Covered (Statewide)

Goals for Women apply nationwide.

GOAL	Goal (percent)
Female Utilization	6.9

APPENDIX B

Until further notice, the following goals for minority utilization in each construction craft and trade shall apply to all Contractors holding federal or federally-assisted construction contracts and subcontracts in excess of \$10,000 to be performed in the respective geographical areas. The goals are applicable to the Contractor's total on-site construction workforce,

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regardless of whether or not part of that workforce is performing work on a federal, federally-assisted or nonfederally related construction contract or subcontract.

	<u>Economic Area</u>	Goal (percent)
056	Paducah, KY: Non - SMSA Counties - IL - Hardin, Massac, Pope KY - Ballard, Caldwell, Calloway, Carlisle, Crittenden, Fulton, Graves, Hickman, Livingston, Lyon, McCracken, Marshall	5.2
080	Evansville, IN: Non-SMSA Counties IL - Edwards, Gallatin, Hamilton, Lawrence, Saline, Wabash, White IN - Dubois, Knox, Perry, Pike, Spencer KY - Hancock, Hopkins, McLean, Muhlenberg, Ohio, Union, Webster	3.5
081	Terre Haute, IN: Non-SMSA Counties - IL - Clark, Crawford KY - Parke	2.5
083	Chicago, IL SMSA Counties: 1600 Chicago, IL - IL - Cook, DuPage, Kane Lake, McHenry, Will 3740 Kankakee, IL - IL - Kankakee Non-SMSA Counties - IL - Bureau, DeKalb, Grundy, Iroquois, Kendall, LaSalle, Livingston, Putnam IN - Jasper, Laporte, Newton, Pulaski, Starke	19.6 9.1 18.4
084	Champaign - Urbana, IL: SMSA Counties: 1400 Champaign - Urbana - Rantoul, IL - IL - Champaign Non-SMSA Counties - IL - Coles, Cumberland, Douglas Edgar, Ford, Piatt, Vermilion	7.8 4.8

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085	Springfield - Decatur, IL:	
	SMSA Counties:	
	2040 Decatur, IL -	7.6
	IL – Macon	
	7880 Springfield, IL -	4.5
	IL - Menard, Sangamon	
	Non-SMSA Counties	
	IL -Cass, Christian, DeWitt, Logan,	4.0
	Morgan, Moultrie, Scott, Shelby	
086	Quincy, IL:	
	Non-SMSA Counties -	3.1
	IL - Adams, Brown, Pike	
	MO - Lewis, Marion, Pike Rails	
087	Peoria, IL:	
	SMSA Counties:	
	1040 Bloomington - Normal, IL -	2.5
	IL - McLean	
	6120 Peoria, IL -	4.4
	IL - Peoria, Tazewell, Woodford	
	Non-SMSA Counties -	3.3
	IL - Fulton, Knox, McDonough, Marshall,	
	Mason, Schuyler, Stark, Warren	
088	Rockford, IL:	
	SMSA Counties:	
	6880 Rockford, IL -	6.3
	IL - Boone, Winnebago	
	Non-SMSA Counties -	4.6
	IL - Lee, Ogle, Stephenson	
098	Dubuque, IA:	
	Non-SMSA Counties -	0.5
	IL - JoDaviess	
	IA - Atlamakee, Clayton, Delaware,	
	Jackson, Winnesheik	
	WI - Crawford, Grant, Lafayette	
099	Davenport, Rock Island, Moline, IA - IL:	
	SMSA Counties:	
	1960 Davenport, Rock Island, Moline, IA - IL -	4.6
	IL - Henry, Rock Island	
	IA – Scott	
	Non-SMSA Counties -	3.4
	IL - Carroll, Hancock, Henderson,	
	Mercer, Whiteside	
	IA - Clinton, DesMoines, Henry,	
	Lee, Louisa, Muscatine	
	MO – Clark	

107	SMSA Counties: 7040 St. Louis, MO - IL -	14.7
	IL - Clinton, Madison, Monroe, St. Clair MO - Franklin, Jefferson, St. Charles, St. Louis, St. Louis City	
	Non-SMSA Counties -	11.4
	IL - Alexander, Bond, Calhoun, Clay, Effingham, Fayette, Franklin, Greene, Jackson, Jasper, Jefferson, Jersey, Johnson, Macoupin, Marion, Montgomery, Perry, Pulaski, Randolph, Richland, Union, Washington, Wayne, Williamson	
	MO - Bollinger, Butler, Cape Girardeau, Carter, Crawford, Dent, Gasconade, Iron, Lincoln, Madison, Maries, Mississippi, Montgomery, Perry, Phelps, Reynolds, Ripley, St. Francois, Ste. Genevieve, Scott, Stoddard, Warren, Washington, Wayne	

These goals are applicable to all the Contractor's construction work (whether or not it is federal or federally-assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with Executive Order 11246 and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the provisions and specifications set forth in its federally assisted contracts, and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246 and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Illinois Department of Transportation will provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten working days of award of any construction contract and/or subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. This notification will list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and

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completion dates of the subcontract; and the geographical area in which the contract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is the entire State of Illinois for the goal set forth in APPENDIX A and the county or counties in which the work is located for the goals set forth in APPENDIX B.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:
 - (a) "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - (b) "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - (c) "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - (d) "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individual or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan.

Each Contractor or subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction Contractors performing construction work in geographical areas where they do not have a federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal Procurement contracting officers. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each

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construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

- b) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
- c) Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the Union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
- d) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
- e) Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
- f) Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff,

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termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

- h) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and subcontractors with whom the Contractor does or anticipates doing business.
- i) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship of other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
- k) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n) Ensure that all facilities and company activities are non-segregated, except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

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- o) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractors and suppliers, including circulation of solicitations to minority and female Contractor associations and other business associations.
 - p) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
- 8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
- 9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specified minority group of women is underutilized).
- 10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
- 11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
- 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellations of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out

such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade rate of pay and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

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State of Illinois
Department of Transportation

SPECIAL PROVISION FOR SPECIFIC EEO RESPONSIBILITIES NONFEDERAL-AID CONTRACTS

Effective: March 20, 1969

Revised: January 1, 1994

1. General

- a. The requirements set forth herein shall constitute the specific affirmative action requirements under this contract and supplement the non-discrimination requirements contained elsewhere in this proposal.
- b. The Contractor shall work with the Illinois Department of Transportation (IDOT) in carrying out Equal Employment Opportunity (EEO) obligations and in reviews of activities under the contract.
- c. The Contractor, and all subcontractors holding subcontracts (not including material suppliers) of \$10,000 or more, shall comply with the following minimum specific requirement activities of EEO. The Contractor shall include these requirements in every subcontract of \$10,000 or more with such modification of language as is necessary to make them binding on the subcontractor.

2. Equal Employment Opportunity Policy

The Contractor shall accept as operating policy the following statement which is designed to further the provision of EEO to all persons, and to promote the full realization of equal employment opportunity through a positive continuing program: "It is the policy of this Company to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age, or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

3. Equal Employment Opportunity Officer

The Contractor shall designate and make known to IDOT contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active Contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

4. Dissemination of Policy

- a. All members of the Contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the Contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:
 - (1) Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the Contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
 - (2) All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the Contractor's EEO obligations within thirty days following their reporting for duty with the Contractor.
 - (3) All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the Contractor's procedures for locating and hiring minority and female employees.
- b. In order to make the Contractor's EEO policy known to all employees, prospective employees, and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the Contractor shall take the following actions:
 - (1) Notices and posters setting forth the Contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
 - (2) The Contractor's EEO policy and the procedures to implement such policy shall be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

5. Recruitment

- a. When advertising for employees, the Contractor shall include in all advertisements for employees the notation: "An Equal Opportunity Employer". All such advertisements shall be published in newspapers, or other publications, having a large circulation among minority groups in the area from which the project work force would normally be derived.
- b. The Contractor shall, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority and female applicants, including, but not limited to, State employment agencies, schools, colleges and minority and female organizations. To meet this requirement, the Contractor shall, identify sources of potential minority and

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female employees, and establish with such identified sources procedures whereby minority and female applicants may be referred to the Contractor for employment consideration. In the event the Contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he/she is expected to observe the provisions of that agreement to the extent that the system permits the Contractor's compliance with EEO contract provisions.

- c. The Contractor shall encourage present employees to refer minority and female applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures with regard to referring minority and female applicants shall be discussed with employees.

6. Personnel Actions

Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, will be taken without regard to race, color, religion, sex, national origin, age, or disability. The following procedures shall be followed:

- a. The Contractor shall conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The Contractor shall periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The Contractor shall periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Contractor shall promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The Contractor shall promptly investigate all complaints of alleged discrimination made to the Contractor in connection with the obligations under this contract, shall attempt to resolve such complaints, and shall take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the Contractor shall inform every complainant of all of the avenues of appeal.

7. Training and Promotion

- a. The Contractor shall assist in locating, qualifying and increasing the skills of minority and female employees and applicants for employment.
- b. Consistent with the Contractor's work force requirements and as permissible under Federal and State regulations, the Contractor shall make full use of

training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance.

- c. The Contractor shall advise employees and applicants for employment of available training programs and entrance requirements for each.
- d. The Contractor shall periodically review the training and promotion potential of minority and female employees and shall encourage eligible employees to apply for such training and promotion.

8. Unions

If the Contractor relies in whole or in part upon unions as a source of employees, the Contractor shall use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minorities and females within the unions, and to effect referrals by such unions of minority and female employees. Actions by the Contractor, either directly or through a Contractor's association acting as agent, shall include the procedures set forth below:

- a. The Contractor shall use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority and female employees for membership in the unions and increasing the skills of minority and female employees so that they may qualify for higher paying employment.
- b. The Contractor shall use best efforts to incorporate an EEO clause into each union agreement to the end that such union shall be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age, or disability.
- c. The Contractor is to obtain information as to the referral practices and policies of the labor union, except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the Contractor, the Contractor shall so certify to IDOT and shall set forth what efforts have been made to obtain such information.
- d. In the event the union is unable to provide the Contractor with a reasonable flow of minority and female referrals within the time limit set forth in the collective bargaining agreement, the Contractor shall, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and females. (The U.S. Department of Labor has held that it shall be no excuse that the union with which the Contractor has a collective bargaining agreement providing for exclusive referral failed to refer minorities or female employees). In the event the union referral practice prevents the Contractor from meeting the obligations pursuant to these Special Provisions, such Contractor shall immediately notify IDOT.

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9. Selection of Subcontractors, Procurement of Materials, and Leasing of Equipment

The Contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

- a. The Contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.
- b. Disadvantaged business enterprises (DBE), as defined in 49 CFR Part 23, shall have equal opportunity to compete for and perform subcontracts which the Contractor enters into pursuant to this contract. The Contractor shall use best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority and female representation among their employees. Contractors shall obtain lists of DBE construction firms from IDOT personnel.
- c. The Contractor shall use his/her best efforts to ensure subcontractor compliance with their EEO obligations.

10. Records and Reports

The Contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of IDOT.

- a. The records kept by the Contractor shall document the following:
 - (1) the number of minorities, non-minorities and females employed in each work classification on the project;
 - (2) the progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and females;
 - (3) the progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and
 - (4) the progress and efforts being made in securing the services of DBE subcontractors, or subcontractors with meaningful minority and female representation among their employees.
- b. The Contractor shall submit to IDOT a monthly report every month for the duration of the project, indicating the number of minority, non-minority and female employees currently engaged in each work classification required by contract work and the number of hours worked. This information is to be reported on Form SBE-956. If on-the-job training is being required by special provision, the Contractor will be required to collect and report training data.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
REQUIRED PROVISIONS - STATE CONTRACTS

Effective: April 1, 1965
Revised: January 1, 2017

I. SELECTION OF LABOR

The Contractor shall comply with all Illinois statutes pertaining to the selection of labor.

EMPLOYMENT OF ILLINOIS WORKERS DURING PERIODS OF
EXCESSIVE UNEMPLOYMENT

Whenever there is a period of excessive unemployment in Illinois, which is defined herein as any month immediately following two consecutive calendar months during which the level of unemployment in the State of Illinois has exceeded five percent as measured by the United States Bureau of Labor Statistics in its monthly publication of employment and unemployment figures, the Contractor shall employ at least 90 percent Illinois laborers. "Illinois laborer" means any person who has resided in Illinois for at least 30 days and intends to become or remain an Illinois resident.

Other laborers may be used when Illinois laborers as defined herein are not available, or are incapable of performing the particular type of work involved, if so certified by the Contractor and approved by the Engineer. The Contractor may place no more than three of his/her regularly employed non-resident executive and technical experts, who do not qualify as Illinois laborers, to do work encompassed by this Contract during period of excessive unemployment.

This provision applies to all labor, whether skilled, semi-skilled, or unskilled, whether manual or non-manual.

II. EQUAL EMPLOYMENT OPPORTUNITY

In the event of the Contractor's noncompliance with the provisions of this Equal Employment Opportunity Clause, the Illinois Human Rights Act or the Illinois Department of Human Rights Rules and Regulations, the Contractor may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political sub-divisions or municipal corporations, and the contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

During the performance of this Contract, the Contractor agrees as follows:

1. That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, marital status, order of protection status, national origin or ancestry, citizenship

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- status, age, physical or mental disability unrelated to ability, military status, or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
2. That, if it hires additional employees in order to perform this contract or any portion hereof, it will determine the availability (in accordance with the Illinois Department of Human Rights Rules and Regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.
 3. That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, sexual orientation, marital status, order of protection status, national origin or ancestry, citizenship status, age, physical or mental disability unrelated to ability, military status, or an unfavorable discharge from military service.
 4. That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations. If any labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Department of Human Rights and IDOT and will recruit employees from other sources when necessary to fulfill its obligations thereunder.
 5. That it will submit reports as required by the Illinois Department of Human Rights Rules and Regulations, furnish all relevant information as may from time to time be requested by the Illinois Department of Human Rights or IDOT, and in all respects comply with the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations.
 6. That it will permit access to all relevant books, records, accounts and work sites by personnel of IDOT and the Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Illinois Department of Human Rights Rules and Regulations.
 7. That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so that the provisions will be binding upon the subcontractor. In the same manner as with other provisions of this contract, the Contractor will be liable for compliance with applicable provisions of this clause by subcontractors; and further it will promptly notify IDOT and the Illinois Department of Human Rights in the event any subcontractor fails or refuses to comply with these provisions. In addition, the Contractor will not utilize any subcontractor declared by the Illinois

Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

III. SUBLETTING OR ASSIGNING THE CONTRACT

1. The Contractor shall perform with his/her own organization contract work amounting to not less than 50 percent of the original total contract price, except that any items designated by the State as "Specialty Items" may be performed by subcontract and the amount of any such "Specialty Items" so performed may be deducted from the original total contract price before computing the amount of work required to be performed by the Contractor with his/her own organization.
 - a. "His/her own organization" shall be construed to include only worker employed and paid directly by the Contractor and equipment owned or rented by him/her, with or without operators.
 - b. "Specialty Items" shall be construed to be limited to work that requires specialized knowledge, craftsmanship or equipment not ordinarily available in contracting organizations qualified to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.
2. In addition to the 50 percent requirement set forth in paragraph 1 above, the Contractor shall furnish (a) a competent superintendent or foreman who is employed by him/her, who has full authority to direct performance of the work in accordance with the contract requirements, and who is in charge of all construction operations (regardless of who performs the work), and (b) such other of his/her own organizational capability and responsibility (supervision, management, and engineering services) as the State highway department contracting officer determines is necessary to assure the performance of the contract.
3. The Contractor shall not sublet, sell, transfer, assign or otherwise dispose of the contract or contracts or any portion thereof, or of his/her right, title or interest therein, without written consent of the Engineer. In case such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform with the Contractor's own organization, work amounting to not less than 50 percent of the total contract cost, except that any items designated in the contract as "specialty items" may be performed by subcontract and the cost of any such specialty items so performed by subcontract may be deducted from the total cost before computing the amount of work required to be performed by the Contractor with his/her own organization. Materials purchased or produced by the Contractor must be incorporated into the project by the Contractor's own organization if their cost is to be applied to the 50 percent requirement.

No subcontracts, or transfer of contract, shall in any case release the Contractor of his/her liability under the contract and bonds. All transactions of the Engineer shall be with the Contractor. The Contractor shall have

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representative on the job at all times when either contract or subcontract work is being performed.

All requests to subcontract shall contain a certification that the subcontract agreement exists in writing and physically contains the required Federal and State Equal Employment Opportunity provisions and Labor compliance provisions, including the contract minimum wage requirements. The Contractor shall permit Department or Federal representatives to examine the subcontract agreements upon notice.

4. Any items that have been selected as "Specialty Items" for the contract are listed as such in the Special Provisions, bid schedule, or elsewhere in the contract documents.
5. No portion of the contract shall be sublet, assigned or otherwise disposed of, except with the written consent of the State highway department contracting officer, or his/her authorized representative, and such consent when given shall not be construed to relieve the Contractor of any responsibility for the fulfillment of the contract. Request for permission to sublet, assign or otherwise dispose of any portion of the contract shall be in writing and accompanied by (a) a showing that the organization which will perform the work is particularly experienced and equipped for such work, and (b) an assurance by the Contractor that the labor standards provisions set forth in this contract shall apply to labor performed on all work encompassed by the request.

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 five 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 the worker's name, the worker's address, the worker's telephone number when available, the worker's social security number, the worker's classification or classifications, the worker's gross and net wages paid in each pay period, the worker's number of hours worked each day, and the worker's starting and ending times of work each day. However, any Contractor or subcontractor who remits contributions to a fringe benefit fund that is not jointly maintained and jointly governed by one or more employer and one or more labor organization must additionally submit the worker's hourly wage rate, the worker's hourly overtime wage rate, the worker's hourly fringe benefit rates, the name and address of each fringe benefit fund, the plan sponsor of each fringe benefit, if applicable, and the plan administrator of each fringe benefit,

if applicable. Upon seven business days' notice, these records shall be available at a location within the State, during reasonable hours, for inspection by the Department or 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.

V. NONSEGREGATED FACILITIES

(Applicable to State Financed Construction Contracts and related subcontracts exceeding \$10,000 which are not exempt from the Equal Opportunity clause).

By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement, as appropriate, the bidder, construction Contractor, subcontractor, or material supplier, as appropriate, certifies that (s)he does not maintain or provide for his/her employees any segregated facilities at any of his/her establishments, and that (s)he does not permit his/her employees to perform their services at any location, under his/her control, where segregated facilities are maintained. (S)He certifies further that (s)he will not maintain or provide for his/her employees any segregated facilities at any of his/her establishments, and that (s)he will not permit his/her employees to perform their services at any location, under his/her control, where segregated facilities are maintained. (S)He agrees that a breach of this certification is a violation of the Equal Opportunity clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, or

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national origin, because of habit, local custom, or otherwise. (S)He agrees that (except where he/she has obtained identical certifications from proposed subcontractors and material suppliers for specific time periods), he/she will obtain identical certifications from proposed subcontractors or material suppliers prior to the award of subcontracts or the consummation of material supply agreements, exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause, and that (s)he will retain such certifications in his/her files.

State of Illinois
Department of Transportation

**SPECIAL PROVISION
FOR
ASBESTOS BEARING PAD REMOVAL**

Effective: November 1, 2003

Description. This work shall consist of the removal and disposal of existing asbestos bearing pads.

The Contractor is advised that the existing bearing pads contain asbestos. All necessary precautions shall be taken in removing, handling, transporting and disposing of the bearing pads. Work shall be in conformance with all governing laws, codes, ordinances or other regulations except that, by agreement with IEPA, it shall not be necessary to notify IEPA or to have a person trained in the asbestos requirements on-site for removal and disposal of asbestos bearing pads.

Documentation. The Engineer will keep records of the removal, handling, transportation, and disposal site.

CONSTRUCTION REQUIREMENTS

General. Prior to removal, the asbestos bearing pads shall be thoroughly wetted.

During handling and transportation, the pads shall be covered with an approved wetting material or contained in such a way as to prevent dust or debris from entering the atmosphere.

The asbestos bearing pads shall be hauled to an approved landfill disposal site.

Basis of Payment. This work will be paid for at the contract unit price per each for ASBESTOS BEARING PAD REMOVAL.

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State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
ASBESTOS WATERPROOFING MEMBRANE AND
ASBESTOS HOT-MIX ASPHALT SURFACE REMOVAL

Effective: June 1, 1989
Revised: January 1, 2009

Description. This work shall consist of the removal and disposal of the existing variable thickness hot-mix asphalt (HMA) surface and all of the asbestos waterproofing membrane system from the bridge deck area or the variable thickness HMA surface containing asbestos shown on the plans, according to the requirements of Section 440 of the Standard Specifications, and the following.

CONSTRUCTION REQUIREMENTS

General. Complete surface removal is required for the entire deck including the waterproofing membrane system; the removal shall be done in such a manner that the concrete deck or the concrete beams are not damaged.

The Contractor is advised that the waterproofing membrane system or HMA wearing surface contains asbestos. Therefore, he/she shall take all necessary precautions in removing, handling, transporting, and subsequent disposal of all materials removed containing asbestos. All such work shall be in conformance with all governing laws, codes, ordinances, or other regulations.

The asbestos membrane, if present, shall be wet saw-cut and removed.

Grinding or milling the existing wearing surface or the membrane system will not be allowed.

All removed material containing asbestos shall be stockpiled separately from other removed material.

All stockpiled material containing asbestos, shall be hauled to an approved landfill disposal site. This removed material shall be wetted down in the truck and shall be covered with an approved wetting material to prevent debris or dust from entering into the atmosphere.

The Engineer will keep records of removal, stockpiling, trucking, shipping manifest, and the landfill disposal site used.

Basis of Payment. This work will be paid for at the contract unit price per square yard (square meter) for HOT-MIX ASPHALT SURFACE REMOVAL (ASBESTOS).

State of Illinois
Department of Transportation

**SPECIAL PROVISION
FOR
TEMPORARY STREAM CROSSINGS AND IN-STREAM WORK PADS**

Effective: January 2, 1992
Revised: January 1, 1998

Haul Road and Other Temporary Stream Crossings. A temporary low flow structure such as a pipe culvert shall be installed at haul road and other temporary stream crossings. The haul road shall be constructed with materials (i.e., coarse aggregate) meeting the requirements of Article 1004.04 of the Standard Specifications, except, if pit run gravel is used, prior approval of the source may be required by the Engineer. Upon completion of the work, the haul road or other temporary stream crossing shall be removed and the stream channel returned to its original cross section or the cross section called for in the plans.

The Contractor may propose other methods of constructing the stream crossing to the Department of Natural Resources and, if approved by them, the Contractor may proceed with that method.

In-Stream Work Pads. All in-stream work pads shall be constructed with materials (i.e. e., coarse aggregate) meeting the requirements of Article 1004.04 of the Standard Specifications, except, if pit run gravel is used, prior approval of the source may be required by the Engineer. In cases where the work pad will span the stream, a temporary low flow structure such as a pipe culvert shall be installed. Upon completion of the work, the in-stream work pads shall be removed and the stream channel returned to its original cross section or the cross section called for in the plans.

The Contractor may propose other methods of constructing the work pads to the Department of Natural Resources, and if approved by them, the Contractor may proceed with that method.

Method of Measurement and Basis of Payment. Haul Roads and Other Temporary Stream Crossings or In-Stream Work Pads will not be measured or paid for separately but shall be considered as included in the unit cost of the various pay items in the contract.

The salvaged aggregates and pipe culverts used in the Haul Roads and Other Temporary Stream Crossings or In-Stream Work Pads shall remain the property of the Contractor but may be used in construction if approved by the Engineer.

CHECK SHEET #9

State of Illinois
Department of Transportation

SPECIAL PROVISION FOR CONSTRUCTION LAYOUT STAKES EXCEPT FOR BRIDGES

Effective: January 1, 1999

Revised: January 1, 2007

Description. The Contractor shall furnish and place construction layout stakes for this project. The Department will provide adequate reference points to the centerline of survey and bench marks as shown in the plans and listed herein. Any additional control points set by the Department will be identified in the field to the Contractor and all field notes will be kept in the office of the Resident Engineer.

The Contractor shall provide field forces, equipment, and material to set all additional stakes for this project, which are needed to establish offset stakes, reference points, and any other horizontal or vertical controls, including supplementary bench marks, necessary to secure a correct layout for the roadway portion of the work. Stakes for line and grade of pavement and/or curb shall be set at sufficient station intervals (not to exceed 50 ft (15 m)) to assure substantial conformance to plan line and grade. The Contractor will not be required to set additional stakes to locate a utility line which is not included as a pay item in the contract nor to determine property lines between private properties.

The Contractor shall be responsible for having the finished work conform to the lines, grades, elevations, and dimensions called for in the plans. Any inspection or checking of the Contractor's layout by the Engineer and the acceptance of all or any part of it shall not relieve the Contractor of his/her responsibility to secure the proper dimensions, grades, and elevations of the several parts of the work. The Contractor shall exercise care in the preservation of stakes and bench marks and shall have them reset when any are damaged, lost, displaced, removed, or otherwise obliterated.

Responsibility of the Department.

- (a) The Department will be responsible for all bridge staking as shown on the plans.
- (b) The Department will locate and reference the centerline of all roads and streets, except interchange ramps. The centerline of private entrances and short street intersection returns may not be located or referenced by the Department. Locating and referencing the centerline of survey will consist of establishing and locating the control points of the centerline of surveys as PC's, PT's and as many POT's as are necessary to provide a line of sight.
- (c) Bench marks will be established along the project outside of construction lines not exceeding 1000 ft (300 m) intervals horizontally and 20 ft (6 m) vertically.

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- (d) Points set for (b) and (c) above will be identified in the field to the Contractor.
- (e) The Department will make random checks of the Contractor's staking to determine if the work is in conformance with the plans. Where the Contractor's work will tie into work that is being or will be done by others, checks will be made to determine if the work is in conformance with the proposed overall grade and horizontal alignment.
- (f) The Department will set all stakes for utility adjustments and for building fences along the right-of-way line by parties other than the Contractor.
- (g) The Department will make all measurements and take all cross sections from which the various pay items will be measured.
- (h) Where the Contractor, in setting construction stakes, discovers discrepancies, the Department will check to determine their nature and make whatever revisions are necessary in the plans, including the recross sectioning of the area involved. Any additional restaking required by the Engineer will be the responsibility of the Contractor. The additional restaking done by the Contractor will be paid for according to Article 109.04 of the Standard Specifications.
- (i) The Department will accept responsibility for the accuracy of the initial control points as provided herein.
- (j) It is not the responsibility of the Department, except as provided herein, to check the correctness of the Contractor's stakes. Any apparent errors will be immediately called to the Contractor's attention and s(he) will be required to make the necessary correction before the stakes are used for construction purposes. The Contractor shall provide the Engineer a copy of any field notes, cut/fill sheets, and layout diagrams produced during the course of the project.
- (k) Where the plan quantities for excavation are to be used as the final pay quantities, the Department will make sufficient checks to determine if the work has been completed in conformance with the plan cross sections.

Responsibility of the Contractor.

- (a) The Contractor shall establish from the given survey points and bench marks all the control points necessary to construct the individual project elements. (S)He shall provide the Engineer adequate control in close proximity to each individual element to allow adequate checking of construction operations. This includes, but is not limited to, line and grade stakes, line and grade nails in form work, and/or filed or etched marks in substantially completed construction work. It is the Contractor's responsibility to tie in centerline control points in order to preserve them during construction operations.
- (b) At the completion of the grading operations, the Contractor shall set stakes at 100 ft (25 m) station intervals along each profile grade line. These stakes will be used for final cross sectioning by the Department.

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- (c) The Contractor shall locate the right-of-way points for the installation of right-of-way markers. The Contractor shall set all line stakes for the construction of fences by the Contractor.
- (d) All work shall be according to normally accepted self-checking surveying practices. Field notes shall be kept in standard survey field notebooks and those books shall become the property of the Department at the completion of the project. All notes shall be neat, orderly, and in accepted form.

Measurement and Payment. This work will be paid for at the contract lump sum price for CONSTRUCTION LAYOUT.

State of Illinois
Department of Transportation

**SPECIAL PROVISION
FOR
CONSTRUCTION LAYOUT STAKES**

Effective: May 1, 1993
Revised: January 1, 2007

Description. The Contractor shall furnish and place construction layout stakes for this project. The Department will provide adequate reference points to the centerline of survey and bench marks as shown in the plans and listed herein. Any additional control points set by the Department will be identified in the field to the Contractor and all field notes will be kept in the office of the Resident Engineer.

The Contractor shall provide field forces, equipment, and material to set all additional stakes for this project, which are needed to establish offset stakes, reference points, and any other horizontal or vertical controls, including supplementary bench marks, necessary to secure a correct layout of the work. Stakes for line and grade of pavement and/or curb shall be set at sufficient station intervals (not to exceed 50 ft (15 m)) to assure substantial conformance to plan line and grade. The Contractor will not be required to set additional stakes to locate a utility line which is not included as a pay item in the contract nor to determine property lines between private properties.

The Contractor shall be responsible for having the finished work conform to the lines, grades, elevations, and dimensions called for in the plans. Any inspection or checking of the Contractor's layout by the Department Engineer and the acceptance of all or any part of it shall not relieve the Contractor of his/her responsibility to secure the proper dimensions, grades and elevations of the several parts of the work. The Contractor shall exercise care in the preservation of stakes and bench marks and shall have them reset when any are damaged, lost, displaced, removed, or otherwise obliterated.

Responsibility of the Department.

- (a) The Department will locate and reference the centerline of all roads and streets, except interchange ramps. The centerline of private entrances and short street intersection returns may not be located or referenced by the Department.

Locating and referencing the centerline of survey will consist of establishing and referencing the control points of the centerline of surveys such as PC's, PT's and as many POT's as are necessary to provide a line of sight.

- (b) Bench marks will be established along the project outside of construction lines not exceeding 1000 ft (300 m) intervals horizontally and 20 ft (6 m) vertically.

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- (c) Stakes set for (a) and (b) above will be identified in the field to the Contractor.
- (d) The Department will make random checks of the Contractor's staking to determine if the work is in conformance with the plans. Where the Contractor's work will tie into work that is being or will be done by others, checks will be made to determine if the work is in conformance with the proposed overall grade and horizontal alignment.
- (e) The Department will set all stakes for utility adjustments and for building fences along the right-of-way line by parties other than the Contractor.
- (f) The Department will make all measurements and take all cross sections from which the various pay items will be measured.
- (g) Where the Contractor, in setting construction stakes, discovers discrepancies, the Department will check to determine their nature and make whatever revisions are necessary in the plans, including the recross sectioning of the area involved. Any additional restaking required by the Engineer will be the responsibility of the Contractor. The additional restaking done by the Contractor will be paid for according to Article 109.04 of the Standard Specifications.
- (h) The Department will accept responsibility for the accuracy of the initial control points as provided herein.
- (i) It is not the responsibility of the Department, except as provided herein, to check the correctness of the Contractor's stakes; any errors apparent will be immediately called to the Contractor's attention and s(he) shall make the necessary correction before the stakes are used for construction purposes.
- (j) Where the plan quantities for excavation are to be used as the final pay quantities, the Department will make sufficient checks to determine if the work has been completed in conformance with the plan cross sections.

Responsibility of the Contractor.

- (a) The Contractor shall establish from the given survey points and bench marks all the control points necessary to construct the individual project elements. S(he) shall provide the Engineer adequate control in close proximity to each individual element to allow adequate checking of construction operations. This includes, but is not limited to, line and grade stakes, line and grade nails in form work, and/or filed or etched marks in substantially completed construction work. It is the Contractor's responsibility to tie in centerline control points in order to preserve them during construction operations.
- (b) At the completion of the grading operations, the Contractor shall set stakes at 100 ft (25 m) Station intervals along each profile grade line. These stakes will be used for final cross sectioning by the Department.

- (c) The Contractor shall locate the right-of-way points for the installation of right-of-way markers. The Contractor shall set all line stakes for the construction of fences by the Contractor.
- (d) All work shall be according to normally accepted self-checking surveying practices. Field notes shall be kept in standard survey field notebooks and those books shall become the property of the Department at the completion of the project. All notes shall be neat, orderly and in accepted form.
- (e) For highway structure staking, the Contractor shall use diligent care and appropriate accuracy. Points shall be positioned to allow reuse throughout the construction process. Prior to the beginning of construction activities, all structure centerlines and pier lines are to be established by the Contractor and checked by the Engineer. The Contractor shall provide a detailed structure layout drawing showing span dimensions, staking lines and offset distances.

Measurement and Payment. This work will be paid for at the contract lump sum price for CONSTRUCTION LAYOUT.

CHECK SHEET #11

State of Illinois
Department of Transportation

SPECIAL PROVISION FOR USE OF GEOTEXTILE FABRIC FOR RAILROAD CROSSING

Effective: January 1, 1995

Revised: January 1, 2007

Description. This work shall consist of furnishing and installing geotextile fabric for railroad crossings.

Materials. The geotextile fabric shall consist of woven monofilaments or nonwoven filaments of polypropylene, polyester or polyethylene. Nonwoven fabric may be needlepunched, heat bonded, resin-bonded, or combinations thereof. The fabric shall be inert to commonly encountered chemicals, rot proof, dimensionally stable (i.e., fibers must maintain their relative position with respect to each other), resistant to delamination and conform to the following physical properties.

Weight oz/sq yd (g/mm)	10.0 (340) min.	ASTM D 3776
Grab Tensile Strength lb (kN) ^{1/}	250 (1.11) min.	ASTM D 4632
Grab Elongation at break %	20 min	ASTM D 4632
Bursting Strength psi (kPa)	350 (2410) min.	ASTM D 3786
Trapezoidal Tear Strength lb (kN)	100 (0.44) min.	ASTM D 4533
Puncture Resistance lb (kN)	130 (0.59) min.	ASTM D 4833
Apparent Opening Size Sieve No.	50-100 (300 µm-150 µm)	ASTM D 4751
U.V. Resistance, Strength Retained %	70 min.	ASTM D 4355

1/ Test samples for grab tensile strength and elongation shall be tested wet.

The supplier shall furnish certified test reports with each shipment of material attesting that the fabric meets the requirements of this specification.

CONSTRUCTION REQUIREMENTS

Handling and Storage. Fabric shall be delivered to the job site in such a manner as to facilitate handling and incorporation into the work without damage. In no case shall the fabric be stored exposed to direct sunlight.

Installation. Geotextile fabric shall be placed on existing subgrade cleared of debris and sharp objects to prevent damage to the fabric. All laps shall be a minimum 12 in. (300 mm). The fabric shall not be punctured during compaction of the ballast.

CHECK SHEET #11

Method of Measurement. This work will be measured for payment in place and the area computed in square yards (square meters). The overlap at joints will be measured as a single layer of material.

Basis of Payment. This work will be paid for at the contract unit price per square yard (square meter) for GEOTEXTILE FABRIC FOR RAILROAD CROSSING.

CHECK SHEET #12

State of Illinois
Department of Transportation

**SPECIAL PROVISION
FOR
SUBSEALING OF CONCRETE PAVEMENTS**

Effective: November 1, 1984
Revised: January 1, 2007

Description. This work shall consist of filling voids beneath rigid and composite pavements with portland cement grout.

Materials. Materials shall be according to the following Articles of Division 1000 - Materials of the Standard Specifications:

Item	Article/Section
(a) Portland Cement	1001
(b) Water	1002
(c) Fly ash	1010.03
(d) Admixtures	1021
(e) Packaged Rapid Hardening Mortar or Concrete	1018

Equipment. Equipment shall be according to the following.

- (a) Grout Plant. The grout plant shall be capable of accurately measuring and proportioning ingredients by volume, weight (mass), or a combination thereof. The mixer shall be capable of producing a consistent and homogeneous mixture free of lumps. Provisions for calibrating the batching or metering equipment and a positive means of monitoring total production including continuity of material delivery shall be provided.
- (b) Grout Pump. The grout pump shall be a positive displacement pump capable of producing 10 to 100 psi (69 to 690 kPa) at the grout packer. If the volume of the grout storage area is 4 cu ft (0.1 cu m) or more it shall be equipped with mixing paddles. The discharge line shall be equipped with a positive cut-off valve at the nozzle end, and a bypass return line for re-circulating the grout into the holding tank or mixer; otherwise, the packer shall be inserted into the grout holding tank and the pump operated to prevent setting or degradation of the grout.
- (c) Drill. The drilling devices shall be capable of drilling the grout injection holes through the pavement, and through the subbase. The equipment shall be in good condition and operated in such a manner that the holes are vertical and sufficiently round to permit sealing by the packer head. Means to monitor the down feed force shall be provided.
- (d) Movement Detectors. The Contractor shall supply equipment to measure slab lift. When used on jointed pavements, the equipment shall be capable of detecting simultaneously the lift of the corners of two adjacent slabs. The

equipment shall have graduations of 0.001 in. (0.025 mm). Two measuring devices shall be provided.

- (e) Pressure Gauge. The pressure gauge, protected from direct contact with grout slurry, shall be mounted in the grout line at the packer head.

CONSTRUCTION REQUIREMENTS

General. Grout pumping shall not be performed when ambient temperature is below 40 °F (5 °C), or when the subgrade and/or base material is frozen.

Grout pumping shall not be performed after October 31 or prior to April 15 unless approval is given by the Engineer.

Drilling Holes. Grout injection holes shall be drilled in the pattern shown in the plans or as determined by the Engineer. They shall not be larger than 2 in. (50 mm) in diameter, drilled vertically and round, to penetrate 2 to 6 in. (50 to 150 mm) below the subbase material. The downfeed force shall not exceed 200 lb (890 N). Depth of spalling of the pavement underside due to drilling of the concrete pavement shall not exceed 20 percent of the pavement thickness. Three times the bid price for holes drilled will be deducted from the money due the Contractor for each hole determined to be excessively spalled. Inspection holes shall be drilled, as required by the Engineer, to determine if the voids under the pavement have been filled. If the voids have not been filled, grout shall be pumped into the inspection hole as described herein.

Washing Holes. Prior to subsealing, holes shall be washed with water to provide an opening into the void system.

Proportioning Grout. Grout for filling voids beneath pavement shall be composed of portland cement, fly ash, water, and if necessary, admixtures. Grout shall meet the following minimum requirements:

- (a) Minimum cement content of 20 percent of the Absolute Volume of the grout solids.
- (b) Flow cone efflux time shall be 10 to 17 seconds according to ASTM C 939. The field test shall be performed by the Contractor at ambient air temperature at time of placement, and will be witnessed by the Engineer. The test shall be performed a minimum of once a day or when requested by the Engineer.
- (c) Minimum design strength at minimum efflux time shall be 600 psi (4150 kPa) at seven days according to ASTM C 109. The test will be performed by the Engineer and three specimens will be molded a minimum of once a day. Disposable molds with a cover shall be provided.
- (d) An initial set time less than two hours according to ASTM C 266. The field test shall be performed by the Contractor at ambient air temperature at time of placement, and will be witnessed by the Engineer. The test shall be performed as needed to open a lane to traffic.

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At least three weeks prior to the beginning of this work, the Contractor shall submit to the Engineer the proposed mixture proportions based on absolute volumes. The submittal shall include independent laboratory testing of the grout showing one day, three day, and seven day strengths, efflux time, time of initial set, and specific gravity of fly ash. Accompanying this submittal shall be sufficient quantities of all mixture components to permit laboratory verification of the grout properties listed herein.

Mixing Grout. Mixed material shall not be held for more than 60 minutes. With permission of the Engineer, grout that has lost fluidity may be re-tempered with mix water one time.

Pumping Grout. An expanding rubber packer or hose connected to the discharge from the plant shall be lowered into the hole. The discharge end of the packer or hose shall not extend below the lower surface of the concrete pavement. Each hole shall be pumped until lift is observed, or material is observed flowing from hole to hole. Movement detectors shall be transported and positioned by the Contractor at each joint and crack to monitor lift. The upward movement of the pavement shall not exceed 0.05 in. (1.2 mm).

Transient pressures (2-3 seconds duration) of no greater than 100 psi (690 kPa) will be permitted to facilitate grout flow. Pumping pressures for void filling shall be no greater than 40 psi (276 kPa).

Water displaced from the void structure by the grout shall be allowed to flow out freely.

The Contractor shall correct subsealing procedures if there is excessive loss of grout through cracks, joints, holes or in the shoulder area. Pay quantities will be reduced by the Engineer accordingly.

Immediately after the grout packer has been removed from the hole, the hole shall be filled with a wooden plug or other approved methods when necessary to prevent grout loss from the hole. These plugs shall remain in place until the grout has set sufficiently to prevent grout escaping from the hole. Plugs driven flush may remain in place until the hole is patched.

Patching Holes. Upon completion of pumping, all drill holes shall be filled with rapid hardening mortar or concrete according to Article 407.10(b)(3) of the Standard Specifications.

Cleaning Pavement. All drill tailings, spilled grout, and other debris shall be cleaned up at the end of each working day or before the lane is opened to traffic. When adjacent lanes are open to traffic, provisions shall be made to prevent grout from encroaching onto the open lane or squirting onto passing vehicles.

Opening to Traffic. The lane in which pumping operations are completed may be opened to traffic 1/2 hour after the initial set of the grout.

Method of Measurement. This work will be measured for payment as follows.

- (a) Holes. Holes drilled through the pavement structure, including inspection holes, will be measured for payment as each.
- (b) Grout Material. Grout incorporated into the pavement structure will be measured for payment in cubic feet (cubic meters) (absolute volume) of dry solid material only. Weights (masses) will be converted to dry solid volume using the following formula:

$$V = \frac{Wc}{Gc \times 9.8} + \frac{Wf}{Gf \times 9.8} \left(\frac{Wc}{Gc \times 62.4} + \frac{Wf}{Gf \times 62.4} \right)$$

Where:

- V = Total absolute volume of the dry solids in cu ft (cu m).
- Wc = Weight (mass) of portland cement in lb (kg).
- Gc = Specific gravity of portland cement.
- Wf = Weight (mass) of fly ash in lb (kg).
- Gf = Specific gravity of fly ash.

Water and admixtures will not be measured for payment.

Basis of Payment. This work will be paid for at the contract unit price per cubic foot (cubic meter) for DRY GROUT SOLIDS and at the contract unit price per each for HOLES DRILLED.

CHECK SHEET #13

State of Illinois
Department of Transportation

SPECIAL PROVISION FOR HOT-MIX ASPHALT SURFACE CORRECTION

Effective: November 1, 1987

Revised: January 1, 2009

Description. This work shall consist of milling and planing the existing hot-mix asphalt (HMA) pavement to remove wheel lane ruts and leave a pavement surface texture suitable for traffic.

Equipment. The milling machine shall be according to Article 1101.16(a) of the Standard Specifications, except the machine shall be capable of milling an entire lane width in a single pass and it shall load the cuttings into a truck.

The cutting drum and teeth shall be designed to produce the required surface texture. When the teeth become worn so they will not produce the required surface texture, they shall be changed at the same time (as a unit). Occasionally, individual teeth may be changed if they lock up or break, but this method shall not be used to avoid changing the set of teeth as a unit.

The moldboard shall be straight, true, and free of excessive nicks or wear, and it shall be replaced as necessary to uniformly produce the required surface texture.

CONSTRUCTION REQUIREMENTS

General. The temperature at which the work is performed, the nature and condition of the equipment, and the manner of performing the work shall be such that the milled and planed surface is not torn, gouged, shoved, or otherwise injured by the grinding operation. Surface tests will be made according to Article 407.09 of the Standard Specifications.

The Contractor shall remove any castings in the pavement and cover the holes prior to milling. The Contractor shall mill the amount as shown on the plans at the centerline, except when the milling at the outer edge of the surface exceeds 1 1/2 in. (40 mm); then the Contractor shall reduce the cut at the centerline to provide a maximum cut at the outer edge of the pavement of 1 1/2 in. (40 mm). It may also become necessary to reduce the slope of the crown from 3/16 in./ft (15 mm/m) to 1/8 in./ft (10 mm/m) to maintain a maximum cut at the outer edge of 1 1/2 in. (40 mm).

The cuttings resulting from this operation shall become the property of the Contractor and shall be disposed of according to Article 202.03 of the Standard Specifications.

Surface Texture. Each tooth on the cutting drum shall produce a series of discontinuous longitudinal striations. There shall be 16 to 20 striations (tooth marks)

for each tooth for each 6 ft (1.8 m) in the longitudinal dimension, and each striation shall be 1.7 ± 0.2 in. (43 ± 5 mm) in length after the area is planed by the moldboard. Thus the planed length between each pair of striations shall be 2.3 ± 0.2 in. (58 ± 5 mm). There shall be 80 to 96 rows of discontinuous longitudinal striations for each 5 ft (1.5 m) in the transverse dimension. The pattern of striations shall be such that a line connecting striations in adjacent rows shall form approximately a 70 degree skew angle with the roadway centerline. The areas between the striations in both the longitudinal and transverse directions shall be flat-topped and coplanar. The moldboard shall be used to cut this plane, and any time the operation fails to produce this flat plane interspersed with a uniform pattern of discontinuous longitudinal striations, the operation shall be stopped and the cause determined and corrected before recommencing.

Clean-up. After milling and planing a traffic lane, the pavement shall be swept clean with a mechanical broom prior to opening the lane to traffic.

Method of Measurement. This work will be measured for payment as follows.

- (a) Contract Quantities. The requirements for the use of contract quantities shall be according to Article 202.07(a) of the Standard Specifications.
- (b) Measured Quantities. This work will be measured for payment in place and the area computed in square yards (square meters). Measurement will include variations in depth of cut due to rutting, superelevations, and pavement crown.

Basis of Payment. This work will be paid for at the contract unit price per square yard (square meter) for HOT-MIX ASPHALT SURFACE CORRECTION.

CHECK SHEET #14

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
PAVEMENT AND SHOULDER RESURFACING

Effective: February 1, 2000
Revised: January 1, 2009

Revise Article 406.10 of the Standard Specifications to read:

“406.10 Resurfacing Sequence. The resurfacing operations shall satisfy the following requirements:

- (a) Before paving in a lane, the adjacent lane and its paved shoulder shall be at the same elevation.
- (b) Each lift of resurfacing shall be completed, including paved shoulders, before the next lift is begun.
- (c) Elevation differences between lanes shall be eliminated within twelve calendar days.”

Revise the first sentence of the eleventh paragraph of Article 406.13 of the Standard Specifications to read:

“When a HMA binder and surface course mixture is used on shoulders and is placed simultaneously with the traffic lane as specified in Section 482, the quantity of HMA placed on the traffic lane that will be paid for will be limited to a calculated tonnage based upon actual mat width and length, plan thickness or a revised thickness authorized by the Engineer, and design mix weight per inch (millimeter) of thickness.”

Delete the twelfth paragraph of Article 406.13 of the Standard Specifications.

Revise the sixth paragraph of Article 482.05 of the Standard Specifications to read:

“On pavement and shoulder resurfacing projects, the resurfacing sequence shall be according to Article 406.10. When the HMA binder and surface course option is used, the shoulders may be placed, at the Contractor’s option, simultaneously with the adjacent traffic lane for both courses, provided the specified density, thickness and cross slope of both the pavement and shoulder can be satisfactorily obtained.”

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL

Effective: October 1, 1995

Revised: January 1, 2007

Description. This work shall consist of removing the hot-mix asphalt (HMA) over areas to be patched, patching, and HMA replacement.

General. The HMA shall be removed as shown on the plans according to Section 440 of the Standard Specifications. After the HMA has been removed, the Engineer will determine if patching is necessary. Areas requiring patching shall be patched according to Section 442 of the Standard Specifications. HMA binder replacement shall be according to Section 406 of the Standard Specifications.

Method of Measurement. In the event the thickness of the existing pavement in an area to be patched after the surface has been removed or the thickness of the existing overlay differs from the thickness shown on the plans, the Engineer will adjust the patching quantity, for the specific patch type, or HMA overlay removal for the individual patches meeting this requirement as indicated by the following chart. The quantities will be increased when the thickness is greater and decreased when the thickness is less.

% change of thickness	% change of quantity
0 to less than 15	0
15 to less than 20	10
20 to less than 30	15
30 and greater	20

Patching will be measured for payment according to Article 442.10 of the Standard Specifications.

HMA removal over the patches will be measured for payment in square yards (square meters), of the thickness specified.

The HMA binder replacement will be measured for payment in tons (metric tons) according to Article 406.13 of the Standard Specifications.

Basis of Payment. The HMA removal will be paid for at the contract unit price per square yard (square meter) for HOT-MIX ASPHALT REMOVAL OVER PATCHES, of the thickness specified.

HMA binder replacement will be paid for at the contract unit price per ton (metric ton) for HOT-MIX ASPHALT REPLACEMENT OVER PATCHES.

Patching will be paid for according to Article 442.11 of the Standard Specifications.

CHECK SHEET #16

State of Illinois
Department of Transportation

SPECIAL PROVISION FOR POLYMER CONCRETE

Effective: August 1, 1995

Revised: April 1, 2016

Description. This work shall consist of furnishing all labor, equipment, technical assistance, and materials necessary to install the polymer concrete as shown on the plans and as specified herein.

Materials. The polymer concrete material shall be a fast setting composite material that may contain aggregate and fibers. It shall be resilient, self-adhering, and water tight. It shall withstand and remain bonded to the surrounding material under repeated impact and thermal cycling. It shall not flow nor become tacky in temperatures up to 130 °F (54 °C). It shall be resistant to ultraviolet radiation, petroleum products and abrasion. It shall be capable of curing at all temperatures above 50 °F (10 °C). Mixing shall be according to the manufacturer's instructions. Based on information provided in the material safety data sheet, the Engineer reserves the right to reject the material due to health or safety concerns.

The polymer concrete shall comply with the following requirements:

Property (Test Method)	Material Specification
Compressive Strength (IL Mod. ASTM C 579)	Refer to Illinois Test Method
Direct Shear (IL Test Procedure, "Shear Strength of Bonded Polymer Concrete")	Refer to Illinois Test Method
Freeze-Thaw (ITP 161)	Refer to Illinois Test Method
Salt Scale (IL Mod. ASTM C 672)	Refer to Illinois Test Method
Traffic Bearing Time	4 hours max. @ 70 ± 5 °F (21 ± 3 °C)
Pot Life	5 minutes min. @ 70 ± 5 °F (21 ± 3 °C)
Impact Resistance (IL Mod. ASTM D 2444):	Refer to Illinois Test Method

The Department will maintain a qualified product list.

Equipment. All equipment necessary for proper construction of this work shall be as recommended by the manufacturer and approved by the Engineer prior to beginning the work. Air equipment shall pass the requirements of ASTM D 4285. This test shall be repeated as determined by the Engineer.

CONSTRUCTION REQUIREMENTS

General. The Contractor shall furnish the Engineer with the manufacturer's product information and installation procedures at least two weeks prior to installation.

When placing the polymer concrete nosing against concrete, the concrete surface shall be dry. For newly placed concrete, the concrete shall be fully cured and allowed to dry out a minimum of seven additional days prior to placement of the nosing. Cold, wet, inclement weather will require an extended drying time.

- a) **Surface Preparation.** All loose foreign material shall be removed. The substrate shall be structurally sound and sandblasted to be free of all foreign matter, grease, dirt, and laitance along the bottom and the sidewalls for all areas that will be in contact with the polymer concrete. Steel surfaces shall be cleaned to SSPC-SP10 surface preparation. After blast cleaning, the surfaces shall be blown clean of debris using oil-free compressed air at a minimum pressure of 90 psi (620 kPa). The bottom and sides of these areas shall then be primed as recommended by the manufacturer.

- b) **Placement.** The polymer concrete shall be mixed, placed and cured according to the manufacturer's instructions. The materials shall be screeded level when appropriate. The material shall be tack free and firm to the touch before proceeding or opening to traffic as determined by the Engineer.

Method of Measurement. This work will be measured for payment in place and the volume computed in cubic feet (cubic meters).

Basis of Payment. This work will be paid for at the contract unit price per cubic foot (cubic meter) for POLYMER CONCRETE.

CHECK SHEET #17

State of Illinois
Department of Transportation

SPECIAL PROVISION FOR PVC PIPELINER

Effective: April 1, 2004
Revised: January 1, 2007

Description. This work shall consist of the rehabilitation of sewer lines and conduits 4 to 18 in. (100 to 450 mm) in diameter by the insertion of a folded/formed PVC pipe liner.

Materials. The folded/formed PVC pipe liner shall conform to ASTM F 1871.

CONSTRUCTION REQUIREMENTS

Installation. The folded/formed PVC pipe liner shall be installed according to ASTM F 1867. The PVC pipe shall be heated, pressurized, and expanded to conform to the wall of the original conduit forming a new structural pipe-within-a-pipe. Service laterals shall then be reinstated.

Both pre and post installation shall be performed and recorded with a camera having an accurate footage counter which shall display on the monitor the exact distance of the camera from the center line of the starting manhole. A copy of the inspection video shall be provided to the Department.

Method of Measurement. This work will be measured for payment in feet (meters) in place.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for FOLDED/FORMED PVC PIPELINER, of the diameter specified.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
BICYCLE RACKS

Effective: April 1, 1994
Revised: January 1, 2012

Description. This work shall consist of furnishing and installing bicycle racks.

Materials. Materials shall be according to the following.

- (a) Steel Pipe. The bicycle rack shall be fabricated from steel pipe, NPS 2, Schedule 40, according to ASTM A 53. The steel pipe shall be a continuous piece as shown on the plans. The steel pipe shall not be welded in sections. Only the base plate shall be welded to the steel pipe.
- (b) Fasteners. Expansion anchors shall be stainless steel mushroom head spikes 1/2 in. (13 mm) diameter x 4 in. (100 mm) long according to ASTM A 193.
- (c) Base Plates. Base plates shall be 3/8 in. (10 mm) thick steel and according to ASTM A 36M (A 36). Base plates shall be galvanized according to ASTM A 153.
- (d) Concrete Pad. The pad shall be Class SI, portland cement concrete according to Section 1020 and curing materials shall be according to Section 1021 of the Standard Specifications.

Submittals. The Contractor shall submit to the Department the following items before construction begins:

- (a) Bicycle Rack -- shop drawings or product data.
- (b) Fastener -- product data.
- (c) Certifications -- submit manufacturer's certification that the pipe and coatings meet the project specifications.
- (d) Samples -- Three 12 in. (300 mm) long samples of the pipe with finish coat and three fasteners.

CONSTRUCTION REQUIREMENTS

Coating of Bicycle Racks. The steel pipe and the base plate shall be coated as specified below. Color of the coating shall be black. The coating shall be applied only after the steel pipe and base plate have been fabricated. The final product shall

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not contain cracks in the coating, ripples in the curved areas, nor any damage due to fabrication and or shipping.

- (a) Steel shall be shot blast to near white steel and then an iron phosphate pre-treatment shall be applied.
- (b) Primer shall be a thermosetting epoxy powder coating (Corvel Zinc Gray 13-7004 or approved equal) electrostatically applied and cured six minutes at 250 °F (121 °C). The primer thickness shall be 1.8-10 mils (45-250 µm).
- (c) Topcoat shall be triglycidly isocyanurate (TGIC) polyester powder coating, electrostatically applied and cured in an oven for 20 minutes at 250 °F (121 °C). The total of all the coatings shall be 8-10 mils (200-250 µm).

Concrete Pad. Prior to construction of a concrete pad, the Engineer will designate the final location, elevation, and dimensions of the pad. Excavation required for the construction of the pad may require removal of existing concrete or asphalt. The excavated area shall be compacted to the satisfaction of the Engineer. A minimum of 6 in. (150 mm) of CA 6 according to Article 1004.04 of the Standard Specifications shall be placed and compacted. The concrete pad shall be 5 1/2 in. (140 mm) thick. Forming and concrete placement shall be according to Section 420 of the Standard Specifications. The site shall be left in a broom clean condition.

Fastening. The bicycle rack shall be surface mounted on concrete with expansion anchors only after concrete has been cured.

Basis of Payment. This work will be paid for at the contract unit price per each for BICYCLE RACKS.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNALS

Effective: August 1, 2003
Revised: January 1, 2007

Description. At the Contractor's option, temporary portable bridge traffic signals may be used in place of temporary bridge traffic signals. Work shall be according to Article 701.18(b) of the Standard Specifications, except as follows:

Materials. Materials shall be according to the following Articles/Sections of the Standard Specifications.

Item	Article/Section
(a) Traffic Signal Head.....	1078
(b) Electric Cable.....	1076.04
(c) Controller.....	1073
(d) Controller Cabinet.....	1074.03
(e) Detector Loop.....	1079

CONSTRUCTION REQUIREMENTS

General. The temporary portable bridge traffic signals shall be trailer-mounted units. The trailer-mounted units shall be set up securely and level. Each unit shall be self-contained and consist of two signal heads. The left signal head shall be mounted on a mast arm capable of extending over the travel lane. Each unit shall contain a solar cell system to facilitate battery charging. There shall be a minimum of 12 days backup reserve battery supply and the units shall be capable of operating with a 120 V power supply from a generator or electrical service.

All signal heads located over the travel lane shall be mounted at a minimum height of 17 ft (5 m) from the bottom of the signal back plate to the top of the road surface. All far right signal heads located outside the travel lane shall be mounted at a minimum height of 8 ft (2.4 m) from the bottom of the signal back plate to the top of the adjacent travel lane surface.

The long all red intervals for the traffic signal controller shall be adjustable up to 250 seconds in one-second increments.

As an alternative to detector loops, temporary portable bridge traffic signals may be equipped with microwave sensors or other approved methods of vehicle detection and traffic actuation. All portable traffic signal units shall be interconnected using hardwire communication cable or radio communication equipment. If radio communication is used, a site analysis shall be completed to ensure that there is no interference present that would affect the traffic signal operation. The radio equipment shall meet all applicable FCC requirements.

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The temporary portable bridge traffic signal system shall meet the physical display and operational requirements of conventional traffic signals as specified in Part IV of the Manual on Uniform Traffic Control Devices (MUTCD). The signal system shall be designed to continuously operate over an ambient temperature range between -30 °F (-34 °C) and 120 °F (48 °C).

When not being utilized to inform and direct traffic, portable signals shall be treated as non-operating equipment according to Article 701.11 of the Standard Specifications.

Basis of Payment. This work will be paid for according to Article 701.20(c) of the Standard Specifications.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
WORK ZONE PUBLIC INFORMATION SIGNS

Effective: September 1, 2002
Revised: January 1, 2007

Description. This work shall consist of furnishing, erecting, maintaining, and removing work zone public information signs.

Camera-ready artwork for the signs will be provided to sign manufacturing companies upon request by contacting the Central Bureau of Operations at 217-782-2076. The sign number is W21-I116-6048.

Freeways/Expressways. These signs are required on freeways and expressways. The signs shall be erected as shown on Highway Standard 701400 and according to Article 701.14 of the Standard Specifications.

All Other Routes. These signs shall be used on other routes when specified on the plans. They shall be erected in pairs midway between the first and second warning signs.

Basis of Payment. This work will not be paid for separately but shall be considered as included in the cost of the Standard.

CHECK SHEET #21

State of Illinois
Department of Transportation

**SPECIAL PROVISION
FOR
NIGHTTIME INSPECTION OF ROADWAY LIGHTING**

Effective: May 1, 1996

The Contractor shall provide traffic control and protection for the nighttime inspection of the roadway lighting as shown in the contract. Any fixtures found not to be aimed to provide optimum lighting on the roadway during the nighttime inspection shall be re-aimed to optimum during the inspection. Any work necessary for re-aiming will not be paid for separately but, shall be included in the cost of the highway lighting bid items.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
ENGLISH SUBSTITUTION OF METRIC BOLTS

Effective: July 1, 1996
Revised: January 1, 2014

This special provision consists of giving the Contractor the option of replacing metric size bolts with English size bolts.

For ASTM A 325M, the following substitutions will be allowed:

Metric Bolt Diameter, mm	English Substitution Diameter, in.
M16	5/8
M22	7/8
M27	1-1/8
M30	1-1/4

A 3/4 in. diameter bolt may be substituted for a M20 bolt only on connections for straight multi-girder systems, detailed with over-sized holes.

For ASTM A 307, the following substitutions will be allowed:

Metric Bolt Diameter, mm	English Substitution Diameter, in.
M24	1
M30	1-1/4
M36	1-1/2
M48	2
M64	2-1/2

CHECK SHEET #23

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
CALCIUM CHLORIDE ACCELERATOR FOR PORTLAND CEMENT CONCRETE

Effective: January 1, 2001
Revised: January 1, 2013

When using Class PP-2 concrete in Class A, B, or C patches, the Contractor may substitute a calcium chloride accelerator for the non-chloride accelerator.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
QUALITY CONTROL OF CONCRETE MIXTURES AT THE PLANT

Effective: August 1, 2000

Revised: January 1, 2014

Description. This Special Provision specifies the quality control responsibilities of the Contractor at the plant, for portland cement concrete mixtures, 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 Schedule C.

Equipment/Laboratory. The Contractor shall provide a laboratory and test equipment to perform their quality control testing, as required in Schedule A.

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 at the beginning of each construction season or each 12 month period. 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" forms BMRP PCCQ01 through BMRP PCCQ09.

The Engineer shall 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.

Plant/Delivery Trucks. The concrete plant and delivery trucks shall be approved according to the Department's Policy Memorandum "Approval of Concrete Plants and Delivery Trucks".

Quality Control Plan. The Contractor shall submit, in writing, a proposed Quality Control (QC) Plan, Part 2, 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 at the plant. 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.

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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.

Plant Quality Control by Contractor. At the plant, 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. 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 of the Standard Specifications.

- (a) Personnel Requirements. The Contractor shall provide personnel to perform the required inspections, sampling, testing, and documentation in a timely manner. A Quality Control (QC) Manager will not be required. The Contractor shall refer to the Department's "Qualifications and Duties of Concrete Quality Control Personnel" document.

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.

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

- (b) 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 Schedule A.

Plant Quality Assurance by Engineer. The Engineer will perform quality assurance tests on independent samples and split samples at the plant. 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 Schedule B.

- (a) 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%
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.

- (b) Test Results and Specification Limits. Split sample and independent sample testing shall be as follows.
- (1) 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 specifications 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:
- a. The Engineer and the Contractor shall investigate the sampling method, test procedure, equipment condition, equipment calibration, and other factors.
 - b. The Engineer or the Contractor shall replace test equipment, as determined by the Engineer.
 - c. The Engineer and the Contractor shall perform additional testing on split samples, as determined by the Engineer.

CHECK SHEET #24

For aggregate gradation, plant slump, and plant air content: if the failing split sample test result is not resolved according to a., b., or c., 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 of the Standard Specifications. If the mixture has already been placed, 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 a., b., or c.

- (2) Independent Sample Testing. For aggregate gradation, plant slump, and plant 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 of the Standard Specifications. If the mixture has already been placed, the material will be considered unacceptable.

Jobsite Acceptance Testing by the Engineer. The Engineer will perform acceptance testing at the jobsite for slump, air content, and strength.

Acceptance by the Engineer. Final acceptance will be based on the Standard Specifications and the following:

- (a) The Contractor's compliance with all contract documents for quality control.
- (b) Comparison of the Engineer's jobsite acceptance test results with specification limits, using samples independently obtained by the Engineer.
- (c) Validation of Contractor plant 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.
- (d) Comparison of the Engineer's plant 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 (a), (b), (c), and (d).

Documentation. 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, 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 BMPR MI504 shall be completed by the Contractor, and shall be submitted to the Engineer weekly or as required by the Engineer. A correctly completed Form BMPR MI504 is required to authorize payment by the Engineer, for applicable pay items.

The Engineer will be responsible for completing form BMPR MI654 and form BMPR MI655.

Basis of Payment. Quality Control of Concrete Mixtures at the Plant will not be paid for separately, but shall be considered as included in the cost of the various types of concrete mixtures required to construct the work items included in the contract.

CHECK SHEET #24

SCHEDULE A

CONTRACTOR PLANT SAMPLING AND TESTING - DOUBLE A			
Item	Test	Frequency	IL Modified AASHTO IL Modified ASTM, or Illinois Test Procedure ^{1/}
Aggregates (Arriving at Plant)	Gradation ^{2/}	As needed to check source for each gradation number	ITP 2, ITP 11, ITP 27, and ITP 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Gradation ^{2/}	2500 cu yd (1900 cu m) for each gradation number ^{3/}	ITP 2, ITP 11, ITP 27, and ITP 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, Pychnometer Jar, or ITP 255
	Moisture ^{4/} : Coarse Aggregate	As needed to control production for each gradation number	Dunagan, Pychnometer Jar, or ITP 255
Mixture ^{5/}	Slump Air Content Unit Weight / Yield Slump Flow (SCC) Visual Stability Index (SCC) J-Ring (SCC) ^{6/} L-Box (SCC) ^{6/} Temperature	As needed to control production	R60 and T 119 R60 and T 152 or T 196 R60 and T 121 ITP SCC-1 and ITP SCC-2 ITP SCC-1 and ITP SCC-2 ITP SCC-1 and ITP SCC-3 ITP SCC-1 and ITP SCC-4 R60 and ASTM C 1064
Mixture (CLSM) ^{7/}	Flow Air Content Temperature	As needed to control production	ITP 307

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. The Department's "Water/Cement Ratio Worksheet" form (BMPR PCCW01) shall be completed, when applicable.

5/ The Contractor may also perform strength testing according to Illinois Modified AASHTO R 60, T 23, and T 22 or T 177; or water content testing according to Illinois Modified AASHTO T 318.

The Contractor may also perform other available self-consolidating concrete (SCC) tests at the plant to control mixture production.

6/ The Contractor shall select the J-Ring or L-Box test for plant sampling and testing.

7/ The Contractor may also perform strength testing according to ITP 307.

SCHEDULE B

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.

ENGINEER QUALITY ASSURANCE SPLIT SAMPLE TESTING ^{2/}		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins	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, Air Content, Slump Flow (SCC), Visual Stability Index (SCC), J-Ring (SCC), and L-Box (SCC)	As determined by the Engineer.

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.

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SCHEDULE C

IDOT 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) Calibration of Concrete Testing Equipment (BMPR PCCQ01 through BMPR PCCQ09)(*)
- (f) Water/Cement Ratio Worksheet (BMPR PCCW01) (*)
- (g) Field/Lab Gradations (BMPR MI504) (*)
- (h) Aggregate Technician Course or Mixture Aggregate Technician Course (*)
- (i) Portland Cement Concrete Tester Course (*)
- (j) Portland Cement Concrete Level I Technician Course – Manual of Instructions for Concrete Testing (*)
- (k) Portland Cement Concrete Level II Technician Course – Manual of Instructions for Concrete Proportioning (*)
- (l) Portland Cement Concrete Level III Technician Course – Manual of Instructions for Design of Concrete Mixtures (*)
- (m) Manual of Test Procedures for Materials

* Refer to the Department's "Manual of Test Procedures for Materials" for more information.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
QUALITY CONTROL/QUALITY ASSURANCE OF CONCRETE MIXTURES

Effective: April 1, 1992
Revised: January 1, 2015

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.

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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" forms BMRP PCCQ01 through BMRP PCCQ09.

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

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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. However, the Level II PCC Technician may request to be available if operations are satisfactory. Approval shall be obtained from the Engineer, 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.

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 are indicated in Article 1020.16(g), Schedule C.
- (1) Strength Testing. For strength testing, Article 1020.09 shall apply, except the Contractor and Engineer strength specimens may be placed in the same field curing box for initial curing and may be cured in the same water storage tank for final curing.

- (2) Comparing Test Results. Differences between the Engineer's and the Contractor's split sample test results will be considered reasonable 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)
Slump Flow (Self-Consolidating Concrete (SCC))	1.5 in. (40 mm)
Visual Stability Index (SCC)	Not Applicable
J-Ring (SCC)	1.5 in. (40 mm)
L-Box (SCC)	10 %
Hardened Visual Stability Index (SCC)	Not Applicable
Dynamic Segregation Index (SCC)	1.0 %
Flow (Controlled Low-Strength Material (CLSM))	1.5 in. (40 mm)
Strength (CLSM)	40 psi (275 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, slump flow, visual stability index, J-Ring, L-Box, dynamic segregation index, flow (CLSM), 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, slump flow, visual stability index, J-Ring, L-Box, dynamic segregation index, flow (CLSM), or aggregate gradation split sample retest result is a failure; or if either the Engineer's or Contractor's strength or hardened visual stability index 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.

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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, jobsite air content, jobsite slump flow, jobsite visual stability index, jobsite J-Ring, jobsite L-Box, jobsite dynamic segregation index, and jobsite flow (CLSM), 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 or hardened visual stability index 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, jobsite air content, jobsite slump flow, jobsite visual stability index, jobsite J-Ring, jobsite L-Box, jobsite dynamic segregation index, jobsite flow (CLSM), 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 or hardened visual stability index 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 BMPR MI504, 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 BMPR MI504, 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 revolution counter reading (final reading optional) at the jobsite, if the mixture is truck-mixed; time discharged at the jobsite; total amount of each admixture added at the jobsite; and total amount of water added at the jobsite.

- (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.

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SCHEDULE A

CONTRACTOR PLANT SAMPLING AND TESTING			
Item	Test	Frequency	IL Modified AASHTO, IL Modified ASTM, or Illinois Test Procedure ^{1/}
Aggregates (Arriving at Plant)	Gradation ^{2/}	As needed to check source for each gradation number	ITP 2, ITP 11, ITP 27, and ITP 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Gradation ^{2/}	2500 cu yd (1900 cu m) for each gradation number ^{3/}	ITP 2, ITP 11, ITP 27, and ITP 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 ITP 255
	Moisture ^{4/} : Coarse Aggregate	As needed to control production for each gradation number	Dunagan, Pycnometer Jar, or ITP 255
Mixture ^{5/}	Slump Air Content Unit Weight / Yield Slump Flow (SCC) Visual Stability Index (SCC) J-Ring (SCC) ^{6/} L-Box (SCC) ^{6/} Temperature	As needed to control production	R 60 and T 119 R 60 and T 152 or T 196 R 60 and T 121 ITP SCC-1 and ITP SCC-2 ITP SCC-1 and ITP SCC-2 ITP SCC-1 and ITP SCC-3 ITP SCC-1 and ITP SCC-4 R 60 and ASTM C 1064
Mixture (CLSM) ^{7/}	Flow Air Content Temperature	As needed to control production	ITP 307

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. The Department's "Water/Cement Ratio Worksheet" form (BMPR PCCW01) shall be completed, when applicable.

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- 5/ The Contractor may also perform strength testing according to Illinois Modified AASHTO R 60, T 23, and T 22 or T 177; or water content testing according to Illinois Modified AASHTO T 318.

The Contractor may also perform other available self-consolidating concrete (SCC) tests at the plant to control mixture production.

- 6/ The Contractor shall select the J-Ring or L-Box test for plant sampling and testing.
- 7/ The Contractor may also perform strength testing according to ITP 307.

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SCHEDULE B

CONTRACTOR JOBSITE SAMPLING & TESTING ^{1/}			
Item	Measured Property	Random Sample Testing Frequency per Mix Design and per Plant ^{2/}	IL Modified AASHTO, IL Modified ASTM, or Illinois Test Procedure
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	R 60 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 100 cu yd (80 cu m) or minimum 1/day	R 60 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	R 60, T 22 and T 23 or R 60, T 177 and T 23
Bridge Approach 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	R 60 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 50 cu yd (40 cu m) or minimum 1/day	R 60 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	R 60, T 22 and T 23 or R 60, T 177 and T 23
Seal Coat	Slump ^{3/}	1 per 250 cu yd (200 cu m) or minimum 1/day	R 60 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 250 cu yd (200 cu m) or minimum 1/day when air is entrained	R 60 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	R 60, T 22 and T 23 or R 60, T 177 and T 23

CONTRACTOR JOBSITE SAMPLING & TESTING ^{1/}			
Curb, Gutter, Median, Barrier, Sidewalk, Slope Wall, Paved Ditch, Fabric Formed Concrete Revetment Mat ^{10/} , Miscellaneous Items, Incidental Items	Slump ^{3/ 4/}	1 per 100 cu yd (80 cu m) or minimum 1/day	R 60 and T 119
	Air Content ^{3/ 5/ 6/}	1 per 50 cu yd (40 cu m) or minimum 1/day	R 60 and T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 400 cu yd (300 cu m) or minimum 1/day	R 60, T 22 and T 23 or R 60, T 177 and T 23
Items Using Self- Consolidating Concrete	Slump Flow ^{3/} VSI ^{3/} J-Ring ^{3/ 11/} L-Box ^{3/ 11/}	Perform at same frequency that is specified for the Item's slump	ITP SCC-1 & ITP SCC-2 ITP SCC-1 & ITP SCC-2 ITP SCC-1 & ITP SCC-3 ITP SCC-1 & ITP SCC-4
	HVSI ^{12/}	Minimum 1/day at start of production for that day	ITP SCC-1 and ITP SCC-6
	Dynamic Segregation Index (DSI)	Minimum 1/week at start of production for that week	ITP SCC-1 and ITP SCC-8 (Option C)
	Air Content ^{3/ 5/ 6/}	Perform at same frequency that is specified for the Item's air content	ITP SCC-1 and T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	Perform at same frequency that is specified for the Item's strength	ITP SCC-1, T 22 and T 23 or ITP SCC-1, T 177 and T 23
All	Temperature ^{3/}	As needed to control production	R 60 and ASTM C 1064
Controlled Low- Strength Material (CLSM)	Flow, Air Content, Compressive Strength (28-day) ^{13/} , and Temperature	First truck load delivered and as needed to control production thereafter	ITP 307

1/ Sampling and testing of small quantities of curb, gutter, median, barrier, sidewalk, slope wall, paved ditch, miscellaneous items, and incidental items may be waived by the Engineer, if requested by the Contractor. However, quality control personnel are still required according to Article 1020.16(c)(1). The Contractor shall also provide recent evidence that similar material has been found to be satisfactory under normal sampling and testing

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procedures. The total quantity that may be waived for testing shall not exceed 100 cu yd (76 cu m) per contract.

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

- 2/ If one mix design is being used for several construction items during a day's production, one testing frequency may be selected to include all items. The construction items shall have the same slump, air content, and water/cement ratio specifications. For self-consolidating concrete, the construction items shall have the same slump flow, visual stability index, J-Ring, L-Box, air content, and water/cement ratio specifications. The frequency selected shall equal or exceed the testing required for the construction item.

One sufficiently sized sample shall be taken to perform the required test(s). Random numbers shall be determined according to the Department's "Method for Obtaining Random Samples for Concrete". The Engineer will provide random sample locations.

- 3/ The temperature, slump, and air content tests shall be performed on the first truck load delivered, for each pour. For self-consolidating concrete, the temperature, slump flow, visual stability index, J-Ring or L-Box, and air content tests shall be performed on the first truck load delivered, for each pour. Unless a random sample is required for the first truck load, testing the first truck load does not satisfy random sampling requirements.
- 4/ The slump random sample testing frequency shall be a minimum 1/day for a construction item which is slipformed.
- 5/ If a pump or conveyor is used for placement, a correction factor shall be established to allow for a loss of air content during transport. The first three truck loads delivered shall be tested, before and after transport by the pump or conveyor, to establish the correction factor. Once the correction is determined, it shall be re-checked after an additional 50 cu yd (38 cu m) is pumped, or an additional 100 cu yd (76 cu m) is transported by conveyor. This shall continue throughout the pour. If the re-check indicates the correction factor has changed, a minimum of two truckloads is required to re-establish the correction factor. The correction factor shall also be re-established when significant changes in temperature, distance, pump or conveyor arrangement, and other factors have occurred. If the correction factor is greater than 3.0 percent, 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.

- 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 two 6 x 12 in. (150 x 300 mm) cylinder breaks, three 4 x 8 in. (100 x 200 mm) cylinder breaks, or two beam breaks for field tests. Per Illinois Modified AASHTO T 23, cylinders shall be 6 x 12 in. (150 x 300 mm) when the nominal maximum size of the coarse aggregate exceeds 1 in. (25 mm). Nominal maximum size is defined as the largest sieve which retains any of the aggregate sample particles.
- 8/ In addition to the strength test, a slump test, air content test, and temperature test shall be performed on the same sample. For self-consolidating concrete, a slump flow test, visual stability index test, J-Ring or L-Box test, air content test, and temperature test shall be performed on the same sample as the strength test. For mixtures pumped or conveyed, the Contractor shall sample according to Illinois Modified AASHTO R 60.
- 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.
- 11/ The Contractor shall select the J-Ring or L-Box test for jobsite sampling and testing.
- 12/ In addition to the hardened visual stability index (HVSI) test, a slump flow test, visual stability index (VSI) test, J-Ring or L-Box test, air content test, and temperature test shall be performed on the same sample. The Contractor shall retain all hardened visual stability index cut cylinder specimens until the Engineer notifies the Contractor that the specimens may be discarded.
- 13/ The test of record for strength shall be the day indicated in Article 1019.04. In addition to the strength test, a flow test, air content test, and temperature test shall be performed on the same sample. The strength test may be waived by the Engineer if future removal of the material is not a concern.

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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, Slump Flow, Visual Stability Index, J-Ring, L-Box, Hardened Visual Stability Index, Dynamic Segregation Index, and Strength	As determined by the Engineer.
	Flow, Air Content, Strength (28-day), and Dynamic Cone Penetration for Controlled Low-Strength Material (CLSM)	As determined by the Engineer

ENGINEER QUALITY ASSURANCE SPLIT SAMPLE TESTING ^{2/}		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins	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, Air Content, Slump Flow (SCC), Visual Stability Index (SCC), J-Ring (SCC), and L-Box (SCC)	As determined by the Engineer.
Jobsite	Slump, Air Content ^{3/} , Slump Flow, Visual Stability Index, J-Ring and L-Box	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.
	Hardened Visual Stability Index	As determined by the Engineer.
	Dynamic Segregation Index	As determined by the Engineer.
	Strength	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.
	Flow, Air Content, and Strength (28-day) for Controlled Low-Strength Material (CLSM)	As determined by the Engineer.

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- 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.

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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 (BMPR MI504) (*)
- (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 Department's "Manual of Test Procedures for Materials" for more information.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
DIGITAL TERRAIN MODELING FOR EARTHWORK CALCULATIONS

Effective: April 1, 2007

Revise the first and second paragraphs of Article 202.07(b) of the Standard Specifications to read:

- “(b) Measured Quantities. Earth and rock excavation will be measured in cubic yards (cubic meters) in their original positions. The volumes will be computed by the method of average end areas using before and after cross sections; or by the method of digital terrain modeling using before and after total station surveys. The volume of any unstable or unsuitable material removed will be measured for payment in cubic yards (cubic meters).

In rock excavation, the Contractor shall strip ledge rock of overburden so that necessary survey shots for measurement may be taken. Vertical measurements shall extend from the surface of the rock to an elevation not more than 6 in. (150 mm) below the subgrade of the proposed pavement structure, as shown on the plans, or to the bottom of the rock where that point is above the subgrade of the proposed pavement structure. Horizontal measurements shall extend not more than 6 in. (150 mm) beyond the slope lines fixed by the Engineer for the work. Boulders and rocks 1/2 cu yd (0.5 cu m) or more in volume will be measured individually and the volume computed from average dimensions taken in three directions.”

Revise the first paragraph of Article 204.07 of the Standard Specifications to read.

“**204.07 Method of Measurement.** Borrow excavation will be measured in cubic yards (cubic meters) in its original position. The volume will be computed by the method of average end areas using before and after cross sections; or by the method of digital terrain modeling using before and after total station surveys.”

Revise the embankment definition of Article 204.07(b) of the Standard Specifications to read:

“Embankment = the volume of fill in its final position computed by the method of average end areas or digital terrain modeling. Both methods will be based upon the existing ground line as shown on the plans, except as noted in (1) and (2) below;”

Revise Article 207.04 of the Standard Specifications to read:

“**207.04 Method of Measurement.** This work will be measured for payment in tons (metric tons) according to Article 311.08(b), or in cubic yards (cubic meters)

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compacted in place and the volume computed by the method of average end areas or digital terrain modeling by total station measurement.”

Revise the second sentence of the second paragraph of Article 211.07(b) of the Standard Specifications to read:

“The volume will be computed by the method of average end areas or digital terrain modeling by total station measurement.”

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CHECK SHEET #28

State of Illinois
Department of Transportation

**SPECIAL PROVISION
FOR**

PREVENTIVE MAINTENANCE – BITUMINOUS SURFACE TREATMENT (A-1)

Effective: January 1, 2009

Revised: January 1, 2017

Description. This work shall consist of constructing a single bituminous surface treatment (A-1).

Materials. Materials shall be according to the following Articles/Sections of the Standard Specifications.

Item	Article/Section
(a) Seal Coat Aggregate (Note 1)	1003, 1004.03
(b) Bituminous Materials (Note 2)	1032

Note 1. The seal coat aggregate shall be either fine or coarse aggregate.

When fine aggregate is used, it shall be stone sand, wet bottom boiler slag, slag sand, or steel slag sand. The aggregate quality shall be Class B. The fine aggregate material shall be selected from the table in Article 1004.03(a) of the Standard Specifications based upon the friction aggregate mixture specified. The aggregate gradation shall be FA 1 (Special), FA 4 (Special), or FA 22 as specified on the plans and shall meet the following.

FINE AGGREGATE GRADATIONS						
Grad. No.	Sieve Size and Percent Passing					
	3/8 in. (9.5 mm)	No. 4 (4.75 mm)	No. 8 (2.36 mm)	No. 16 (1.18 mm)	No. 40 (425 µm)	No. 200 (75 µm)
FA 1 (Special)	100	90 ± 10	62.5 ± 17.5	32.5 ± 7.5	7.5 ± 7.5	1.5 ± 1
FA 4 (Special)	100	--	--	2 ± 2	--	1.5 ± 1
FA 22	100	*	*	8 ± 8	--	2 ± 2

* For the fine aggregate gradation FA 22, the aggregate producer shall set the midpoint percent passing, and the Department will apply a range of ± 10 percent. The midpoint shall not be changed without Department approval.

When coarse aggregate is used, it shall be crushed gravel, crushed stone, wet bottom boiler slag, crushed slag, crushed sandstone, or crushed steel slag. The coarse aggregate material shall be selected from the table in Article 1004.03(a) of the Standard Specifications based upon the friction aggregate mixture specified. The aggregate quality shall be Class B and the total chert count shall be no more than 25.0 percent by weight (mass) as

determined by the ITP 203. The aggregate gradation shall be CA 15, CA 16, or CA 20 as specified on the plans.

Note 2. The bituminous material shall be either a CRSP or an HFP polymer modified emulsified asphalt meeting the requirements of Article 1032.06(f)(2) of the Standard Specifications.

Equipment. Equipment shall be according to the following Articles/Sections of the Standard Specifications.

Item	Article/Section
(a) Self-Propelled Pneumatic-Tired Roller (Note 1)	1101.01
(b) Mechanical Sweeper (Note 2)	1101.03
(c) Aggregate Spreaders (Note 3)	1102.04
(d) Pressure Distributor (Note 4)	1102.05
(e) Heating Equipment	1102.07

Note 1. There shall be a minimum of two rollers, with the final number of rollers determined by the rollers' abilities to maintain proper spacing with the aggregate spreader as directed by the Engineer.

Note 2. The mechanical sweeper shall be power driven and self-propelled with the broom located between the axles. The mechanical sweeper shall not use a cantilever-mounted broom and the broom rotation shall not be operated by forward movement.

Note 3. The aggregate spreader shall be a self-propelled mechanical type with the receiving hopper in the rear and shall pull the aggregate truck. The spreader shall be fitted with an automated system which provides positive interconnected control of the aggregate flow with the forward speed of the spreader. The automated system shall provide uniform and consistent aggregate application at the rate specified.

The Engineer will check the spread roll of the aggregate spreader for straightness each day before operations begin. Should the surface of the spread roll vary off a straight line along its longitudinal dimension by more than 1/16 in. (1.5 mm), the Engineer will inspect the application of aggregate for corrugations and, should these occur, the machine shall be repaired or replaced. The forward speed of the spreader during calibration shall be the same as is to be used during construction. The equipment required for aggregate spreader calibration may consist of several sheets of canvas, each being exactly 1 sq yd (0.8 sq m), and a weight scale. By making several runs at different gate openings over the sheets of canvas, placed to cover the full width applied by the spreader, and carefully measuring the aggregate on each canvas sheet, the gate opening at the pre-established speed required to apply aggregate at the specified rate may be determined.

Note 4. The pressure distributor shall have a minimum capacity of 3000 gal (11,500 L). The application rate control shall be automated and shall control the application rate regardless of ground speed or spray bar width. The computer shall have the capability of recording the application rate, gallons sprayed, square yards, and feet traveled. The pressure distributor shall be

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capable of maintaining the asphalt emulsion at the specified temperature. The spray bar nozzles shall produce a uniform triple lap application fan spray, and the shutoff shall be instantaneous, with no dripping. The pressure distributor shall be capable of maintaining the specified application rate within ± 0.015 gal/sq yd (± 0.070 L/sq m) for each load. The spray-bar nozzles shall be turned to make the same angle with the longitudinal axis of the spray bar as recommended by the manufacturer.

Application rates shall be determined by the procedures listed in ASTM D 2995, except the sample may be taken on three 8 x 12 in. (200 x 300 mm) metal plates. The three plates shall be positioned as directed by the Engineer.

CONSTRUCTION REQUIREMENTS

Weather Limitations. This work shall be done between May 1 and August 31. Bituminous materials shall be applied only when the temperature of the air in the shade is above 55 °F (13 °C). No work shall be started if local conditions indicate that rain is imminent.

This work may be done between September 1 and September 15 provided both of the following conditions are met:

- (a) The temperature of the air in the shade is above 70 °F (20 °C) and the temperature of the surface to which the asphalt will be applied is 70 °F (20 °C) or above, and
- (b) The National Weather Service forecast for the area does not show any rain or any temperatures below 55 °F (13 °C) for the day the work is to be done or for the following five days.

Repair and Preparation of Base or Existing Surface. The base or existing surface shall be prepared according to Section 358 of the Standard Specifications.

Calibration. The working day prior to starting construction, the pressure distributor and aggregate spreader shall be calibrated and adjusted according to the manufacturer's recommendations. At least three days prior to starting the work the Contractor shall provide the Engineer with a copy of the manufacturer's recommendations for the equipment to be used. All calibrations and adjustments shall be made in the presence of the Engineer on a level surface at a location approved by the Engineer. The Contractor shall maintain proper calibration and adjustment of the equipment and the Engineer reserves the right to check application rates as the work progresses. Should the equipment fail to consistently apply the specified rates, the work shall be stopped and the Contractor shall recalibrate and readjust the equipment.

Application Rates. Based upon the aggregate gradation to be used, the Contractor shall determine the application rates of bituminous material and seal coat aggregate. The application rates along with the seal coat gradations shall be submitted to the Engineer for approval prior to the start of work. Application rates shall be according to the following table for the aggregate type shown on the plans, and shall result in

aggregate embedment between 50 and 70 percent behind the roller. Changes in the application rate of greater than 15 percent shall be resubmitted to the Engineer for approval.

Aggregate Type	Bituminous Material Rate	Aggregate Rate
CA 15	0.38 – 0.46 gal/sq yd (1.7 – 2.1 L/sq m)	22 – 30 lb/sq yd (12 – 16 kg/sq m)
CA 16	0.36 – 0.40 gal/sq yd (1.6 – 1.8 L/sq m)	18 – 26 lb/sq yd (8 – 14 kg/sq m)
CA 20	0.36 – 0.40 gal/sq yd (1.6 – 1.8 L/sq m)	18 – 26 lb/sq yd (8 – 14 kg/sq m)
FA 1 (Special)	0.26 – 0.30 gal/sq yd (1.2 – 1.4 L/sq m)	16 – 20 lb/sq yd (9 – 11 kg/sq m)
FA 4 (Special)	0.28 – 0.36 gal/sq yd (1.3 – 1.6 L/sq m)	18 – 24 lb/sq yd (10 – 13 kg/sq m)
FA 22	0.32 – 0.40 gal/sq yd (1.5 – 1.8 L/sq m)	15 – 22 lb/sq yd (8 – 12 kg/sq m)

Preparation of Bituminous Material. The temperature of the bituminous material at the time of application shall be such that it shall spray uniformly without clogging the spraying nozzles and shall be applied within the temperature ranges of 150 – 190 °F (65 – 90 °C).

Preparation of Aggregate. The aggregate shall be stockpiled near the jobsite according to Article 1003.01(e) or 1004.01(e) of the Standard Specifications. The aggregate used shall contain no free moisture. Slightly damp aggregate may be used with the approval of the Engineer.

Application of Bituminous Material. The bituminous material shall be applied with a pressure distributor. The entire length of the spray bar shall be set at the height above the surface recommended by the manufacturer for even distribution of the bituminous material.

The distributor shall be operated in a manner such that missing or overlapping of transverse joints shall be avoided. To prevent overlapping of successive applications of bituminous material at transverse joints, heavy paper shall be spread over the previously applied bituminous material and aggregates. In order to obtain a uniform application of the bituminous material, the distributor shall be traveling at the speed required for the specified rate of application when the spray bar crosses the paper.

Adjacent construction, such as concrete pavement, curb and gutter, bridge floors, raised reflective pavement markers, and bridge handrails, shall be protected by shields, covers or other means. If bituminous material is applied to adjacent construction, the Contractor shall remove such material to the satisfaction of the Engineer.

The emulsified asphalt shall not be applied when the wind conditions will inhibit uniform coverage from the fans of asphalt being applied.

Application of Aggregates. The seal coat aggregates shall be spread evenly with an aggregate spreader over the entire surface being treated. When treating one-half of

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the pavement width at a time, an inside strip of uncovered emulsified asphalt 3 in. (75 mm) wide shall be left during construction of the first half to provide center joint overlap when the second half of the treatment is placed. In all cases, the aggregate shall be applied ahead of the truck or spreader wheels. Hand spreading will be permitted only when approved by the Engineer and, when so permitted, the aggregate shall be spread uniformly and at the approximate rate specified. Any ridges of aggregate left by the aggregate spreader shall be smoothed out with hand brooms immediately behind the aggregate spreader.

All equipment involved in the work shall operate as close to each other as practical. The aggregate shall cover the asphalt emulsion within 30 seconds of applications. At no time shall the aggregate spreader trail the pressure distributor by more than 150 ft (45 m) to ensure proper asphalt/aggregate adhesion.

Each aggregate truck shall be equipped with a suitable hitch for connection to the aggregate spreader while unloading. The trucks shall avoid contact between the truck body or bed and the aggregate spreader. The body or bed of the truck shall be modified, if necessary, to empty cleanly and completely into the receiving hopper of the aggregate spreader. No aggregate shall be allowed to spill onto the road surface when the truck is emptying into this hopper.

The aggregate shall be rolled following spreading. A maximum time of five minutes will be allowed between the spreading of aggregate and completion of the initial rolling of the aggregate. The rollers shall proceed in a longitudinal direction at a speed less than or equal to 5 mph (8 km/h). Each roller will travel over the aggregate a minimum of two times. The entire surface shall be rolled immediately with a self-propelled pneumatic-tired roller. Rolling shall proceed in a longitudinal direction beginning at the edges and progressing toward the center, overlapping on successive trips by at least 1/2 the width of the roller. The aggregate shall then be rolled with a separate pneumatic-tired roller until the aggregate is properly seated in the bituminous material.

The Contractor shall use the appropriate sweeping equipment to perform an initial sweeping after a minimum of two hours curing and not less than one hour before sunset on the day the bituminous surface treatment is placed. The initial sweeping shall remove excess aggregate by lightly sweeping each pavement lane. The sweeping shall be sufficient to prevent migration of loose aggregate back onto any part of the pavement.

The Contractor shall sweep the pavement surface as needed to remove excess aggregate.

Opening to Traffic. The road shall be opened to traffic according to Article 701.17(c)(4) of the Standard Specifications.

Method of Measurement. The bituminous surface treatment will be measured for payment in place and the area computed in square yards (square meters). The width for measurement will be the top width of the bituminous surface treatment as shown on the plans or as directed by the Engineer.

Basis of Payment. This work will be paid for at the contract unit price per square yard (square meter) for BITUMINOUS SURFACE TREATMENT (PREVENTIVE MAINTENANCE).

When provided as a payment item, the preparation of the existing surface will be measured and paid for as specified in Section 358 of the Standard Specifications. If not provided as a payment item, preparation of existing surface will be paid for according to Article 109.04 of the Standard Specifications.

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State of Illinois
 Department of Transportation

**SPECIAL PROVISION
 FOR
 PREVENTIVE MAINTENANCE – CAPE SEAL**

Effective: January 1, 2009
 Revised: January 1, 2017

Description. This work shall consist of constructing a single bituminous surface treatment (A-1) and a micro-surfacing on existing hot-mix asphalt (HMA) surfaces.

Materials. Materials shall be according to the following.

- (a) A-1 Surface Treatment. Materials shall be according to the following Articles/Sections of the Standard Specifications.

Item	Article/Section
(1) Seal Coat Aggregate (Note 1)	1003, 1004.03
(2) Bituminous Materials (Note 2)	1032

Note 1. The seal coat aggregate shall be either fine or coarse aggregate.

When fine aggregate is used, it shall be stone sand, wet bottom boiler slag, slag sand, or steel slag sand. The aggregate quality shall be Class C. The aggregate gradation shall be FA 1 (Special), FA 4 (Special), or FA 22 as specified on the plans and shall meet the following.

FINE AGGREGATE GRADATIONS						
Grad. No.	Sieve Size and Percent Passing					
	3/8 in. (9.5 mm)	No. 4 (4.75 mm)	No. 8 (2.36 mm)	No. 16 (1.18 mm)	No. 40 (425 µm)	No. 200 (75 µm)
FA 1 (Special)	100	90 ± 10	62.5 ± 17.5	32.5 ± 7.5	7.5 ± 7.5	1.5 ± 1
FA 4 (Special)	100	--	--	2 ± 2	--	1.5 ± 1
FA 22	100	*	*	8 ± 8	--	2 ± 2

* For the fine aggregate gradation FA 22, the aggregate producer shall set the midpoint percent passing, and the Department will apply a range of ± 10 percent. The midpoint shall not be changed without Department approval.

When coarse aggregate is used, it shall be crushed gravel, crushed stone, wet bottom boiler slag, crushed slag, crushed sandstone, or crushed steel slag. The aggregate quality shall be Class C and the total chert count shall be no more than 25.0 percent by weight (mass) as

determined by the Illinois Test Procedure 203. The aggregate gradation shall be CA 15, CA 16, or CA 20 as specified on the plans.

Note 2. The bituminous material shall be either a CRSP or an HFP polymer modified emulsified asphalt meeting the requirements of Article 1032.06(f)(2) of the Standard Specifications.

- (b) Micro-Surfacing. Materials shall be according to the following Articles/Sections of the Standard Specifications.

Item	Article/Section
(1) Mineral Filler (Note 1)	1001
(2) Water	1002
(3) Coarse Aggregate (Note 2)	1004.03
(4) Latex-Modified Emulsified Asphalt (Note 3)	
(5) Additives (Note 4)	

Note 1. The mineral filler shall be Type 1 portland cement.

Note 2. The coarse aggregate material shall be selected from the table in Article 1004.03(a) of the Standard Specifications based upon the friction aggregate mixture specified. The quality of the aggregate shall be Class B and the gradation shall be as shown in the table below.

Sieve Size	% Passing
3/8 in. (9.5 mm)	100
No. 4 (4.75 mm)	95 ± 5
No. 8 (2.36 mm)	77 ± 13
No. 16 (1.18 mm)	57 ± 13
No. 30 (600 µm)	35 ± 10
No. 50 (330 µm)	19 ± 6
No. 100 (150 µm)	15 ± 6
No. 200 (75 µm)	10 ± 5

When coarse aggregate is used, it shall be crushed gravel, crushed stone, crushed slag, crushed sandstone, or crushed steel slag. The blending, alternate use, and/or substitutions of aggregates from different sources for use in this work will not be permitted without the approval of the Engineer. Any blending shall be by interlocked mechanical feeders. The blending shall be uniform, compatible with the other components of the mix, and the equipment shall be approved by the Engineer.

If blending aggregates, the blend shall have a washed gradation performed every other day or a minimum of three tests per week. Testing shall be completed before the aggregate receives final acceptance for use in the mix.

Aggregates shall be screened at the stockpile prior to delivery to the paving machine to remove oversized material or contaminants.

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Note 3. CSS-1h Latex Modified Emulsified Asphalt. The emulsified asphalt shall be a quick-traffic latex modified asphalt emulsion containing a minimum of 3.0 percent latex solids by weight of asphalt binder. The latex shall be milled or blended into the emulsifier solution prior to the emulsification process. The CSS-1h latex modified emulsified asphalt shall be according to the following.

Test (AASHTO T 59)	Result
Viscosity, Saybolt Furol, 77 °F (25 °C), SFS	20-100
Storage Stability Test, 24 hours, %	1 max.
Particle Charge Test	Positive
Sieve Test, No. 20 (850 µm), retained on sieve, %	0.10 max.
Distillation Test, Residue from distillation test to 347 ± 9 °F (175 ± 5 °C), %	62 min.

Tests on residue from distillation	Result
Penetration, 77 °F (25 °C), 100 grams, 5 seconds, (AASHTO T 49), dmm	40-90
Ductility, 77 °F (25 °C), 50 mm/min, (AASHTO T 51), mm	400 min.
Solubility in trichloroethylene, (AASHTO T 44), %	97.5 min.
Softening Point, (AASHTO T 53), °F (°C)	135 (57) min.
Absolute Viscosity, 140 °F (60 °C), (AASHTO T 202), Poises (Pa · sec)	8,000 (800) min.

Note 4. Additives may be added to the emulsion mix or any of the component materials to provide the control of the quick-traffic properties. They shall be included as part of the mix design and be compatible with the other components of the mix.

- (c) Crack/Joint Sealant. The crack/joint sealant shall be a fiber-modified asphalt binder mixed at the jobsite or premixed.
 - (1) Jobsite-Mixed Sealant. The sealant shall consist of an asphalt binder and fibers, and be according to the following.
 - a. Asphalt Binder. The asphalt binder shall be PG 58-28, PG 58-22, or PG 64-22 and meet the requirements of Article 1032.05 of the Standard Specifications.
 - b. Fibers. Fibers shall be short cut polypropylene or polyester fibers meeting the properties listed below. The fiber will be accepted by certification. The Contractor shall supply a certification from the manufacturer stating that it meets the specified requirements.

Property	Value	
	Polypropylene	Polyester
Length, in. (mm)	0.3 - 0.5 (8 - 12)	0.25 ± 0.02 (6.3 ± 0.5)
Denier	13 - 16	3 - 6
Crimps	None	None
Tensile Strength, min., psi (kPa)	40,000 (275,000)	70,000 (482,000)
Specific Gravity (typical)	0.91	1.32 – 1.40
Moisture Regain @ 70 °F (21 °C) and 65% RH (typical), %	0.1	N/A
Elongation at Break, %		35 - 38
Melt Temperature, °F (°C)		475 – 490 (246 – 254)
Percent Fibers by weight (mass)	8.0	5.0 ± 0.5

- c. Sealant Heating. The sealant shall be heated in the kettle at temperatures between 255 and 285 °F (124 and 141 °C).
- (2) Premixed Sealant. The sealant shall be packaged and consist of an asphalt binder, fibers, and other modifiers meeting the following requirements. The sealant and its components will be accepted by certification. The Contractor shall submit a certification from the manufacturer stating that it meets the specified requirements.
- a. Asphalt Binder. The asphalt binder shall be PG 64-22 and meet the requirements of Article 1032.05 of the Standard Specifications.
 - b. Fibers. Fibers shall be short cut polyester fibers meeting the properties listed in the table above for Jobsite-Mixed Sealant.

The sealant, in its final form, shall meet the following requirements when sampled and heated to the manufacturer's recommended maximum heating temperature according to ASTM D 5167.

Test	Value
Cone Penetration @ 77 °F (25 °C), ASTM D 5329	10 - 35 dmm
Softening Point, ASTM D 36	175 °F (79 °C) min.
Maximum Heating Temperature	400°F (204 °C)
Application Temperature	350°F (177 °C) min.

Equipment. Equipment shall be according to the following.

- (a) A-1 Surface Treatment. Equipment shall be according to the following Articles/Sections of the Standard Specifications.

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Item	Article/Section
(1) Self-Propelled Pneumatic-Tired Roller (Note 1)	1101.01
(2) Mechanical Sweeper (Note 2)	1101.03
(3) Aggregate Spreaders (Note 3)	1102.04
(4) Pressure Distributor (Note 4)	1102.05
(5) Heating Equipment	1102.07

Note 1. There shall be a minimum of two rollers, with the final number of rollers determined by the rollers' abilities to maintain proper spacing with the aggregate spreader as directed by the Engineer.

Note 2. The mechanical sweeper shall be power driven and self-propelled with the broom located between the axles. The mechanical sweeper shall not use a cantilever-mounted broom and the broom rotation shall not be operated by forward movement.

Note 3. The aggregate spreader shall be a self-propelled mechanical type with the receiving hopper in the rear and shall pull the aggregate truck. The spreader shall be fitted with an automated system which provides positive interconnected control of the aggregate flow with the forward speed of the spreader. The automated system shall provide uniform and consistent aggregate application at the rate specified.

The Engineer will check the spread roll of the aggregate spreader for straightness each day before operations begin. Should the surface of the spread roll vary off a straight line along its longitudinal dimension by more than 1/16 in. (1.5 mm), the Engineer will inspect the application of aggregate for corrugations and, should these occur, the machine shall be repaired or replaced. The forward speed of the spreader during calibration shall be the same as is to be used during construction. The equipment required for aggregate spreader calibration may consist of several sheets of canvas, each being exactly 1 sq yd (0.8 sq m), and a weight scale. By making several runs at different gate openings over the sheets of canvas, placed to cover the full width applied by the spreader, and carefully measuring the aggregate on each canvas sheet, the gate opening at the pre-established speed required to apply aggregate at the specified rate may be determined.

Note 4. The pressure distributor shall have a minimum capacity of 3000 gal (11,500 L). The application rate control shall be automated and shall control the application rate regardless of ground speed or spray bar width. The computer shall have the capability of recording the application rate, gallons sprayed, square yards, and feet traveled. The pressure distributor shall be capable of maintaining the asphalt emulsion at the specified temperature. The spray bar nozzles shall produce a uniform triple lap application fan spray, and the shutoff shall be instantaneous, with no dripping. The pressure distributor shall be capable of maintaining the specified application rate within ± 0.015 gal/sq yd (± 0.070 L/sq m) for each load. The spray-bar nozzles shall be turned to make the same angle with the longitudinal axis of the spray bar as recommended by the manufacturer.

Application rates shall be determined by the procedures listed in ASTM D 2995, except the sample may be taken on three 8 x 12 in. (200 x 300 mm) metal plates. The three plates shall be positioned as directed by the Engineer.

(b) Micro-Surfacing. Equipment shall be according to the following.

- (1) Micro-Surfacing Mixing Machine. The machine shall be either a continuous (self-loading) machine or a non-continuous (self-contained) machine depending on the size of the project as described below. Both types of machines shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, control additive and water to maintain an adequate supply to the proportioning controls. The mixing unit shall be able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, control setting additive, and water to a revolving multi-blade, double-shafted mixer.

Machines that are the continuous (self-loading) type shall be an automatic-sequenced, self-propelled, continuous-flow mixing unit able to discharge the mixed product on a continuous-flow basis. The machine shall be equipped to allow the operator to have full control of the forward and reverse speeds during applications of the material and be equipped with opposite-side driver stations to assist in alignment.

Non-continuous (self-contained) machines will be allowed on projects with a length of 2 lane-miles (3.2 lane-km) or less. For mainline paving, the Contractor shall have at least three self-contained machines in continuous operation to ensure appropriate production rates. Self-contained machines will also be allowed on shoulders, ramps, short applications as bridge decks, or where the material can be placed in a single loading capacity of the machine.

Each mixing unit to be used in the performance of the work shall be calibrated in the presence of the Engineer prior to construction. Each new or different aggregate requires a new calibration. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than 30 days have lapsed. The documentation shall include an individual calibration of each material at various settings, which can be related to the machine metering devices. Prior to the calibration process, portable scales used to calibrate the mixing machine for emulsion and aggregate shall be checked with 25 lb and 50 lb weights, respectively. Results from the standard weight checks shall be furnished to the Engineer. No machine will be allowed to work on the project until the calibration has been completed and/or accepted.

- (2) Micro-Surfacing Spreader. The mixture shall be agitated and spread uniformly in the surfacing box by means of twin-shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform

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consistency is achieved to produce a free flow of material to the rear strike-off. The spreader box shall have suitable means provided to side shift the box to compensate for variations in the pavement geometry.

A secondary strike-off shall be provided to improve surface texture on the surface course. The secondary strike-off shall have the same adjustments as the spreader box and shall not bounce, wobble, or chatter.

When required on the plans, before the final surface course is placed, preliminary micro-surfacing material may be required to fill ruts, utility cuts, depressions in the existing surface, etc. Ruts of 1/2 in. (13 mm) or greater in depth shall be filled independently with a rut-filling spreader box, either 5 or 6 ft (1.5 or 1.8 m) in width. For irregular or shallow rutting of less than 1/2 in. (13 mm) in depth, a full-width scratch-coat pass may be used as directed by the Engineer utilizing either a stiff primary rubber or else a metal primary strike off. Ruts that are in excess of 1 1/2 in. (38 mm) in depth may require multiple placements with the rut-filling spreader box to restore the cross-section. All rut-filling level-up material should cure under traffic for a minimum of 24 hours before additional material is placed on top of the level up.

- (3) Micro-Surfacing Proportioning Devices. Individual volume or weight controls for proportioning each material to be added to the mix (i.e. aggregate, mineral filler, emulsified asphalt, additive, and water) shall be provided and properly marked. These proportioning devices are used in material calibration and determining the material output at any time. Calibration records, conversion formulas, and daily run sheets including the beginning and final numbers shown on the proportioning devices shall be submitted to the Engineer for approval. During production any deviations from the original JMF shall be approved by the Engineer.
- (c) Crack/Joint Sealing. Equipment shall be according to the following.
- (1) Air Compressor. The air compressor shall be capable of producing a minimum pressure of 90 psi (620 kPa) at the end of the discharge hose. The air stream shall discharge onto the pavement through an appropriate air lance. The tool lubricator shall be bypassed and a filter installed on the discharge valve to keep water and oil out of the line.
 - (2) Oil Kettle. The crack sealant shall be heated in an oil jacketed double wall kettle equipped with an agitator (reversing rotary auger action) and separate thermometers for the oil bath and mixing chamber. The unit shall also be equipped with a reversible hydraulic 2 in. (50 mm) hot asphalt pump and a recirculating pump to circulate the oil bath.

CONSTRUCTION REQUIREMENTS

Weather Limitations. Placement of the A-1 bituminous surface treatment shall be done between May 1 and August 31, with the micro-surfacing being placed according to the timeframe specified herein. Bituminous materials shall be applied only when the temperature of the air in the shade is above 55 °F (13 °C). No work shall be started if local conditions indicate that rain is imminent.

The A-1 bituminous surface treatment may be done between September 1 and September 15 provided both of the following conditions are met:

- (a) The temperature of the air in the shade is above 70 °F (20 °C) and the temperature of the surface to which the asphalt will be applied is 70 °F (20 °C) or above, and
- (b) The National Weather Service forecast for the area does not show any rain or any temperatures below 55 °F (13 °C) for the day the work is to be done or for the following five days.

Mix Design. A Contractor provided laboratory shall develop the mix design for the micro-surfacing mixture, shall verify the functioning of the set regulating additives, and shall present certified test results for the Engineer's approval. This laboratory shall be recognized by the International Slurry Surfacing Association (ISSA) as being capable of performing mix designs. The Engineer will verify the laboratory tests required in ISSA A143 have been conducted.

Proportions for the mix design shall be within the following limits.

Mineral Aggregate, dry weight (mass) lb/sq yd (kg/sq m)	15-50 (8-30)
Latex Emulsified Asphalt Residue, % by wt. of Aggregate	5.5-10.5
Latex Base Modifier	As required with % by weight (mass) of binder min. of 3.0
Mix Set Additive	As required
Mineral Filler, % by weight (mass) of aggregate	0.25 - 3 depending on weather conditions

The amount of mineral filler needed shall be determined by the laboratory mix design and will be considered as part of the aggregate gradation.

The amount and type of latex shall be determined by the laboratory performing the mix design. The minimum amount required shall be based on asphalt weight content and shall be certified by the emulsion supplier.

Compatibility of the aggregate, latex-modified emulsified asphalt, mineral filler, and other additives shall be verified by the mix design. The materials shall meet the following requirements for ISSA A143.

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ISSA Test No.	Description	Specification
ISSA TB-139	Wet Cohesion @ 30 minutes min. (Set) @ 60 minutes min. (Traffic)	12 kg-cm min. 20 kg-cm min. or Near Spin
ISSA TB-109	Excess Asphalt by LWT Sand Adhesion	50 gm/sq ft (538 gm/sq m) max.
ISSA TB-114	Wet Stripping	Pass (90% min.)
ISSA TB-100	Wet-Track Abrasion Loss One-hour Soak Six-day Soak	50 gm/sq ft (538 gm/sq m) max. 75 gm/sq ft (807 gm/sq m) max.
ISSA TB-147	Lateral Displacement	5% max.
	Specific Gravity after 1,000 Cycles of 25 lb (11.34 kg)	2.10 max.
ISSA TB-144	Classification Compatibility	11 Grade Points min. (AAA, BAA)
ISSA TB-113	Mix Time @ 77 °F (25 °C)	Controllable to 120 seconds min.

The mixing test and set-time test shall be checked at the highest temperatures expected during construction.

The mix design shall report the quantitative effects of moisture content on the unit weight of the aggregate (bulking effect). The report shall clearly show the proportions of aggregate, mineral filler (minimum and maximum), water (minimum and maximum), additive usage, and latex-modified asphalt emulsion based on the dry weight of the aggregate.

For the aggregate blend in the mix design, test results for AASHTO T 176 shall be provided with the mix information to the Engineer. Aggregate test values below 65 shall require review and approval from the Engineer.

Before the work commences, the Contractor shall submit to the Engineer a complete mix design covering the specific materials to be used on the project. The percentages of each individual material required shall be shown in the laboratory report. The Engineer shall approve the mix design prior to its use. After approval, no substitutions will be permitted, unless approved by the Engineer, and the Contractor shall maintain continuous control of the latex-modified emulsified asphalt to dry aggregate proportioning to conform to the approved mix design within a tolerance of ± 2 gal/ton (± 8 L/metric ton).

Micro-Surfacing Test Strip. For projects over 100,000 sq yd (83,600 sq m), at least one day prior to starting the project the Contractor shall designate a mutually agreeable location and apply a test strip of micro-surfacing using the aggregate indicated in the mix design. The Engineer will evaluate the micro-surfacing application rate and cure time.

Surface Preparation. Pavement markings shall be removed according to Article 783.03(a) of the Standard Specifications. Only very small particles of tightly adhering existing markings may remain in place.

When specified in the plans, pavement markers shall be removed according to Article 783.03(b) of the Standard Specifications.

Bumps greater than or equal to 1/2 in. (13 mm) shall be removed by grinding. The Contractor shall determine bump grinding locations in the presence of the Engineer by using a 16 ft (5 m) straightedge with the scratcher bolts set to 1/2 in. (13 mm). All locations marked by the scratcher bolts shall be ground using either a grinding machine consisting of multiple saws or a cold-milling machine with a double- or triple-wrap milling head.

Joints and cracks 3/16 in. (5 mm) or wider shall be cleaned of loose and unsound material and sealed. The sealant shall be applied only when the joints and cracks are clean and dry and the ambient temperature is 40-85 °F (4-29 °C). The sealant shall be applied using a pressurized wand delivery system with such devices as necessary to seal the cracks/joints and form a nominal 0.125 in. (3 mm) thick by 3 in. (75 mm) wide overseal band centered so that the center of the 3 in. (75 mm) wide band is within 1 in. (25 mm) of the crack. The sealant shall be allowed to cure before opening to traffic. When approved by the Engineer, the sealer may be dusted with fine sand, portland cement, or mineral filler to prevent tracking.

Prior to applying the A-1 bituminous surface treatment, the pavement surface shall be cleaned.

Manholes, valve boxes, drop inlets, and other service entrances shall be protected from the cape seal by a suitable method. The surface preparation shall be approved by the Engineer prior to application of the A-1 bituminous surface treatment. No dry aggregate either spilled from the lay-down machine or existing on the road, will be permitted.

Calibration. The working day prior to starting construction of the A-1 bituminous surface course, the pressure distributor and aggregate spreader shall be calibrated and adjusted according to the manufacturer's recommendations. At least three days prior to starting the work the Contractor shall provide the Engineer with a copy of the manufacturer's recommendations for the equipment to be used. All calibrations and adjustments shall be made in the presence of the Engineer on a level surface at a location approved by the Engineer. The Contractor shall maintain proper calibration and adjustment of the equipment and the Engineer reserves the right to check application rates as the work progresses. Should the equipment fail to consistently apply the specified rates, the work shall be stopped and the Contractor shall recalibrate and readjust the equipment.

Application. The cape seal shall be applied as shown on the plans and the following.

- (a) A-1 Bituminous Surface Treatment. The bituminous material and aggregate shall be applied according to the following.
 - (1) Application Rates. Based upon the aggregate gradation to be used, the Contractor shall determine the application rates of bituminous material

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and seal coat aggregate. The application rates along with the seal coat gradations shall be submitted to the Engineer for approval prior to the start of work. Application rates shall be according to the following table for the aggregate type shown on the plans, and shall result in aggregate embedment between 50 and 70 percent behind the roller. Changes in the application rate of greater than 15 percent shall be resubmitted to the Engineer for approval.

Aggregate Type	Bituminous Material Rate	Aggregate Rate
CA 15	0.38 – 0.46 gal/sq yd (1.7 – 2.1 L/sq m)	22 – 30 lb/sq yd (12 – 16 kg/sq m)
CA 16	0.36 – 0.40 gal/sq yd (1.6 – 1.8 L/sq m)	18 – 26 lb/sq yd (8 – 14 kg/sq m)
CA 20	0.36 – 0.40 gal/sq yd (1.6 – 1.8 L/sq m)	18 – 26 lb/sq yd (8 – 14 kg/sq m)
FA 1 (Special)	0.26 – 0.30 gal/sq yd (1.2 – 1.4 L/sq m)	16 – 20 lb/sq yd (9 – 11 kg/sq m)
FA 4 (Special)	0.28 – 0.36 gal/sq yd (1.3 – 1.6 L/sq m)	18 – 24 lb/sq yd (10 – 13 kg/sq m)
FA 22	0.32 – 0.40 gal/sq yd (1.5 – 1.8 L/sq m)	15 – 22 lb/sq yd (8 – 12 kg/sq m)

- (2) Preparation of Bituminous Material. The temperature of the bituminous material at the time of application shall be such that it shall spray uniformly without clogging the spraying nozzles and shall be applied within the temperature ranges of 150 – 190 °F (65 – 90 °C).
- (3) Preparation of Aggregate. The aggregate shall be stockpiled near the jobsite according to Article 1003.01(e) or 1004.01(e) of the Standard Specifications. The aggregate used shall contain no free moisture. Slightly damp aggregate may be used with the approval of the Engineer.
- (4) Application of Bituminous Material. The bituminous material shall be applied with a pressure distributor. The entire length of the spray bar shall be set at the height above the surface recommended by the manufacturer for even distribution of the bituminous material.

The distributor shall be operated in a manner such that missing or overlapping of transverse joints is avoided. To prevent overlapping of successive applications of bituminous material at transverse joints, heavy paper shall be spread over the previously applied bituminous material and aggregates. In order to obtain a uniform application of the bituminous material, the distributor shall be traveling at the speed required for the specified rate of application when the spray bar crosses the paper.

Adjacent construction, such as concrete pavement, curb and gutter, bridge floors, raised reflective pavement markers, and bridge handrails, shall be protected by shields, covers or other means. If bituminous

material is applied to adjacent construction, the Contractor shall remove such material to the satisfaction of the Engineer.

The emulsified asphalt shall not be applied when the wind conditions will inhibit uniform coverage from the fans of asphalt being applied.

- (5) Application of Aggregates. The seal coat aggregates shall be spread evenly with an aggregate spreader over the entire surface being treated. When treating one-half of the pavement width at a time, an inside strip of uncovered emulsified asphalt 3 in. (75 mm) wide shall be left during construction of the first half to provide center joint overlap when the second half of the treatment is placed. In all cases, the aggregate shall be applied ahead of the truck or spreader wheels. Hand spreading will be permitted only when approved by the Engineer and, when so permitted, the aggregate shall be spread uniformly and at the approximate rate specified. Any ridges of aggregate left by the aggregate spreader shall be smoothed out with hand brooms immediately behind the aggregate spreader.

All equipment involved in the work shall operate as close to each other as practical. The aggregate shall cover the asphalt emulsion within 30 seconds of applications. At no time shall the aggregate spreader trail the pressure distributor by more than 150 ft (45 m) to ensure proper asphalt/aggregate adhesion.

Each aggregate truck shall be equipped with a suitable hitch for connection to the aggregate spreader while unloading. The trucks shall avoid contact between the truck body or bed and the aggregate spreader. The body or bed of the truck shall be modified, if necessary, to empty cleanly and completely into the receiving hopper of the aggregate spreader. No aggregate shall be allowed to spill onto the road surface when the truck is emptying into this hopper.

The aggregate shall be rolled following spreading. A maximum time of five minutes will be allowed between the spreading of aggregate and completion of the initial rolling of the aggregate. The rollers shall proceed in a longitudinal direction at a speed less than or equal to 5 mph (8 km/h). Each roller shall travel over the aggregate a minimum of two times. The entire surface shall be rolled immediately with a self-propelled pneumatic-tired roller. Rolling shall proceed in a longitudinal direction beginning at the edges and progressing toward the center, overlapping on successive trips by at least 1/2 the width of the roller. The aggregate shall then be rolled with a separate pneumatic-tired roller until the aggregate is properly seated in the bituminous material.

The Contractor shall use the appropriate sweeping equipment to perform an initial sweeping after a minimum of two hours curing and not less than one hour before sunset on the day the A-1 surface treatment is placed. The initial sweeping shall remove excess aggregate by lightly sweeping each pavement lane. The sweeping shall be sufficient to prevent migration of loose aggregate back onto any part of the pavement.

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The Contractor shall sweep the pavement surface as needed to remove excess aggregate.

- (b) Micro-Surfacing. This method shall consist of applying the surface mix within a maximum of 12 calendar days of placing the A-1 bituminous surface treatment. The Contractor shall sweep the pavement surface immediately prior to applying the micro-surfacing.

The surface shall be prewetted by water fogging ahead of the spreader box when road conditions require, as determined by the Engineer. The rate of fogging shall be adjusted during the day based on pavement temperature, surface texture, and dryness.

- (1) Application. The micro-surfacing shall be applied over the entire width of each lane in a single pass at a rate of 24 lb/sq yd (13 kg/sq m). The application rate shall be verified from daily readings taken from the proportioning devices during the progress of the work.

The paving mixture shall be spread to leave a uniform surface. A sufficient amount of material shall be carried at all times in all parts of the spreader box to ensure complete coverage. Overloading of the spreader shall be avoided. No lumps or uncoated aggregate will be permitted in the finished surface.

Adjustments to the mix design may be required during construction, based on field conditions. The percent of mineral filler in the mix design may be increased or decreased by less than 0.3 percent when the slurry seal is being placed if it is found to be necessary for better consistency or set times. The Engineer will give final approval for all adjustments.

- (2) Mix Consistency. The finished product shall be uniform in color and composition. No streaks, such as those caused by oversized aggregate, shall be left in the finished surface. If excess streaking develops, the job will be stopped until the Contractor proves to the Engineer that the situation has been corrected. Excessive streaking is defined as more than four drag marks greater than 1/2 in. (13 mm) wide and 4 in. (100 mm) long, or 1 in. (25 mm) wide and 3 in. (75 mm) long, in any 30 sq yd (25 sq m) area. No transverse ripples or longitudinal streaks of 0.25 in. (6 mm) in depth will be permitted, when measured by placing a 10 ft (3 m) straightedge over the surface.
- (3) Mix Stability. The micro-surfacing shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess water or emulsified asphalt and free of segregation of the emulsified asphalt and aggregate fines from the coarser aggregate. Under no circumstances shall water be sprayed directly into the lay-down box while placing micro-surfacing material.

- (4) Joints and Edges. The Contractor shall devise a joint plan according to ISSA A143 and submit to the Engineer for approval. When practical, the surface course joint shall be at least 10 in. (255 mm) away from the nearest edge of any subsequent permanent pavement markings.

Micro-surfacing edges shall be parallel with the existing pavement edges. If the existing pavement edge cannot be used to give a straight edge, a stringline or other guide will be required. Edge lines shall not vary by more than ± 2 in. (± 50 mm) horizontally in any 100 ft (30 m) of length.

A smooth, neat seam shall be provided where two passes meet. Excess material shall be immediately removed from the ends of each run. Any damage to, or irregularities in, the micro-surfacing shall be repaired, as directed by the Engineer. All repairs shall be made with a paver box, except areas designated as hand work areas.

- (5) Hand Work. Those areas inaccessible to the spreader box and other areas approved by the Engineer shall be designated as hand work areas. Adjustments to the additive will be permitted to provide a slower setting time when hand spreading is needed. If hand spreading is necessary, the mixture shall be poured in a small windrow along one edge of the surface to be covered and then spread uniformly by a hand squeegee or lute. Hand work areas shall have an appearance consistent with that being placed with a spreader box.

Clean-Up. All areas, such as manholes, gutters, and intersections, shall have the cape seal removed as specified by the Engineer. The Contractor shall, on a daily basis, remove any debris associated with the performance of the work.

Sampling and Testing. The Contractor shall check yield of the application after the first 1000 ft (300 m), and throughout each day's paving, with a minimum of three tests per day. Yield check results shall be furnished to the Engineer daily.

The Contractor shall submit a daily "run sheet" for each day's work as soon as all the data is available. The run sheet shall provide a breakdown of the actual meter numbers and quantities of all materials actually used each day, as well as the respective locations.

Opening to Traffic. The A-1 bituminous surface treatment portion shall be opened to traffic according to Article 701.17(c)(4) of the Standard Specifications.

The micro-surfacing shall be opened to traffic within one hour of its application.

Curing. The micro-surfacing shall cure for a minimum of seven days before placement of the permanent pavement markings.

Method of Measurement. Crack/joint sealing will be measured for payment in feet (meters), measured along the crack.

Pavement marking removal and pavement marker removal will be measured for payment according to Article 783.05 of the Standard Specifications.

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The cape seal will be measured for payment in place and the area computed in square yards (square meters). The width for measurement will be the width of the top surface as shown on the plans or as directed by the Engineer.

Basis of Payment. Crack/joint sealing will be paid for at the contract unit price per foot (meter) for FIBER-MODIFIED ASPHALT CRACK SEALING.

Bump removal will be paid for at the contract unit price per each for BUMP REMOVAL.

Pavement marking removal and pavement marker removal will be paid for according to Article 783.06 of the Standard Specifications.

Cape seal will be paid for at the contract unit price per square yard (square meter) for CAPE SEAL, of the gradation type and friction aggregate mixture specified.

State of Illinois
Department of Transportation

**SPECIAL PROVISION
FOR
PREVENTIVE MAINTENANCE – MICRO-SURFACING**

Effective: January 1, 2009
Revised: January 1, 2017

Description. This work shall consist of micro-surfacing hot-mix asphalt (HMA) surfaces.

Materials. Materials shall be according to the following.

- (a) Micro-Surfacing. Materials shall be according to the following Articles/Sections of the Standard Specifications.

Item	Article/Section
(1) Mineral Filler (Note 1)	1001
(2) Water	1002
(3) Coarse Aggregate (Note 2)	1004.03
(4) Bituminous Material (Tack Coat)	1032.06
(5) Latex-Modified Emulsified Asphalt (Note 3)	
(6) Additives (Note 4)	

Note 1. The mineral filler shall be Type 1 portland cement.

Note 2. The coarse aggregate material shall be selected from the table in Article 1004.03(a) of the Standard Specifications based upon the friction aggregate mixture specified. The quality of the aggregate shall be Class B and the gradation shall be as shown in the table below.

Sieve Size	Type II % Passing	Type III % Passing ^{1/}
3/8 in. (9.5 mm)	100	100
#4 (4.75 mm)	95 ± 5	80 ± 10
#8 (2.36 mm)	77 ± 13	57 ± 13
#16 (1.18 mm)	57 ± 13	39 ± 11
#30 (600 µm)	35 ± 10	26 ± 8
#50 (330 µm)	19 ± 6	18 ± 7
#100 (150 µm)	15 ± 6	12 ± 6
#200 (75 µm)	10 ± 5	10 ± 5

1/ Rut filling mixes shall be constructed using a Type III gradation. All surface mixes shall be constructed using a Type II gradation.

When coarse aggregate is used, it shall be crushed gravel, crushed stone, crushed slag, crushed sandstone, or crushed steel slag. The blending, alternate use, and /or substitutions of aggregates from

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different sources for use in this work will not be permitted without the approval of the Engineer. Any blending shall be by interlocked mechanical feeders. The blending shall be uniform, compatible with the other components of the mix, and the equipment shall be approved by the Engineer.

If blending aggregates, the blend shall have a washed gradation performed every other day or a minimum of three tests per week. Testing shall be completed before the aggregate receives final acceptance for use in the mix.

Aggregates shall be screened at the stockpile prior to delivery to the paving machine to remove oversized material or contaminants.

Note 3. CSS-1h Latex Modified Emulsified Asphalt. The emulsified asphalt shall be a quick-traffic latex modified asphalt emulsion containing a minimum of 3.0 percent latex solids by weight of asphalt binder. The latex shall be milled or blended into the emulsifier solution prior to the emulsification process. The CSS-1h latex modified emulsified asphalt shall be according to the following.

Test (AASHTO T 59)	Result
Viscosity, Saybolt Furol, 77 °F (25 °C), SFS	20-100
Storage Stability Test, 24 hours, %	1 max.
Particle Charge Test	Positive
Sieve Test, No. 20 (850 µm), retained on sieve, %	0.10 max.
Distillation Test, Residue from distillation test to 347 ± 9 °F (175 ± 5 °C), %	62 min.

Tests on residue from distillation	Result
Penetration, 77 °F (25 °C), 100 grams, 5 seconds, (AASHTO T 49), dmm	40-90
Ductility, 77 °F (25 °C), 50 mm/min, (AASHTO T 51), mm	400 min.
Solubility in trichloroethylene, (AASHTO T 44), %	97.5 min.
Softening Point, (AASHTO T 53), °F (°C)	135 (57) min.
Absolute Viscosity, 140 °F (60 °C), (AASHTO T 202), Poises (Pa · sec)	8,000 (800) min.

Note 4. Additives may be added to the emulsion mix or any of the component materials to provide the control of the quick-traffic properties. They shall be included as part of the mix design and be compatible with the other components of the mix.

- (b) Crack/Joint Sealant. The crack/joint sealant shall be a fiber-modified asphalt binder mixed at the jobsite or premixed.
- (1) Jobsite-Mixed Sealant. The sealant shall consist of an asphalt binder and fibers, and be according to the following.

- a. Asphalt Binder. The asphalt binder shall be PG 58-28, PG 58-22, or PG 64-22 and meet the requirements of Article 1032.05 of the Standard Specifications.
- b. Fibers. Fibers shall be short cut polypropylene or polyester fibers meeting the properties listed below. The fiber will be accepted by certification. The Contractor shall supply a certification from the manufacturer stating that it meets the specified requirements.

Property	Value	
	Polypropylene	Polyester
Length, in. (mm)	0.3 - 0.5 (8 - 12)	0.25 ± 0.02 (6.3 ± 0.5)
Denier	13 - 16	3 - 6
Crimps	None	None
Tensile Strength, min., psi (kPa)	40,000 (275,000)	70,000 (482,000)
Specific Gravity (typical)	0.91	1.32 – 1.40
Moisture Regain @ 70 °F (21 °C) and 65% RH (typical), %	0.1	N/A
Elongation at Break, %		35 - 38
Melt Temperature, °F (°C)		475 – 490 (246 – 254)
Percent Fibers by weight (mass)	8.0	5.0 ± 0.5

- c. Sealant Heating. The sealant shall be heated in the kettle at temperatures between 255 and 285 °F (124 and 141 °C).
- (2) Premixed Sealant. The sealant shall be packaged and consist of an asphalt binder, fibers, and other modifiers meeting the following requirements. The sealant and its components will be accepted by certification. The Contractor shall submit a certification from the manufacturer stating that it meets the specified requirements.
- a. Asphalt Binder. The asphalt binder shall be PG 64-22 and meet the requirements of Article 1032.05 of the Standard Specifications.
 - b. Fibers. Fibers shall be short cut polyester fibers meeting the properties listed in the table above for Jobsite-Mixed Sealant.

The sealant, in its final form, shall meet the following requirements when sampled and heated to the manufacturer's recommended maximum heating temperature according to ASTM D 5167.

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Test	Value
Cone Penetration @ 77 °F (25 °C), ASTM D 5329	10-35 dmm
Softening Point, ASTM D 36	175 °F (79 °C) min.
Maximum Heating Temperature	400°F (204 °C)
Application Temperature	350°F (177 °C) min.

Equipment. Equipment shall be according to the following.

(a) Micro-Surfacing. Equipment shall be according to the following.

- (1) Micro-Surfacing Mixing Machine. The machine shall be either a continuous (self-loading) machine or a non-continuous (self-contained) machine depending on the size of the project as described below. Both types of machines shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, control additive and water to maintain an adequate supply to the proportioning controls. The mixing unit shall be able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, control setting additive, and water to a revolving multi-blade, double-shafted mixer.

Machines that are the continuous (self-loading) type shall be an automatic-sequenced, self-propelled, continuous-flow mixing unit able to discharge the mixed product on a continuous-flow basis. The machine shall be equipped to allow the operator to have full control of the forward and reverse speeds during applications of the material and be equipped with opposite-side driver stations to assist in alignment.

Non-continuous (self-contained) machines will be allowed on projects with a length of 2 lane-miles (3.2 lane-km) or less. For mainline paving, the Contractor shall have at least three self-contained machines in continuous operation to ensure appropriate production rates. Self-contained machines will also be allowed on shoulders, ramps, short applications such as bridge decks, or where the material can be placed in a single loading capacity of the machine.

Each mixing unit to be used in the performance of the work shall be calibrated in the presence of the Engineer prior to construction. Each new or different aggregate requires a new calibration. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than 30 days have lapsed. The documentation shall include an individual calibration of each material at various settings, which can be related to the machine metering devices. Prior to the calibration process, portable scales used to calibrate the mixing machine for emulsion and aggregate shall be checked with 25 lb and 50 lb weights, respectively. Results from the standard weight checks shall be furnished to the Engineer. No machine will be allowed to work on the project until the calibration has been completed and/or accepted.

- (2) Micro-Surfacing Spreader. The mixture shall be agitated and spread uniformly in the surfacing box by means of twin shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off. The spreader box shall have suitable means provided to side shift the box to compensate for variations in the pavement geometry.

A secondary strike-off shall be provided to improve surface texture on the surface course. The secondary strike-off shall have the same adjustments as the spreader box and shall not bounce, wobble, or chatter.

When required on the plans, before the final surface course is placed, preliminary micro-surfacing material may be required to fill ruts, utility cuts, depressions in the existing surface, etc. Ruts of 1/2 in. (13 mm) or greater in depth shall be filled independently with a rut-filling spreader box, either 5 or 6 ft (1.5 or 1.8 m) in width. For irregular or shallow rutting of less than 1/2 in. (13 mm) in depth, a full-width scratch-coat pass may be used as directed by the Engineer utilizing either a stiff primary rubber or else a metal primary strike off. Ruts that are in excess of 1 1/2 in. (38 mm) in depth may require multiple placements with the rut-filling spreader box to restore the cross-section. All rut-filling level-up material should cure under traffic for a minimum of 24 hours before additional material is placed on top of the level up.

- (3) Micro-Surfacing Proportioning Devices. Individual volume or weight controls for proportioning each material to be added to the mix (i.e. aggregate, mineral filler, emulsified asphalt, additive, and water) shall be provided and properly marked. These proportioning devices are used in material calibration and determining the material output at any time. Calibration records, conversion formulas, and daily run sheets including the beginning and final numbers shown on the proportioning devices shall be submitted to the Engineer for approval. During production any deviations from the original JMF shall be approved by the Engineer.
- (b) Crack/Joint Sealing. Equipment shall be according to the following.
- (1) Air Compressor. The air compressor shall be capable of producing a minimum pressure of 90 psi (620 kPa) at the end of the discharge hose. The air stream shall discharge onto the pavement through an appropriate air lance. The tool lubricator shall be bypassed and a filter installed on the discharge valve to keep water and oil out of the line.
 - (2) Oil Kettle. The crack sealant shall be heated in an oil jacketed double wall kettle equipped with an agitator (reversing rotary auger action) and separate thermometers for the oil bath and mixing chamber. The unit

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shall also be equipped with a reversible hydraulic 2 in. (50 mm) hot asphalt pump and a recirculating pump to circulate the oil bath.

CONSTRUCTION REQUIREMENTS

General. The paving mixture shall be capable of filling up to 1 1/2 in. (38 mm) wheel ruts in one pass, be capable of field regulation of the setting time, and be suitable for nighttime placement. The compatibility of all ingredients of the mix, including the mix set additive, shall be certified by the emulsified asphalt manufacturer.

Weather Limitations. Placement of the micro-surfacing shall be done between May 1 and October 15, and when the temperature is at least 50 °F (10 °C) and rising and the forecast for the next 24 hours is above 40 °F (5 °C).

Mix Design. A Contractor provided laboratory shall develop the mix design for the micro-surfacing mixture, shall verify the functioning of the set regulating additives, and shall present certified test results for the Engineer's approval. This laboratory shall be recognized by the International Slurry Surfacing Association (ISSA) as being capable of performing mix designs. The Engineer will verify the laboratory tests required in ISSA A143 have been conducted.

Proportions for the mix design shall be within the following limits.

Mineral Aggregate, dry weight (mass) lb/sq yd (kg/sq m)	15-50 (8-30)
Latex Emulsified Asphalt Residue, % by wt. of Aggregate	5.5 - 10.5
Latex Base Modifier	As required with % by weight (mass) of binder, min. of 3.0
Mix Set Additive	As required
Mineral Filler, % by weight (mass) of Aggregate	0.25 - 3 depending on weather conditions

The amount of mineral filler needed shall be determined by the laboratory mix design and will be considered as part of the aggregate gradation.

The amount and type of latex shall be determined by the laboratory performing the mix design. The minimum amount required shall be based on asphalt weight content and shall be certified by the emulsion supplier.

Compatibility of the aggregate, latex-modified emulsified asphalt, mineral filler, and other additives shall be verified by the mix design. The materials shall meet the following requirements for ISSA A143.

ISSA Test No.	Description	Specification
ISSA TB-139	Wet Cohesion @ 30 minutes min. (Set) @ 60 minutes min. (Traffic)	12 kg-cm min. 20 kg-cm min. or Near Spin
ISSA TB-109	Excess Asphalt by LWT Sand Adhesion	50 gm/sq ft (538 gm/sq m) max.
ISSA TB-114	Wet Stripping	Pass (90% min.)
ISSA TB-100	Wet-Track Abrasion Loss One-hour Soak Six-day Soak	50 gm/sq ft (538 gm/sq m) max. 75 gm/sq ft (807 gm/sq m) max.
ISSA TB-147	Lateral Displacement	5% max.
	Specific Gravity after 1,000 Cycles of 25 lb (11.34 kg)	2.10 max.
ISSA TB-144	Classification Compatibility	11 Grade Points min. (AAA, BAA)
ISSA TB-113	Mix Time @ 77 °F (25 °C)	Controllable to 120 seconds min.

The mixing test and set-time test shall be checked at the highest temperatures expected during construction.

The mix design shall report the quantitative effects of moisture content on the unit weight of the aggregate (bulking effect). The report shall clearly show the proportions of aggregate, mineral filler (minimum and maximum), water (minimum and maximum), additive usage, and latex-modified asphalt emulsion based on the dry weight of the aggregate.

For the aggregate blend in the mix design, test results for AASHTO T 176 shall be provided with the mix information to the Engineer. Aggregate test values below 65 shall require review and approval from the Engineer.

Before the work commences, the Contractor shall submit to the Engineer a complete mix design covering the specific materials to be used on the project. The percentages of each individual material required shall be shown in the laboratory report. The Engineer shall approve the mix design prior to its use. After approval, no substitutions will be permitted, unless approved by the Engineer, and the Contractor shall maintain continuous control of the latex-modified emulsified asphalt to dry aggregate proportioning to conform to the approved mix design within a tolerance of ± 2 gal/ton (± 8 L/metric ton).

Test Strip. For projects over 100,000 sq yd (83,600 sq m), at least one day prior to starting the project the Contractor shall designate a mutually agreeable location and apply a test strip of micro-surfacing using the aggregate indicated in the mix design. The Engineer will evaluate the micro-surfacing application rate and cure time.

Surface Preparation. Pavement markings shall be removed according to Article 783.03(a) of the Standard Specifications. Only very small particles of tightly adhering existing markings may remain in place.

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When specified in the plans, pavement markers shall be removed according to Article 783.03(b) of the Standard Specifications.

Bumps greater than or equal to 1/2 in. (13 mm) shall be removed by grinding. The Contractor shall determine bump grinding locations in the presence of the Engineer by using a 16-ft (5-m) straightedge with the scratcher bolts set to 1/2 in. (13 mm). All locations marked by the scratcher bolts shall be ground using either a grinding machine consisting of multiple saws or a cold-milling machine with a double- or triple-wrap milling head.

Joints and cracks 3/16 in. (5 mm) or wider shall be cleaned of loose and unsound material and sealed. The sealant shall be applied only when the joints and cracks are clean and dry, and the ambient temperature is 40-85 °F (4-29 °C). The sealant shall be applied using a pressurized wand delivery system with such devices as necessary to seal the cracks/joints and form a nominal 0.125 in. (3 mm) thick by 3 in. (75 mm) wide overseal band centered so that the center of the 3 in. (75 mm) wide band is within 1 in. (25 mm) of the crack. The sealant shall be allowed to cure before opening to traffic. When approved by the Engineer, the sealant may be dusted with fine sand, portland cement, or mineral filler to prevent tracking.

Micro-Surfacing. The micro-surfacing shall be applied as shown on the plans and the following.

- (a) Preparation. Prior to applying the micro-surfacing, the pavement surface shall be cleaned. On highly oxidized surfaces, a tack coat shall be applied at a rate of 0.025 lb/sq ft (0.122 kg/sq m) according to Article 406.05(b) of the Standard Specifications. Manholes, valve boxes, drop inlets, and other service entrances shall be protected from the micro-surfacing by a suitable method. The surface preparation shall be approved by the Engineer prior to the application of the micro-surfacing. No dry aggregate either spilled from the lay-down machine or existing on the road will be permitted.

The Contractor shall apply the micro-surfacing according to the following methods.

- (1) Micro-Surfacing Rut Filling. This method shall consist of filling each of the two wheelpath ruts in a lane using the specially designed rutbox and the rutfill (Type III) mix. It shall be the Contractor's responsibility to determine and estimate the quantities of rutfill mix required for rut filling. This work is then followed by one pass of micro-surfacing as described below.
- (2) Micro-Surfacing, Single Pass. This method shall consist of applying the surface mix over the entire width of each lane in one pass at an application rate of 20 lb/sq yd (11 kg/sq m).

Determinations of application rates shall be from daily readings taken from the material control devices during the progress of the work.

The pavement surface shall be prewetted by water fogging ahead of the spreader box when road conditions require, as determined by the Engineer.

The rate of fogging shall be adjusted during the day based on pavement temperature, surface texture, and dryness.

The paving mixture shall be spread to fill minor cracks and shallow potholes and leave a uniform surface. Care shall be taken when rut filling to restore the designed profile of the pavement cross section. Excess crowning (over-filling) of rut areas shall be avoided. A sufficient amount of material shall be carried at all times in all parts of the spreader box to ensure complete coverage. Overloading of the spreader shall be avoided. No lumps or uncoated aggregate will be permitted in the finished surface.

Adjustments to the mix design may be required during construction, based on field conditions. The percent of mineral filler in the mix design may be increased or decreased by less than 0.3 percent when the slurry seal is being placed if it is found to be necessary for better consistency or set times. The Engineer will give final approval for all adjustments.

- (b) **Mix Consistency.** The finished product shall be uniform in color and composition. No streaks, such as those caused by oversized aggregate, shall be left in the finished surface. If excess streaking develops, the job will be stopped until the Contractor proves to the Engineer that the situation has been corrected. Excessive streaking is defined as more than four drag marks greater than 1/2 in. (13 mm) wide and 4 in. (100 mm) long, or 1 in. (25 mm) wide and 3 in. (75 mm) long, in any 30 sq yd (25 sq m) area. No transverse ripples or longitudinal streaks of 0.25 in. (6 mm) in depth will be permitted, when measured by placing a 10 ft (3 m) straightedge over the surface.
- (c) **Mix Stability.** The micro-surfacing shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess water or emulsified asphalt and free of segregation of the emulsified asphalt and aggregate fines from the coarser aggregate. Under no circumstances shall water be sprayed directly into the lay-down box while placing micro-surfacing material.
- (d) **Joints and Edges.** The Contractor shall devise a joint plan according to ISSA A143 and submit to the Engineer for approval. When practical, the surface course joint shall be at least 10 in. (255 mm) away from the nearest edge of any subsequent permanent pavement markings.

Micro-surfacing edges shall be parallel with the existing pavement edges. If the existing pavement edge cannot be used to give a straight edge, a stringline or other guide will be required. Edge lines shall not vary by more than ± 2 in. (50 mm) horizontally in any 100 ft (30 m) of length.

A smooth, neat seam shall be provided where two passes meet. Excess material shall be immediately removed from the ends of each run. Any damage to, or irregularities in, the micro-surfacing shall be repaired, as directed by the Engineer. All repairs shall be made with a paver box, except areas designated as hand work areas.

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- (e) Hand Work. Those areas inaccessible to the spreader box and approved by the Engineer shall be designated as hand work areas. Adjustments to the additive will be permitted to provide a slower setting time when hand spreading is needed. If hand spreading is necessary, the mixture shall be poured in a small windrow along one edge of the surface to be covered and then spread uniformly by a hand squeegee or lute. Hand work areas shall have an appearance consistent with that being placed with a spreader box.

Clean-Up. All areas, such as manholes, gutters, and intersections, shall have the micro-surfacing mix removed as specified by the Engineer. The Contractor shall, on a daily basis, remove any debris associated with the performance of the work.

Sampling and Testing. The Contractor shall check yield of the application after the first 1000 ft (300 m), and throughout each day's paving, with a minimum of three tests per day. Yield check results shall be furnished to the Engineer daily.

The Contractor shall submit a daily "run sheet" for each day's work as soon as all the data is available. The run sheet shall provide a breakdown of the actual meter numbers and quantities of all materials actually used each day, as well as the respective locations.

Opening to Traffic. The micro-surfacing shall be opened to traffic within one hour of its application.

Curing. The micro-surfacing shall cure for a minimum of 7 days before placement of the permanent pavement markings.

Method of Measurement. This work will be measured for payment as follows.

- (a) Contract Quantities. The requirements for the use of contract quantities shall conform to Article 202.07(a) of the Standard Specifications.
- (b) Measured Quantities. Crack/Joint sealing will be measured for payment in feet (meters), measured along the crack.

Pavement marking removal will be measured for payment according to Article 783.05 of the Standard Specifications.

The micro-surfacing will be measured according to the following for the method of application provided in the plans.

- (1) Micro-Surfacing Rut Filling. Micro-surfacing rut filling will be measured for payment in place in feet (meters) along the wheel path or filled rut.
- (2) Micro-surfacing, Single Pass. Micro-surfacing, single pass will be measured for payment in place and the area computed in square yards (square meters). The width for measurement will be the width of the top surface as shown on the plans or as directed by the Engineer.

Tack coat, when required, will be measured for payment according to Article 406.13(b) of the Standard Specifications.

Basis of Payment. Crack/joint sealing will be paid for at the contract unit price per foot (meter) of FIBER-MODIFIED ASPHALT CRACK SEALING.

Bump removal will be paid for at the contract unit price per each for BUMP REMOVAL.

Pavement marking removal and pavement marker removal will be paid for according to Article 783.06 of the Standard Specifications.

Rut filling will be paid for at the contract unit price per foot (meter) for MICRO-SURFACING RUT FILLING.

Micro-surfacing, single pass will be paid for at the contract unit price per square yard (square meter) for MICRO-SURFACING, SINGLE PASS, of the gradation type and friction aggregate mixture specified.

Tack coat, when required, will be paid for according to Article 406.14 of the Standard Specifications.

CHECK SHEET #31

State of Illinois
Department of Transportation

**SPECIAL PROVISION
FOR
PREVENTIVE MAINTENANCE – SLURRY SEAL**

Effective: January 1, 2009
Revised: January 1, 2017

Description. This work shall consist of slurry sealing existing hot-mix asphalt (HMA) surfaces.

Materials. Materials shall be according to the following.

- (a) Slurry Seal. Materials shall be according to the following Articles/Sections of the Standard Specifications.

Item	Article/Section
(1) Mineral Filler (Note 1)	1001
(2) Water.....	1002
(3) Coarse Aggregate (Note 2).....	1004.03
(4) Bituminous Material (Tack Coat).....	1032.06
(5) Emulsified Asphalt (Note 3)	
(6) Additives (Note 4)	

Note 1. The mineral filler shall be Type 1 portland cement.

Note 2. The coarse aggregate material shall be selected from the table in Article 1004.03(a) of the Standard Specifications based upon the friction aggregate mixture specified. The quality of the aggregate shall be Class B and the gradation shall be as shown in the table below.

Sieve Size	% Passing
3/8 in. (9.5 mm)	100
#4 (4.75 mm)	95 ± 5
#8 (2.36 mm)	77 ± 13
#16 (1.18 mm)	57 ± 13
#30 (600 µm)	35 ± 10
#50 (330 µm)	19 ± 6
#100 (150 µm)	15 ± 6
#200 (75 µm)	10 ± 5

When coarse aggregate is used, it shall be crushed gravel, crushed stone, crushed slag, crushed sandstone, or crushed steel slag. The blending, alternate use, and/or substitutions of aggregates from different sources for use in this work will not be permitted without the approval of the Engineer. Any blending shall be by interlocked mechanical feeders. The blending shall be uniform, compatible with the other components of the mix, and the equipment shall be approved by the Engineer.

If blending aggregates, the blend shall have a washed gradation performed every other day or a minimum of three tests per week. Testing shall be completed before the aggregate receives final acceptance for use in the mix.

Aggregates shall be screened at the stockpile prior to delivery to the paving machine to remove oversized material or contaminants.

Note 3. The emulsified asphalt shall be a quick-traffic, asphalt emulsion conforming to the requirements of AASHTO M 208 for CSS-1h, and the following.

AASHTO Test No.	Quality	Specification
AASHTO T 59 ^{1/}	Residue after Distillation	60% minimum

1/ When using a latex-modified emulsion, the distillation temperature shall be 347 ± 9 °F (175 ± 5 °C).

AASHTO Test No.	Tests on Residue	Specification
AASHTO T 49	Penetration at 77 °F (25 °C)	40 - 90 dmm ^{2/}

2/ Climatic conditions should be considered when establishing this range.

The cement mixing test will be waived for this emulsion.

If a latex-modified emulsion is used, the latex shall be milled or blended into the emulsifier solution prior to the emulsification process.

Note 4. Additives may be added to the emulsion mix or any of the component materials to provide control of the quick-traffic properties. They shall be included as part of the mix design and be compatible with the other components of the mix.

- (b) Crack/Joint Sealant. The crack/joint sealant shall be a fiber-modified asphalt binder mixed at the jobsite or premixed.
 - (1) Jobsite-Mixed Sealant. The sealant shall consist of an asphalt binder and fibers, and be according to the following.
 - a. Asphalt Binder. The asphalt binder shall be PG 58-28, PG 58-22, or PG 64-22 and meet the requirements of Article 1032.05 of the Standard Specifications.
 - b. Fibers. Fibers shall be short cut polypropylene or polyester fibers meeting the properties listed below. The fiber will be accepted by certification. The Contractor shall supply a certification from the manufacturer stating that it meets the specified requirements.

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Property	Value	
	Polypropylene	Polyester
Length, in. (mm)	0.3 - 0.5 (8 - 12)	0.25 ± 0.02 (6.3 ± 0.5)
Denier	13 - 16	3 - 6
Crimps	None	None
Tensile Strength, min., psi (kPa)	40,000 (275,000)	70,000 (482,000)
Specific Gravity (typical)	0.91	1.32 – 1.40
Moisture Regain @ 70 °F (21 °C) and 65% RH (typical), %	0.1	N/A
Elongation at Break, %		35 - 38
Melt Temperature, °F (°C)		475 – 490 (246 – 254)
Percent Fibers by weight (mass)	8.0	5.0 ± 0.5

- c. Sealant Heating. The sealant shall be heated in the kettle at temperatures between 255 and 285 °F (124 and 141 °C).
- (2) Premixed Sealant. The sealant shall be packaged and consist of an asphalt binder, fibers, and other modifiers meeting the following requirements. The sealant and its components will be accepted by certification. The Contractor shall submit a certification from the manufacturer stating that it meets the specified requirements.
 - a. Asphalt Binder. The asphalt binder shall be PG 64-22 and meet the requirements of Article 1032.05 of the Standard Specifications.
 - b. Fibers. Fibers shall be short cut polyester fibers meeting the properties listed in the table above for the Jobsite-Mixed Sealant.

The sealant, in its final form, shall meet the following requirements when sampled and heated to the manufacturer’s recommended maximum heating temperature according to ASTM D 5167.

Test	Value
Cone Penetration @ 77 °F (25 °C), ASTM D 5329	10-35 dmm
Softening Point, ASTM D 36	175 °F (79 °C) min.
Maximum Heating Temperature	400°F (204 °C)
Application Temperature	350°F (177 °C) min.

Equipment. Equipment shall be according to the following.

- (a) Slurry Seal. Equipment shall be according to the following.

- (1) Slurry Seal Mixing Machine. The machine shall be either a continuous (self-loading) machine or a non-continuous (self-contained) machine depending on the size of the project as described below. Both types of machines shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, control additive and water to maintain an adequate supply to the proportioning controls. The mixing unit shall be able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, control setting additive, and water to a revolving multi-blade, double-shafted mixer.

Machines that are the continuous (self-loading) type shall be an automatic-sequenced, self-propelled, continuous-flow mixing unit able to discharge the mixed product on a continuous-flow basis. The machine shall be equipped to allow the operator to have full control of the forward and reverse speeds during applications of the material and be equipped with opposite-side driver stations to assist in alignment.

Non-continuous (self-contained) machines will be allowed on projects with a length of 2 lane-miles (3.2 lane-km) or less. For mainline paving, the Contractor shall have at least three self-contained machines in continuous operation to ensure appropriate production rates. Self-contained machines will also be allowed on shoulders, ramps, short applications such as bridge decks, or where the material can be placed in a single loading capacity of the machine.

Each mixing unit to be used in the performance of the work shall be calibrated in the presence of the Engineer prior to construction. Each new or different aggregate requires a new calibration. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than 30 days have lapsed. The documentation shall include an individual calibration of each material at various settings, which can be related to the machine metering devices. Prior to the calibration process, portable scales used to calibrate the mixing machine for emulsion and aggregate shall be checked with 25 lb and 50 lb weights, respectively. Results from the standard weight checks shall be furnished to the Engineer. No machine will be allowed to work on the project until the calibration has been completed and/or accepted.

- (2) Slurry Seal Spreader. The mixture shall be agitated and spread uniformly in the surfacing box by means of twin shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off. The spreader box shall have suitable means provided to side shift the box to compensate for variations in the pavement geometry.
- (3) Slurry Seal Proportioning Devices. Individual volume or weight controls for proportioning each material to be added to the mix (i.e. aggregate, mineral filler, emulsified asphalt, additive, and water) shall be provided

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and properly marked. These proportioning devices are used in material calibration and determining the material output at any time. Calibration records, conversion formulas, and daily run sheets including the beginning and final numbers shown on the proportioning devices shall be submitted to the Engineer for approval. During production any deviations from the original JMF shall be approved by the Engineer.

(b) Crack/Joint Sealing. Equipment shall be according to the following.

- (1) Air Compressor. The air compressor shall be capable of producing a minimum pressure of 90 psi (620 kPa) at the end of the discharge hose. The air stream shall discharge onto the pavement through an appropriate air lance. The tool lubricator shall be bypassed and a filter installed on the discharge valve to keep water and oil out of the line.
- (2) Oil Kettle. The crack sealant shall be heated in an oil jacketed double wall kettle equipped with an agitator (reversing rotary auger action) and separate thermometers for the oil bath and mixing chamber. The unit shall also be equipped with a reversible hydraulic 2-in. (50-mm) hot asphalt pump and a recirculating pump to circulate the oil bath.

CONSTRUCTION REQUIREMENTS

General. The slurry seal shall be capable of field regulation of the setting time. The compatibility of all ingredients of the mix, including the mix set additive, shall be certified by the emulsified asphalt manufacturer.

Weather Limitations. Placement of the slurry seal shall be done between May 1 and October 15, and when the temperature is at least 50 °F (10 °C) and rising and the forecast for the next 24 hours is above 40 °F (5 °C).

Mix Design. A Contractor provided laboratory shall develop the mix design for the paving mixture, shall verify the functioning of the set regulating additives, and shall present certified test results for the Engineer's approval. This laboratory shall be recognized by the International Slurry Surfacing Association (ISSA) as being capable of performing mix designs. The Engineer will verify the laboratory tests required in ISSA A105 have been conducted.

Proportions for the mix design shall be within the following limits.

Mineral Aggregate, dry weight (mass) lb/sq yd (kg/sq m)	15 - 25 (8 - 15)
Emulsified Asphalt Residue, % by wt. of Aggregate	7.5 - 13.5
Latex Base Modifier (if required)	As required with % by weight (mass) of binder, min. of 5.0
Mix Set Additive	As required
Mineral Filler, % by weight (mass) of Aggregate	0.5 - 2.0 depending on weather conditions

The amount of mineral filler needed shall be determined by the laboratory mix design and will be considered as part of the aggregate gradation.

The amount and type of latex shall be determined by the laboratory performing the mix design. The minimum amount required shall be based on asphalt weight content and shall be certified by the emulsion supplier.

Compatibility of the aggregate, emulsified asphalt, mineral filler, and other additives shall be verified by the mix design. The materials shall meet the following requirements for ISSA A105.

ISSA Test No.	Description	Specification
ISSA TB-139	Wet Cohesion @ 30 minutes min. (Set) @ 60 minutes min. (Traffic)	12 kg-cm min. 20 kg-cm min. or Near Spin
ISSA TB-109	Excess Asphalt by LWT Sand Adhesion	50 gm/sq ft (538 gm/sq m) max.
ISSA TB-114	Wet Stripping	Pass (90% min.)
ISSA TB-100	Wet-Track Abrasion Loss One-hour Soak	75 gm/sq ft (807 gm/sq m) max.
ISSA TB-113	Mix Time @ 77 °F (25 °C)	Controllable to 180 seconds, min.

The mixing test and set-time test shall be checked at the highest temperatures expected during construction.

The mix design shall report the quantitative effects of moisture content on the unit weight of the aggregate (bulking effect). The report shall clearly show the proportions of aggregate, mineral filler (minimum and maximum), water (minimum and maximum), additive usage, and asphalt emulsion based on the dry weight of the aggregate.

For the aggregate blend in the mix design, test results for AASHTO T 176 shall be provided with the mix information to the Engineer. Aggregate test values below 45 shall require review and approval from the Engineer.

Before the work commences, the Contractor shall submit to the Engineer a complete mix design covering the specific materials to be used on the project. The percentages of each individual material required shall be shown in the laboratory report. The Engineer shall approve the mix design prior to its use. After approval, no substitutions will be permitted unless approved by the Engineer, and the Contractor shall maintain continuous control of the emulsified asphalt to dry aggregate proportioning to conform to the approved mix design within a tolerance of ± 2 gal/ton (± 8 L/metric ton).

Test Strip. For projects over 100,000 sq yd (83,600 sq m), at least one day prior to starting the project the Contractor shall designate a mutually agreeable location and apply a test strip of slurry seal using the aggregate indicated in the mix design. The Engineer will evaluate the slurry seal application rate and cure time.

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Surface Preparation. Pavement markings shall be removed according to Article 783.03(a) of the Standard Specifications. Only very small particles of tightly adhering existing markings may remain in place.

When specified in the plans, pavement markers shall be removed according to Article 783.03(b) of the Standard Specifications.

Bumps greater than or equal to 1/2 in. (13 mm) shall be removed by grinding. The Contractor shall determine bump grinding locations in the presence of the Engineer by using a 16-ft (5-m) straightedge with the scratcher bolts set to 1/2 in. (13 mm). All locations marked by the scratcher bolts shall be ground using either a grinding machine consisting of multiple saws or a cold-milling machine with a double- or triple-wrap milling head.

Joints and cracks, 3/16 in. (5 mm) or wider, shall be cleaned of loose and unsound material and sealed. The sealant shall be applied only when the joints and cracks are clean and dry, and the ambient temperature is 40 - 85 °F (4 - 29 °C). The sealant shall be applied using a pressurized wand delivery system with such devices as necessary to seal the cracks/joints and form a nominal 0.125 in. (3 mm) thick by 3 in. (75 mm) wide overseal band centered so that the center of the 3 in. (75 mm) wide band is within 1 in. (25 mm) of the crack. The sealant shall be allowed to cure before opening to traffic. When approved by the Engineer, the sealant may be dusted with fine sand, portland cement, or mineral filler to prevent tracking.

Slurry Sealing. The slurry seal shall be applied as follows.

- (a) Preparation. Prior to applying the slurry seal, the pavement surface shall be cleaned. On highly oxidized surfaces, a tack coat shall be applied at a rate of 0.025 lb/sq ft (0.122 kg/sq m) according to Article 406.05(b) of the Standard Specifications. Manholes, valve boxes, drop inlets, and other service entrances shall be protected from the slurry seal by a suitable method. The surface preparation shall be approved by the Engineer prior to application of the slurry seal. No dry aggregate either spilled from the lay-down machine or existing on the road, will be permitted.

The pavement surface shall be prewetted by water fogging ahead of the spreader box when road conditions require, as determined by the Engineer. The rate of fogging shall be adjusted during the day based on pavement temperature, surface texture, and dryness.

- (b) Application. The slurry seal shall be applied over the entire width of each lane in a single pass at a rate 20 lb/sq yd (11 kg/sq m). The application rate shall be verified from daily readings taken from the proportioning devices during the progress of the work.

The paving mixture shall be spread to fill minor cracks and shallow potholes and leave a uniform surface. A sufficient amount of material shall be carried at all times in all parts of the spreader box to ensure complete coverage. Overloading of the spreader shall be avoided. No lumps or uncoated aggregate will be permitted in the finished surface.

Adjustments to the mix design may be required during construction, based on field conditions. The percent of mineral filler in the mix design may be increased or decreased by less than 0.3 percent when the slurry seal is being placed if it is found to be necessary for better consistency or set times. The Engineer will give final approval for all adjustments.

- (c) **Mix Consistency.** The finished product shall be uniform in color and composition. No streaks, such as those caused by oversized aggregate, shall be left in the finished surface. If excess streaking develops, the job will be stopped until the Contractor proves to the Engineer that the situation has been corrected. Excessive streaking is defined as more than four drag marks greater than 1/2 in. (13 mm) wide and 4 in. (100 mm) long, or 1 in. (25 mm) wide and 3 in. (75 mm) long, in any 30 sq yd (25 sq m) area. No transverse ripples or longitudinal streaks of 0.25 in. (6 mm) in depth will be permitted, when measured by placing a 10 ft (3 m) straightedge over the surface.
- (d) **Mix Stability.** The slurry seal shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess water or emulsified asphalt and free of segregation of the emulsified asphalt and aggregate fines from the coarser aggregate. Under no circumstances shall water be sprayed directly into the lay-down box while placing slurry seal material.
- (e) **Joints and Edges.** The Contractor shall devise a joint plan according to ISSA A105 and submit it to the Engineer for approval. When practical, the surface course joint shall be at least 10 in. (255 mm) away from the nearest edge of any subsequent permanent pavement markings.

Slurry seal edges shall be parallel with the existing pavement edges. If the existing pavement edge cannot be used to give a straight edge, a stringline or other guide will be required. Edge lines shall not vary by more than ± 2 in. (50 mm) horizontally in any 100 ft (30 m) of length.

A smooth, neat seam shall be provided where two passes meet. Excess material shall be immediately removed from the ends of each run. Any damage to, or irregularities in, the slurry seal shall be repaired, as directed by the Engineer. All repairs shall be made with a paver box, except areas designated as hand work areas.

- (f) **Hand Work.** Those areas inaccessible to the spreader box and approved by the Engineer shall be designated as hand work areas. Adjustments to the additive will be permitted to provide a slower setting time when hand spreading is needed. If hand spreading is necessary, the mixture shall be poured in a small windrow along one edge of the surface to be covered and then spread uniformly by a hand squeegee or lute. Hand work areas shall have an appearance consistent with that being placed with a spreader box.

Clean-Up. All areas, such as manholes, gutters, and intersections, shall have the slurry seal mix removed as specified by the Engineer. The Contractor shall, on a daily basis, remove any debris associated with the performance of the work.

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Sampling and Testing. The Contractor shall check yield of the application after the first 1000 ft (300 m), and throughout each day's paving, with a minimum of three tests per day. Yield check results shall be furnished to the Engineer daily.

The Contractor shall submit a daily "run sheet" for each day's work as soon as all the data is available. The run sheet shall provide a breakdown of the actual meter numbers and quantities of all materials actually used each day, as well as the respective locations.

Opening to Traffic. The slurry seal shall be opened to traffic within two hours of its application.

Curing. The slurry seal shall cure for a minimum of 7 days before placement of the permanent pavement markings.

Method of Measurement. This work will be measured for payment as follows.

- (a) Contract Quantities. The requirements for the use of contract quantities shall conform to Article 202.07(a) of the Standard Specifications.
- (b) Measured Quantities. Crack/Joint sealing will be measured for payment in feet (meters), measured along the crack.

Pavement marking removal will be measured for payment according to Article 783.05 of the Standard Specifications.

The slurry seal will be measured for payment in place and the area computed in square yards (square meters). The width for measurement will be the width of the top surface as shown on the plans or as directed by the Engineer.

Tack coat, when required, will be measured for payment according to Article 406.13(b) of the Standard Specifications.

Basis of Payment. Crack/joint sealing will be paid for at the contract unit price per foot (meter) of FIBER-MODIFIED ASPHALT CRACK SEALING.

Bump removal will be paid for at the contract unit price per each for BUMP REMOVAL.

Pavement marking removal and pavement marker removal will be paid for according to Article 783.06 of the Standard Specifications.

Slurry seal will be paid for at the contract unit price per square yard (square meter) for ASPHALTIC EMULSION SLURRY SEAL, of the friction aggregate mixture specified.

Tack coat, when required, will be paid for according to Article 406.14 of the Standard Specifications.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
TEMPORARY RAISED PAVEMENT MARKERS

Effective: January 1, 2009
Revised: January 1, 2014

Description. This work shall consist of furnishing and installing temporary raised pavement markers on preventive maintenance projects requiring cape seals or bituminous surface treatments.

Materials. The marker body shall be approximately 0.06 in. (1.5 mm) thick polyurethane formed in an "L" shape. The base of the marker shall be approximately 4 in. (100 mm) wide by 1.125 in. (28 mm) long with a solid 0.125 in. (3.2 mm) thick butyl rubber adhesive pad protected with a release paper. The vertical portion of the marker shall be approximately 4 in. (100 mm) wide by 2 in. (50 mm) high.

A cube-corner micro-prism reflective tape material shall be placed horizontally along both sides at the top of the vertical section of the marker. The reflective material shall be recessed in an "I-Beam" design to protect the reflective material from aggregate. A clear flexible polyvinyl chloride plastic cover is to be attached to the vertical section of the marker with a heavy duty staple to cover the reflective material during surfacing operations. The flexible raised pavement marker shall be readily visible at night when viewed with high beam automobile headlamps from a distance of at least 300 ft (90 m).

Construction Requirements

Application. The temporary markers shall be installed at the centerline or lane line(s) prior to application of any surface treatment which would cover the existing pavement markings. Temporary markers shall also be applied at edge lines when specified on the plans.

For temporary replacement of skip dash markings, an abbreviated pattern of two markers spaced 4 ft (1.2 m) apart with a maximum spacing of 40 ft (12 m) between sets of markers shall be used. For temporary replacement of solid lines, one marker shall be placed every 5 ft (1.5 m). The marker color and location shall match the existing line color and location.

Basis of Payment. This work will be paid for at the contract unit price per each for TEMPORARY RAISED PAVEMENT MARKER.

CHECK SHEET #33

State of Illinois
Department of Transportation

**SPECIAL PROVISION
FOR
RESTORING BRIDGE APPROACH PAVEMENTS USING HIGH-DENSITY FOAM**

Effective: January 1, 2009
Revised: January 1, 2012

Description. This work shall consist of restoring elevation and cross-slope of bridge approach transition pavements and/or bridge approach pavements. Locations to be restored shall be as shown on the plans or as designated by the Engineer.

Materials. Materials shall be according to the following.

Item	Article/Section
(a) High-Density Foam (Note 1)	
(b) Nonshrink Grout (Note 2)	1024.02

Note 1. The high-density foam used for restoring the concrete slabs shall be high-density expanding polyurethane foam having a water insoluble diluent and shall be according to the following.

Physical Property	Test Standard	Value
Density, lb/cu ft (kg/cu m)	ASTM D 1622	6.0 (96.0) min.
Tensile Strength, psi (kPa)	ASTM D 1623-03 Type C	100 (690) min.
Compressive Strength at yield point, psi (kPa)	ASTM D 1621	100 (690)

The manufacturer shall provide documentation that the lot(s) of foam meet the specified properties. Manufacturer's certification shall list lot number(s) and documentation of compliance with the specification.

Note 2. The nonshrink grout shall only be used for filling the injection holes after the elevation and cross-slope of the slab have been restored.

Equipment. A list of equipment shall be submitted to the Engineer for review. The minimum required equipment is shown below. However, additional equipment necessary for the work may be allowed with approval of the Engineer.

- (a) Pneumatic Drill. The pneumatic drill shall be capable of drilling 1/2-inch (13-mm) diameter holes.
- (b) Pumping Unit. The pumping unit shall be truck mounted, capable of mixing and injecting the foam between the concrete and subbase, and

capable of controlling the rate of rise of the pavement. The pumping unit shall have a certified flow meter that measures the amount of foam injected and a digital display in pounds (kilograms). Calibration of the Contractor's equipment will be required daily before any work begins. The Contractor shall eject a minimum of 10 lb (4.5 kg) of foam to be weighed by the Engineer. The Engineer will calculate the factor for the specific pump and its display to determine the weight (mass) in pounds (kilograms) of foam used.

- (c) Leveling Unit. The leveling unit shall be capable of measuring elevation to ensure that the slabs are raised to an even plane and to the required elevation, or the approval of the Engineer. The unit shall have an accuracy of 1/32 in. (1 mm).

Construction Requirements

General. The construction methods outlined below may, for sufficient justifications, be modified by the Engineer as field conditions dictate. The Contractor shall maintain all pavement surfaces adjacent to the actual operation in progress. The pavement, including adjacent shoulders, shall be cleaned prior to the placement of traffic on the work area.

Field Surveying and Profile Grade Determination. The Contractor shall perform adequate surveys of the areas proposed for regrading to determine the existing profile grade line elevations. The Contractor shall use this data to develop and present to the Engineer a proposed profile grade line. The profile grade line shall be approved prior to beginning any work on an area designated for regrading. The approved profile grade line shall then be used to guide the leveling of each area proposed for regrading.

Drilling Holes. A series of 5/8-in. (16-mm) diameter or other approved diameter holes shall be drilled in the concrete slab throughout the area to be repaired at evenly spaced intervals, 4 ft (1.2 m) maximum. Holes drilled nearest the edge of the slab, the joints, or a major crack, shall be a minimum of 6 in. (150 mm) from the feature. Any other holes shall have a tolerance of 6 in. (150 mm) from the proposed location. Holes shall be drilled to a depth sufficient to penetrate the concrete pavement, sleeper slab/stabilized subbase, and subgrade. Holes drilled in the sleeper slab zone (4 ft (1.20 m) either side of the bridge approach pavement joint) shall be a maximum of 37 in. (925 mm) from the pavement surface. Holes drilled in the bridge approach transition pavement shall be a maximum of 26 in. (650 mm) from the pavement surface.

The pneumatic drill shall be rotated to avoid cracking the pavement and to provide satisfactory holes of the proper diameter for effective operations. When drilling holes, the drill shall be held as nearly perpendicular as possible to the pavement surface. Irregular or unsatisfactory holes, which cannot be satisfactorily used, shall be filled and sealed with nonshrink grout and new holes shall be drilled. The Contractor shall exercise sufficient precautions during all operations to insure that slabs are not broken or cracked. Any slab that develops a crack that extends through the drill hole will be considered to have been damaged during the process of the work and it shall be repaired or replaced. Repair or replacement shall be in accordance with

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techniques approved by the Engineer. No more holes shall be drilled during a day's operations than can be filled during the same day.

Injecting High-Density Foam. The foam shall not be placed when the pavement surface temperature is below 35 °F (2 °C) or if the subgrade and/or base course material is frozen. When injecting the foam, the pavement shall be raised to the profile elevations with the proper cross-slope. The Contractor shall be responsible for any excessive or uneven pavement moving, and shall replace or repair any damaged areas. When the injection nozzle is removed from the hole, excess foam at joints and cracks and a minimum depth of 6 in. (150 mm) in the injection holes shall be removed from the area. The injection holes shall be sealed with nonshrink grout.

Continuous laser level or dial indicator micrometer readings shall be in place and monitored by the Contractor during initial injection to determine if sufficient material has been injected to cause pavement movement a minimum of 1/32 in. (1 mm). After the initial movement has been recorded, the Contractor may proceed to raise the pavement to the desired grade and cross slope.

Bridge approach slabs that have sleeper support slabs shall have all drill holes fully sleeved by tubes into the subgrade soils to prevent any injection of material between the slabs. The tubes shall extend a maximum of 37 in. (925 mm) below the pavement surface. The zone requiring tubes shall be a maximum of 4 ft (1.2 m) beyond the bridge approach pavement joint.

Opening to Traffic. The road may be opened to traffic after a minimum 30 minute cure period from the time of completing the last injection hole.

Surface Tests. Once the work is complete, the pavement surface will be tested for smoothness and any necessary corrections shall be made according to Article 407.09(a) of the Standard Specifications.

Method of Measurement. This work will be measured for payment in pounds (kilograms) of high-density foam used as determined by the adjusted amount from the flow meter. Foam lost through cracks, edges of pavement, and injection holes will not be deducted; however, the Contractor shall keep this loss to a minimum.

Basis of Payment. This work will be paid for at the contract unit price per pound (kilogram) for FOAM, EXPANDING POLYURETHANE, HIGH-DENSITY.

State of Illinois
Department of Transportation

**SPECIAL PROVISION
FOR
PORTLAND CEMENT CONCRETE INLAY OR OVERLAY**

Effective: November 1, 2008
Revised: January 1, 2017

Description. This work shall consist of constructing a portland cement concrete inlay or overlay on an existing hot-mix asphalt (HMA) surfaced pavement.

Materials. Materials shall be according to the following Articles/Sections of the Standard Specifications.

Item	Article/Section
(a) Portland Cement Concrete (Note 1)	1020
(b) Synthetic Fibers (Note 2)	
(c) Protective Coat	1023.01

Note 1. Class PV concrete shall be used, except the cement factor for central mixed concrete shall be 6.05 cwt/cu yd (360 kg/cu m). A cement factor reduction according to Article 1020.05(b)(8) of the Standard Specifications will be permitted. CA 5 shall not be used and CA 7 may only be used for overlays that are a minimum of 4.5 in. (113 mm) thick. The Class PV concrete shall have a minimum flexural strength of 550 psi (3800 kPa) or a minimum compressive strength of 3000 psi (20,700 kPa) at 14 days.

Note 2. Synthetic fibers shall be Type III according to ASTM C 1116. The synthetic fiber shall be a monofilament or bundled monofilament with a minimum length of 1.0 in. (25 mm) and a maximum length of 2 1/2 in. (63 mm), and shall have a maximum aspect ratio (length divided by the equivalent diameter of the fiber) of 150. The quantity of synthetic fiber(s) added to the concrete mixture shall be sufficient to have a residual strength ratio ($R_{150,3}$) of 20.0 percent according to Illinois Modified ASTM C 1609. The maximum dosage rate shall not exceed 5.0 lb/cu yd (3.0 kg/cu m), unless the manufacturer can demonstrate through a field demonstration that the concrete mixture will be workable and fiber clumping is not a problem.

The synthetic fibers shall be added to the concrete and mixed per the manufacturer's recommendation.

The Department will maintain a qualified product list of synthetic fibers, which will include the minimum required dosage rate. For the minimum required fiber dosage rate based on the Illinois Modified ASTM C 1609 test, a report prepared by an independent laboratory accredited by the AASHTO Materials Reference Laboratory (AMRL) for Portland Cement Concrete shall be provided. The report shall show results of tests conducted no more than five years prior to the time of submittal. When the test result is more than

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seven years old, the manufacturer shall submit retest results prepared by an independent laboratory accredited by AASHTO.

Equipment. Equipment shall be according to Article 420.03, 1101.10, and 1101.19 of the Standard Specifications, except as noted herein. The mechanical saw used for cutting joints shall be equipped with an upcutting blade and a restricting skid plate to prevent spalling of the finished saw cut. For surface variation corrections, the grinding device shall be a self-propelled machine with diamond blades. The machine shall be designed for grinding concrete surfaces, and shall have a minimum effective head width of 3 ft (0.9 m). Wood forms of a height equal to the proposed inlay or overlay thickness may be used.

CONSTRUCTION REQUIREMENTS

Preparation of Existing Pavement. The area to be overlaid shall be milled as shown on the plans according to Section 440 of the Standard Specifications. Areas requiring patching shall be patched according to Section 442 of the Standard Specifications. The patches shall be milled or their surface given a rough texture.

When detector loops are required, the loops shall be Type I or Type II according to Section 886 of the Standard Specifications. The detector loops shall be installed into the milled surface prior to cleaning.

Following milling, the surface shall be cleaned. Cleaning shall be accomplished by sweeping to remove all large particles and air blasting to remove dust. As an alternative to air blasting, a vacuum sweeper may be used to accomplish the dust removal. The surface shall be free of standing water. The prepared surface shall meet the approval of the Engineer prior to proceeding with the work.

Forms and Form Setting. This work shall be according to Article 420.06 of the Standard Specifications. Shims or wedges may be used to raise the forms to the specified plan elevation. Form removal shall be according to Article 420.11 of the Standard Specifications.

Treatment of Structures in the Pavement. Pavement round-outs shall be used at structures in the pavement. This work shall be as shown on the plans.

Placing. This work shall be according to Article 420.07 of the Standard Specifications, except standing water on the existing pavement surface shall be removed prior to concrete placement. Slip form paving shall be according to Article 420.14 of the Standard Specifications. However in Article 420.14(c)(2) of the Standard Specifications, the amount of pavement removed for edge slump will be at the direction of the Engineer and reinforcement will not be required.

Strike Off, Consolidation, Finishing, Longitudinal Floating, Straightedging, Edging, and Final Finish. This work shall be according to Article 420.09 of the Standard Specifications, except when a Type B final finish is specified the artificial turf drag shall be replaced with a rough broom finish struck perpendicular to the direction of traffic flow. The rough broom finish shall be performed over the entire surface.

Surface Tests. The finished surface of the pavement shall be tested for smoothness

according to Article 407.09 of the Standard Specifications, except as follows:

The finished surface of the pavement shall be tested for smoothness once the pavement has attained a flexural strength of 550 psi (3800 kPa) or a compressive strength of 3000 psi (20,700 kPa).

One wheel track shall be tested per lane. Testing shall be performed 3 ft (1 m) from and parallel to the edge of the lane away from traffic.

Membrane curing damaged during testing shall be repaired as directed by the Engineer at no additional cost to the Department.

No further texturing for skid resistance will be required for areas corrected by grinding. Protective coat shall be reapplied to ground areas according to Article 420.18 of the Standard Specifications.

For pavement that is corrected by removal and replacement, the minimum area shall be replaced in even panel sizes.

SMOOTHNESS ASSESSMENT SCHEDULE (PCC)		
High-Speed Mainline Pavt. Average Profile Index in./mile (mm/km)	Low-Speed Mainline Pavt. Average Profile Index in./mile (mm/km)	Assessment per subplot
6.0 (95) or less		+\$800.00
>6.0 (95) to 11.0 (175)	15.0 (240) or less	+\$650.00
>11.0 (175) to 17.0 (270)	>15.0 (240) to 25.0 (400)	+\$400.00
>17.0 (270) to 30.0 (475)	>25.0 (400) to 45.0 (710)	+\$0.00
>30.0 (475) to 40.0 (635)	>45.0 (710) to 65.0 (1025)	+\$0.00
Greater than 40.0 (635)	Greater than 65.0 (1025)	-\$500.00"

Joints. Joints shall be constructed at the locations and spacing shown on the plans. Field adjustments to the transverse joint locations will be permitted provided no transverse joint exceeds the planned spacing by more than ten percent.

The joints shall be mechanically sawed to 1/4 the depth of the inlay or overlay, and shall be a minimum 1/8 in. (3 mm) and a maximum 1/4 in. (6 mm) wide. Sawed joints shall be constructed as soon as the concrete will support the weight of the saw and operator without disturbing the final finish.

Opening to Traffic. The road shall be opened to traffic according to Article 420.13 of the Standard Specifications, except curing may be discontinued and the pavement opened to traffic when a minimum flexural strength of 550 psi (3800 kPa) or a minimum compressive strength of 3000 psi (20,700 kPa) is attained.

Protective Coat Application. The use of protective coat shall be according to Articles 420.10 and 420.18 of the Standard Specifications.

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Method of Measurement. This work will be measured for payment according to Article 420.19 of the Standard Specifications.

Milling, when required, will be measured for payment according to Article 440.07 of the Standard Specifications.

Patching, when required, will be measured for payment according to Article 442.10 of the Standard Specifications.

Detector loops, when required, will be measured for payment according to Article 886.05 of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price per square yard (square meter) for PORTLAND CEMENT CONCRETE INLAY or PORTLAND CEMENT CONCRETE OVERLAY, of the thickness specified.

Protective coat will be paid for according to Article 420.20 of the Standard Specifications.

Milling, when required, will be paid for according to Article 440.08 of the Standard Specifications.

Patching, when required, will be paid for according to Article 442.11 of the Standard Specifications.

Detector loops, when required, will be paid for according to according to Article 886.06 of the Standard Specifications.

Add the following to Article 1101 of the Standard Specifications.

“1101.19 Vacuum Sweeper. The vacuum sweeper shall have a minimum sweeping path of 52 in. (1.3 m) and a minimum blower rating of 20,000 cu ft per minute (566 cu m per minute).”

LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

**The following special provisions should only be used
when the local agency is the lead on a project.**

RESERVED

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

**SPECIAL PROVISION
FOR
FURNISHED EXCAVATION**

Effective: January 1, 1999

Revised: January 1, 2007

Add the following subparagraph to Article 204.07 of the Standard Specifications:

- “(c) Truck Loads. When contract quantities do not exceed 2000 cu yd (cu m), furnished excavation may be measured by truck loads. Prior to the start of work, the Contractor and the Engineer shall agree to a standard volume for the trucks utilized by the Contractor. A shrinkage factor of 25 percent will be used in the computations.”

CHECK SHEET #LRS3

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

**SPECIAL PROVISION
FOR
WORK ZONE TRAFFIC CONTROL SURVEILLANCE**

Effective: January 1, 1999
Revised: January 1, 2010

Revise Article 701.10 of the Standard Specifications to read:

“The Contractor shall conduct inspections of the worksite at a frequency that will allow for the timely replacement of any traffic control device that has become displaced, worn, or damaged. A sufficient quantity of replacement devices, based on vulnerability to damage, shall be readily available to meet this requirement.”

Delete Articles 701.19(d) and Article 701.20(g) of the Standard Specifications.

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
FLAGGERS IN WORK ZONES

Effective: January 1, 1999

Revised: January 1, 2007

Revise the last paragraph of Article 701.13 of the Standard Specifications to read:

“Flaggers are required only when workers are present.”

CHECK SHEET #LRS5

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

**SPECIAL PROVISION
FOR
CONTRACT CLAIMS**

Effective: January 1, 2002

Revised: January 1, 2007

Revise the second sentence of subparagraph (a) of Article 109.09 of the Standard Specifications to read:

"All claims shall be submitted to the Engineer."

Revise subparagraph (e) of Article 109.09 of the Standard Specifications to read:

"(e) Procedure. All Claims shall be submitted to the Engineer. The Engineer will consider all information submitted with the claim. Claims not conforming to this Article will be returned without consideration. The Engineer may schedule a claim presentation meeting if, in the Engineer's judgment, such a meeting would aid in resolution of the claim, otherwise a decision will be based on the claim documentation submitted. A final decision will be rendered within 90 days of receipt of the claim.

Full compliance by the Contractor with the provisions specified in this Article is a contractual condition precedent to the Contractor's right to seek relief in the Court of Claims. The Engineer's written decision shall be the final administrative action of the Department. Unless the Contractor files a claim for adjudication by the Court of Claims within 60 days after the date of the written decision, the failure to file shall constitute a release and waiver of the claim."

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
BIDDING REQUIREMENTS AND CONDITIONS FOR CONTRACT PROPOSALS

Effective: January 1, 2002

Revised: January 1, 2015

Replace Article 102.01 of the Standard Specifications with the following:

“Prequalification of Bidders. When prequalification is required and the Awarding Authority for contract construction work is the County Board of a County, the Council, the City Council, or the President and Board of Trustees of a city, village, or town, each prospective bidder, in evidence of competence, shall furnish the Awarding Authority as a prerequisite to the release of proposal forms by the Awarding Authority, a certified or photostatic copy of a "Certificate of Eligibility" issued by the Department of Transportation, according to the Department's "Prequalification Manual".

The two low bidders must file, within 24 hours after the letting, a sworn affidavit in triplicate, showing all uncompleted contracts awarded to them and all low bids pending award for Federal, State, County, Municipal and private work, using the blank form made available for this affidavit. One copy shall be filed with the Awarding Authority and two copies with IDOT's District office.

Issuance of Proposal Forms. The Awarding Authority reserves the right to refuse to issue a proposal form for bidding purposes for any of the following reasons:

- (a) Lack of competency and adequate machinery, plant, and other equipment, as revealed by the financial statement and experience questionnaires required in the prequalification procedures.
- (b) Uncompleted work which, in the judgment of the Awarding Authority, might hinder or prevent the prompt completion of additional work awarded.
- (c) False information provided on a bidder's "Affidavit of Availability".
- (d) Failure to pay, or satisfactorily settle, all bills due for labor and material on former contracts in force at the time of issuance of proposal forms.
- (e) Failure to comply with any prequalification regulations of the Department.
- (f) Default under previous contracts.
- (g) Unsatisfactory performance record as shown by past work for the Awarding Authority, judged from the standpoint of workmanship and progress.
- (h) When the Contractor is suspended from eligibility to bid at a public letting where the contract is awarded by, or requires approval of, the Department.

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- (i) When any agent, servant, or employee of the prospective bidder currently serves as a member, employee, or agent of a governmental body that is financially involved in the proposal work.
- (j) When any agent, servant, or employee of the perspective bidder has participated in the preparation of plans or specifications for the proposed work.

Interpretation of Quantities in the Bid Schedule. The quantities appearing in the bid schedule are approximate and are prepared for the comparison of bids. Payment to the Contractor will be made only for the actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased, or omitted as hereinafter provided.

Examination of Plans, Specifications, Special Provisions, and Site of Work. The bidder shall, before submitting a bid, carefully examine the provisions of the contract. The bidder shall inspect in detail the site of the proposed work, investigate and become familiar with all the local conditions affecting the contract and fully acquaint themselves with the detailed requirements of construction. Submission of a bid shall be a conclusive assurance and warranty the bidder has made these examinations and the bidder understands all requirements for the performance of the work. If his/her bid is accepted, the bidder shall be responsible for all errors in the proposal resulting from his/her failure or neglect to comply with these instructions. The Awarding Authority will, in no case, be responsible for any costs, expenses, losses, or change in anticipated profits resulting from such failure or neglect of the bidder to make these examinations.

The bidder shall take no advantage of any error or omission in the proposal and advertised contract. Any prospective bidder who desires an explanation or interpretation of the plans, specification, or any of the contract documents, shall request such in writing from the Awarding Authority, in sufficient time to allow a written reply by the Awarding Authority that can reach all prospective bidders before the submission of their bids. Any reply given a prospective bidder concerning any of the contract documents, plans, and specifications will be furnished to all prospective bidders in the form determined by the Awarding Authority including, but not limited to, an addendum, if the information is deemed by the Awarding Authority to be necessary in submitting bids or if the Awarding Authority concludes the information would aid competition. Oral explanations, interpretations, or instructions given before the submission of bids unless at a prebid conference will not be binding on the Awarding Authority.

Preparation of the Proposal. Bidders shall submit their proposals on the form furnished by the Awarding Authority. The proposal shall be executed properly, and bids shall be made for all items indicated in the proposal form, except when alternate bids are asked, a bid on more than one alternate for each item is not required, unless otherwise provided. The bidder shall indicate in figures, a unit price for each of the separate items called for in the proposal form; the bidder shall show the products of the respective quantities and unit prices in the column provided for that purpose, and the gross sum shown in the place indicated in the proposal form shall be the

summation of said products. All writing shall be with ink or typewriter, except the signature of the bidder which shall be written in ink.

If the proposal is made by an individual, that individual's name and business address shall be shown. If made by a firm or partnership, the name and business address of each member of the firm or partnership shall be shown. If made by a corporation, the proposal shall show the names, titles, and business addresses of the president, corporate secretary and treasurer. The proposal shall be signed by president or someone with authority to execute contracts and attested by the corporate secretary or someone with authority to execute or attest to the execution of contracts.

When prequalification is required, the proposal form shall be submitted by an authorized bidder in the same name and style as shown on the "Contractor's Statement of Experience and Financial Condition" used for prequalification.

Rejection of Proposals. The Awarding Authority reserves the right to reject any proposal for any of the conditions in "Issuance of Proposal Forms" or for any of the following reasons:

- (a) More than one proposal for the same work from an individual, firm, partnership, or corporation under the same name or different names.
- (b) Evidence of collusion among bidders.
- (c) Unbalanced proposals in which the bid prices for some items are, in the judgment of the Awarding Authority, out of proportion to the bid prices for other items.
- (d) If the proposal does not contain a unit price for each pay item listed, except in the case of authorized alternate pay items or lump sum pay items.
- (e) If the proposal form is other than that furnished by the Awarding Authority; or if the form is altered or any part thereof is detached.
- (f) If there are omissions, erasures, alterations, unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the proposal incomplete, indefinite or ambiguous as to its meaning.
- (g) If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
- (h) If the proposal is not accompanied by the proper proposal guaranty.
- (i) If the proposal is prepared with other than ink or typewriter, or otherwise fails to meet the requirements of the above "Preparation of Proposal" section.

Proposal Guaranty. Each proposal shall be accompanied by a bid bond on the Department form contained in the proposal, executed by a corporate surety company satisfactory to the Awarding Authority, by a bank cashier's check or a properly certified check for not less than five percent of the amount bid, or for the amount specified in the following schedule:

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Amount Bid	Proposal Guaranty	
Up to	\$5,000	\$150
>\$5,000	\$10,000	\$300
>\$10,000	\$50,000	\$1,000
>\$50,000	\$100,000	\$3,000
>\$100,000	\$150,000	\$5,000
>\$150,000	\$250,000	\$7,500
>\$250,000	\$500,000	\$12,500
>\$500,000	\$1,000,000	\$25,000
>\$1,000,000	\$1,500,000	\$50,000
>\$1,500,000	\$2,000,000	\$75,000
>\$2,000,000	\$3,000,000	\$100,000
>\$3,000,000	\$5,000,000	\$150,000
>\$5,000,000	\$7,500,000	\$250,000
>\$7,500,000	\$10,000,000	\$400,000
>\$10,000,000	\$15,000,000	\$500,000
>\$15,000,000	\$20,000,000	\$600,000
>\$20,000,000	\$25,000,000	\$700,000
>\$25,000,000	\$30,000,000	\$800,000
>\$30,000,000	\$35,000,000	\$900,000
Over	\$35,000,000	\$1,000,000

In the event that one proposal guaranty check is intended to cover two or more proposals, the amount must equal to the sum of the proposal guaranties which would be required for each individual proposal.

Bank cashier's checks or properly certified checks accompanying proposals shall be made payable to the County Treasurer, when a County is the Awarding Authority; or the City, Village, or Town Treasurer, when a city, village, or town is the Awarding Authority.

The proposal guaranty checks of all, except the two lowest responsible, will be returned promptly after the proposals have been checked, tabulated, and the relation of the proposals established. Proposal guaranty checks of the two lowest bidders will be returned as soon as the contract and contract bond of the successful bidder have been properly executed and approved. Bid bonds will not be returned.

After a period of three working days has elapsed after the date of opening proposals, the Awarding Authority may permit the two lowest bidders to substitute for the bank cashier's checks or certified checks submitted with their proposals as proposal guaranties, bid bonds on the Department forms executed by corporate surety companies satisfactory to the Awarding Authority.

Delivery of Proposals. If a special envelope is supplied by the Awarding Authority, each proposal should be submitted in that envelope furnished by the Awarding Authority and the blank spaces on the envelope shall be filled in correctly to clearly indicate its contents. When an envelope other than the special one furnished by the Awarding Authority is used, it shall be marked to clearly indicate its contents. When sent by mail, the sealed proposal shall be addressed to the Awarding Authority at the address and in care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the Notice to

Bidders. Proposals received after the time specified will be returned to the bidder unopened.

Withdrawal of Proposals. Permission will be given a bidder to withdraw a proposal if the bidder makes the request in writing or in person before the time for opening proposals.

Public Opening of Proposals. Proposals will be opened and read publicly at the time and place specified in the Notice to Bidders. Bidders, their authorized agents, and other interested parties are invited to be present.

Consideration of Proposals. After the proposals are opened and read, they will be compared on the basis of the summation of the products of the quantities shown in the bid schedule by the unit bid prices. In awarding contracts, the Awarding Authority will, in addition to considering the amounts stated in the proposals, take into consideration the responsibility of the various bidders as determined from a study of the data required under "Prequalification of Bidders", and from other investigations which it may elect to make.

The right is reserved to reject any or all proposals, to waive technicalities, or to advertise for new proposals, if in the judgment of the Awarding Authority, the best interests of the Awarding Authority will be promoted thereby.

Award of Contract. The award of contract will be made within 45 calendar days after the opening of proposals to the lowest responsible and qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified by letter of intent that his/her bid has been accepted, and subject to the following conditions, the bidder will be the Contractor.

An approved contract executed by the Awarding Authority is required before the Awarding Authority is bound. An award may be cancelled any time by the Awarding Authority prior to execution in order to protect the public interest and integrity of the bidding process or for any other reason if, in the judgment of the Awarding Authority, the best interests of the Awarding Authority will be promoted thereby.

If a contract is not awarded within 45 days after the opening of proposals, bidders may file a written request with the Awarding Authority for the withdrawal of their bid, and the Awarding Authority will permit such withdrawal.

Requirement of Contract Bond. If the Awarding Authority requires a Contract Bond, the Contractor or Supplier shall furnish the Awarding Authority a performance and payment bond with good and sufficient sureties in the full amount of the contract as the penal sum. The surety shall be acceptable to the Awarding Authority, shall waive notice of any changes and extensions of time, and shall submit its bond on the form furnished by the Awarding Authority.

Execution of Contract. The contract shall be executed by the successful bidder and returned, together with the Contract Bond, within 15 days after the contract has been mailed to the bidder.

If the bidder to whom the award is made is a corporation organized under the laws of a State other than Illinois, the bidder shall furnish the Awarding Authority a

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copy of the corporation's Certificate of Authority to do business in the State of Illinois with the return of the executed contract and bond. Failure to furnish such evidence of a Certificate of Authority within the time required will be considered as just cause for the annulment of the award and the forfeiture of the proposal guaranty to the Awarding Authority, not as a penalty, but in payment of liquidated damages sustained as a result of such failure.

Failure to Execute Contract. If the contract is not executed by the Awarding Authority within 15 days following receipt from the bidder of the properly executed contracts and bonds, the bidder shall have the right to withdraw his/her bid without penalty.

Failure of the successful bidder to execute the contract and file acceptable bonds within 15 days after the contract has been mailed to the bidder shall be just cause for the cancellation of the award and the forfeiture of the proposal guaranty which shall become the property of the Awarding Authority, not as penalty, but in liquidation of damages sustained. Award may then be made to the next lowest responsible bidder, or the work may be readvertised and constructed under contract, or otherwise, as the Awarding Authority may decide.”

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
BIDDING REQUIREMENTS AND CONDITIONS FOR MATERIAL PROPOSALS

Effective: January 1, 2002

Revised: January 1, 2013

Replace Article 102.01 of the Standard Specifications with the following:

“Prequalification of Bidders. When prequalification is required and the awarding authority for contract construction work is the County Board of a County, the Council, the City Council, or the President and Board of Trustees of a city, village, or town, each prospective bidder, in evidence of competence, shall furnish the awarding authority as a prerequisite to the release of proposal forms by the awarding authority, a certified or photostatic copy of a "Certificate of Eligibility" issued by the Department of Transportation, in accordance with the Department's "Prequalification Manual".

The two low bidders must file, within 24 hours after the letting, a sworn affidavit in triplicate, showing all uncompleted contracts awarded to them and all low bids pending award for Federal, State, County, Municipal and private work, using the blank form made available for this affidavit. One copy shall be filed with the awarding authority and two copies with the District office.

Issuance of Proposal Forms. The Awarding Authority reserves the right to refuse to issue a proposal form for bidding purposes for any of the following reasons:

- (a) Lack of competency and adequate machinery, plant, and other equipment, as revealed by the financial statement and experience questionnaires required in prequalification procedures.
- (b) Uncompleted work which, in the judgment of the Awarding Authority, might hinder or prevent the prompt completion of additional work awarded.
- (c) False information provided on a bidder's "Affidavit of Availability".
- (d) Failure to pay, or satisfactorily settle, all bills due for labor and material on former contracts in force at the time of issuance of proposal forms.
- (e) Failure to comply with any prequalification regulations of the Department.
- (f) Default under previous contracts.
- (g) Unsatisfactory performance record as shown by past work for the Awarding Authority, judged from the standpoint of workmanship and progress.
- (h) When the Contractor is suspended from eligibility to bid at a public letting where the contract is awarded by, or requires approval of, the Department.

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- (i) When any agent, servant, or employee of the prospective bidder currently serves as a member, employee, or agent of a governmental body that is financially involved in the proposal work.
- (j) When any agent, servant, or employee of the perspective bidder has participated in the preparation of plans or specifications for the proposed work.

Interpretation of Quantities in the Bid Schedule. The quantities appearing in the bid schedule are approximate and are prepared for the comparison of bids. Payment to the Contractor will be made only for the actual quantities of work performed and accepted or materials furnished according to the contract. The scheduled quantities of work to be done and materials to be furnished may be increased, decreased or omitted as hereinafter provided.

Examination of Material Proposal, Specifications, Special Provisions, and Site of Work. The bidder shall, before submitting a bid, carefully examine the provisions of the proposal. The bidder shall inspect in detail the site of the proposed work, investigate and become familiar with all the local conditions affecting the work and fully acquaint themselves with the detailed requirements of the work. Submission of a bid shall be a conclusive assurance and warranty the bidder has made these examinations and the bidder understands all requirements for the performance of the work. If his/her bid is accepted, the bidder will be responsible for all errors in the proposal resulting from his/her failure or neglect to comply with these instructions. The Awarding Authority will, in no case, be responsible for any costs, expenses, losses, or change in anticipated profits resulting from such failure or neglect of the bidder to make these examinations.

The bidder shall take no advantage of any error or omission in the proposal. Any prospective bidder who desires an explanation or interpretation of the specification, or any of the documents, shall request such in writing from the Awarding Authority, in sufficient time to allow a written reply by the Awarding Authority that can reach all prospective bidders before the submission of their bids. Any reply given a prospective bidder concerning any of the documents and specifications will be furnished to all prospective bidders in the form determined by the Awarding Authority including, but not limited to, an addendum, if the information is deemed by the Awarding Authority to be necessary in submitting bids or if the Awarding Authority concludes the information would aid competition. Oral explanations, interpretations or instructions given before the submission of bids unless at a prebid conference will not be binding on the Awarding Authority.

Preparation of the Proposal. Bidders shall submit their proposals on the form furnished by the Awarding Authority. The proposal shall be executed properly, and bids shall be made for all items indicated in the proposal form, except when alternate bids are asked, a bid on more than one alternate for each item is not required, unless otherwise provided. The bidder shall indicate in figures, a unit price for each of the separate items called for in the proposal form; the bidder shall show the products of the respective quantities and unit prices in the column provided for that purpose, and the gross sum shown in the place indicated in the proposal form shall be the summation of said products. All writing shall be with ink or typewriter, except the signature of the bidder which shall be written in ink.

When prequalification is required, the proposal form shall be submitted by an authorized bidder in the same name and style as shown on the "Contractor's Statement of Experience and Financial Condition" used for prequalification and shall be submitted in like manner.

Rejection of Proposals. The Awarding Authority reserves the right to reject any proposal for any of the conditions in "Issuance of Proposal Forms" or for any of the following reasons:

- (a) More than one proposal for the same work from an individual, firm, partnership, or corporation under the same name or different names.
- (b) Evidence of collusion among bidders.
- (c) Unbalanced proposals in which the bid prices for some items are, in the judgment of the Awarding Authority, out of proportion to the bid prices for other items.
- (d) If the proposal does not contain a unit price for each pay item listed, except in the case of authorized alternate pay items or lump sum pay items.
- (e) If the proposal form is other than that furnished by the Awarding Authority; or if the form is altered or any part thereof is detached.
- (f) If there are omissions, erasures, alterations, unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the proposal incomplete, indefinite or ambiguous as to its meaning.
- (g) If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
- (i) If the proposal is not accompanied by the proper proposal guaranty.
- (i) If the proposal is prepared with other than ink or typewriter, or otherwise fails to meet the requirements of the above "Preparation of Proposal" section.

Proposal Guaranty. Each proposal shall be accompanied by a bid bond on the Department form contained in the proposal, executed by a corporate surety company satisfactory to the Awarding Authority, by a bank cashier's check or a properly certified check for not less than five percent of the amount bid, or for the amount specified in the following schedule:

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	Amount Bid	Proposal Guaranty
Up to	\$5,000	\$150
>\$5,000	\$10,000	\$300
>\$10,000	\$50,000	\$1,000
>\$50,000	\$100,000	\$3,000
>\$100,000	\$150,000	\$5,000
>\$150,000	\$250,000	\$7,500
>\$250,000	\$500,000	\$12,500
>\$500,000	\$1,000,000	\$25,000
>\$1,000,000	\$1,500,000	\$50,000
>\$1,500,000	\$2,000,000	\$75,000
>\$2,000,000	\$3,000,000	\$100,000
>\$3,000,000	\$5,000,000	\$150,000
>\$5,000,000	\$7,500,000	\$250,000
>\$7,500,000	\$10,000,000	\$400,000
>\$10,000,000	\$15,000,000	\$500,000
>\$15,000,000	\$20,000,000	\$600,000
>\$20,000,000	\$25,000,000	\$700,000
>\$25,000,000	\$30,000,000	\$800,000
>\$30,000,000	\$35,000,000	\$900,000
Over	\$35,000,000	\$1,000,000

In the event that one proposal guaranty check is intended to cover two or more proposals, the amount must equal to the sum of the proposal guaranties which would be required for each individual proposal.

Bank cashier's checks or properly certified checks accompanying proposals shall be made payable to the County Treasurer, when a County is the awarding authority; or the City, Village, or Town Treasurer, when a city, village, or town is the awarding authority.

If this proposal contains various groups and the bidder has the option of bidding on one or several groups, the bidder may provide a separate proposal guaranty for each group or combination of groups in lieu of a single proposal guaranty to cover the amount bid for the entire proposal. Each proposal guaranty shall identify the groups covered by the individual proposal guaranty. In the event that one proposal guaranty check is intended to cover two or more groups, the amount must be equal to the sum of the proposal guaranties which would be required for each individual group.

The proposal guaranty checks of all, except the two lowest responsible, will be returned promptly after the proposals have been checked, tabulated, and the relation of the proposals established. Proposal guaranty checks of the two lowest bidders will be returned as soon as the contract and contract bond of the successful bidder have been properly executed and approved. If a contract bond is not required, the proposal guaranty check will be held in lieu thereof. Bid bonds will not be returned.

The awarding authority may deny the use of a bid bond as a proposal guaranty but may not further restrict the proposal guaranty. The Notice of Material Letting will state whether a bid bond is allowed.

Delivery of Proposals. If a special envelope is supplied by the Awarding Authority, each proposal should be submitted in that envelope furnished by the Awarding Authority and the blank spaces on the envelope shall be filled in correctly to clearly indicate its contents. When an envelope other than the special one furnished by the Awarding Authority is used, it shall be marked to clearly indicate its contents. When sent by mail, the sealed proposal shall be addressed to the Awarding Authority at the address and in care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the Notice to Bidders. Proposals received after the time specified will be returned to the bidder unopened.

Withdrawal of Proposals. Permission will be given a bidder to withdraw a proposal if the bidder makes the request in writing or in person before the time for opening proposals.

Public Opening of Proposals. Proposals will be opened and read publicly at the time and place specified in the Notice to Bidders. Bidders, their authorized agents and other interested parties are invited to be present.

Consideration of Proposals. After the proposals are opened and read, they will be compared on the basis of the summation of the products of the quantities shown in the bid schedule by the unit bid prices. In the event of a discrepancy between unit bid prices and extensions, the unit bid price shall govern. In awarding the supply of materials, the Awarding Authority will, in addition to considering the amounts stated in the proposals, take into consideration the responsibility of the various bidders as determined from a study of the data required under "Prequalification of Bidders", and from other investigations which it may elect to make.

The right is reserved to reject any or all proposals, to waive technicalities or to advertise for new proposals, if in the judgment of the Awarding Authority, the best interests of the Awarding Authority will be promoted thereby.

Acceptance of Proposal to Furnish Material. The award will be made within 45 calendar days after the opening of proposals to the lowest responsible and qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified by letter of intent that his/her bid has been accepted, and subject to the following conditions, the bidder will be the Contractor or Supplier.

An acceptance of proposal to furnish materials executed by the Awarding Authority is required before the Awarding Authority is bound. An award may be cancelled any time by the Awarding Authority prior to execution in order to protect the public interest and integrity of the bidding process or for any other reason if, in the judgment of the Awarding Authority, the best interests of the Awarding Authority will be promoted thereby.

If a material proposal is not awarded within 45 days after the opening of proposals, bidders may file a written request with the Awarding Authority for the withdrawal of their bid, and the Awarding Authority will permit such withdrawal.

Requirement of Contract Bond. If the Awarding Authority requires a Contract Bond, the Contractor or Supplier shall furnish the Awarding Authority a performance and payment bond with good and sufficient sureties in the full amount of the award as

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the penal sum. The surety shall be acceptable to the Awarding Authority, shall waive notice of any changes and extensions of time, and shall submit its bond on the form furnished by the Awarding Authority.

The contract bond shall be returned within 15 days after the notice of award. Failure of the successful bidder to execute and file acceptable bonds within 15 days after the notice of award has been mailed to the bidder shall be just cause for the cancellation of the award and the forfeiture of the proposal guaranty which shall become the property of the Awarding Authority, not as penalty, but in liquidation of damages sustained. Award may then be made to the next lowest responsible bidder, or the work may be readvertised, or otherwise, as the Awarding Authority may decide.

If the bidder to whom the award is made is a corporation organized under the laws of a State other than Illinois, the bidder shall furnish the Awarding Authority a copy of the corporation's Certificate of Authority to do business in the State of Illinois with the return of the contract bond. Failure to furnish such evidence of a Certificate of Authority within the time required will be considered as just cause for the annulment of the award and the forfeiture of the proposal guaranty to the Awarding Authority, not as a penalty, but in payment of liquidated damages sustained as a result of such failure.

Failure to Execute the Acceptance of Proposal to Furnish Material. If the acceptance of proposal to furnish material is not executed by the Awarding Authority within 15 days following receipt from the bidder of the properly executed bonds, the bidder shall have the right to withdraw his/her bid without penalty.”

RESERVED

CHECK SHEET #LRS9

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

**SPECIAL PROVISIONS
FOR
BITUMINOUS SURFACE TREATMENTS**

Effective: January 1, 1999

Revised: January 1, 2011

Revise the last sentence of Article 403.13 of the Standard Specifications to read:

“Upon completion of the work and after the final set of the asphalt, excesses of loose aggregate shall be removed.”

RESERVED

CHECK SHEET #LRS11

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION FOR EMPLOYMENT PRACTICES

Effective: January 1, 1999

In addition to all other labor requirements set forth in this proposal and in the Standard Specifications for Road and Bridge Construction, adopted by the Department of Transportation, during the performance of this contract, the Contractor for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

Selection of Labor. The Contractor shall comply with all Illinois statutes pertaining to the selection of labor.

Equal Employment Opportunity. During the performance of this contract, the Contractor agrees as follows:

- (a) That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, ancestry, age, marital status, physical or mental handicap or unfavorable discharge from military service, and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.
- (b) That, if it hires additional employees in order to perform this contract or any portion hereof, it will determine the availability of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.
- (c) That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, national origin, ancestry, age, marital status, physical or mental handicap or unfavorable discharge from military service.

That it will send to each labor organization or representative of workers with which it has or is bound by collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Contractor's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any such labor organization or representative fails or refuses to cooperate with the Contractor in its efforts to comply with so such Act and Rules and Regulations, the Contractor will promptly so notify the Illinois Department of Human Rights and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

- (e) That it will submit reports as required by the Department of Human Rights Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.
- (f) That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency Illinois Department of Human Rights for purposes of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.
- (g) That it will include verbatim or by reference the provisions of this clause in every subcontract so that such provisions will be binding upon every such subcontractor. In the same manner as with other provisions of this contract, the Contractor will be liable for compliance with applicable provisions of this clause by all its subcontractors; and further it will promptly notify the contracting agency and the Illinois Department of Human Rights in the event any subcontractor fails or refuses to comply therewith. In addition, the Contractor will not utilize any subcontractor declared by the subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

CHECK SHEET #LRS12

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION FOR WAGES OF EMPLOYEES ON PUBLIC WORKS

Effective: January 1, 1999

Revised: January 1, 2015

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 Illinois Department of Labor publishes the prevailing wage rates on its website. If the Illinois Department of Labor revises the prevailing wage rates, the revised prevailing wage rates on the Illinois Department of Labor's website shall apply to this contract and the Contractor will not be allowed additional compensation on account of said revisions. The Contractor shall review the wage rates applicable to the work of the contract at regular intervals in order to ensure the timely payment of current wage rates. The Contractor agrees that no additional notice is required. The Contractor shall be responsible to notify each subcontractor of the wage rates set forth in this contract and any revisions thereto.
2. **Payroll Records.** The Contractor and each subcontractor shall make and keep, for a period of not less than five years from the date of the last payment on a contract or subcontract, records of all laborers, mechanics, and other workers employed by them on the project; the records shall include information required by 820 ILCS 130/5 for each worker. Upon seven business days' notice, the Contractor and each subcontractor shall make available for inspection and copying at a location within this State during reasonable hours, the payroll records to the public body in charge of the project, its officers and agents, the Director of Labor and his deputies and agents, and to federal, State, or local law enforcement agencies and prosecutors.
3. **Submission of Payroll Records.** The Contractor and each subcontractor shall, no later than the 15th day of each calendar month, file a certified payroll for the immediately preceding month with the public body in charge of the project, except that the full social security number and home address 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). The certified payroll shall consist of a complete copy of the payroll records, except starting and ending times of work each day may be omitted.

The certified payroll shall be accompanied by a statement signed by the Contractor or subcontractor or an officer, employee, or agent of the Contractor or subcontractor which avers that: (i) he or she has examined the certified payroll records required to be submitted by the Act 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; and (iii) the Contractor or subcontractor is aware that filing a certified payroll that he or 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.

CHECK SHEET #LRS13

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

**SPECIAL PROVISION
FOR
SELECTION OF LABOR**

Effective: January 1, 1999

Revised: January 1, 2012

The Contractor shall comply with all Illinois statutes pertaining to the selection of labor.

Employment of Illinois Workers During Periods of Excessive Unemployment.

Whenever there is a period of excessive unemployment in Illinois, which is defined herein as any month immediately following two consecutive calendar months during which the level of unemployment in the State of Illinois has exceeded five percent as measured by the United States Bureau of Labor Statistics in its monthly publication of employment and unemployment figures, the Contractor shall employ at least 90 percent Illinois laborers. "Illinois laborer" means any person who has resided in Illinois for at least 30 days and intends to become or remain an Illinois resident.

Other laborers may be used when Illinois laborers as defined herein are not available, or are incapable of performing the particular type of work involved, if so certified by the Contractor and approved by the Engineer. The Contractor may place no more than three of his regularly employed non-resident executive and technical experts, who do not qualify as Illinois laborers, to do work encompassed by this Contract during a period of excessive unemployment.

This provision applies to all labor, whether skilled, semi-skilled or unskilled, whether manual or non-manual.

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

**SPECIAL PROVISION
FOR
PAVING BRICK AND CONCRETE PAVER PAVEMENTS AND SIDEWALKS**

Effective: January 1, 2004
Revised: January 1, 2009

Description. This work shall consist of constructing pavement or sidewalk, composed of paving bricks or concrete pavers, on a prepared subgrade, subbase, or base.

Materials. Materials shall be according to the following Articles of Division 1000 - Materials of the Standard Specifications.

Item	Article/Section
(a) Fine Aggregate (Note 1)	1003.01, 1003.02(d)
(b) Edge Restraints (Note 2)	
(c) Paving Brick (Note 3)	1041.03
(d) Concrete Pavers (Note 3)	1042

Note 1. The fine aggregate used for the bedding course and joint filling shall be sand, silica sand, or slag sand. It shall also be Class A quality and dry. For the bedding course, the gradation shall be FA 1 or FA 2. For joint filling, the gradation shall be FA 9.

Note 2. For sidewalk, the edge restraints shall conform to the manufacturer's recommendations. For pavement, the edge restraints shall be combination concrete curb and gutter according to Section 606 of the Standard Specifications.

Note 3. The dimensions of the bricks and/or pavers shall be as shown on the plans.

Equipment. Equipment shall conform to the following Articles of Division 1100 - Equipment of the Standard Specifications.

Item	Article/Section
(a) Pneumatic-Tired Rollers	1101.01(a)
(b) Masonry Saw (Note 1)	
(c) Vibrator/Compactor (Note 2)	

Note 1. The masonry saw shall be a wet or dry saw capable of clean and accurate cuts.

Note 2. The vibrator/compactor shall be either a plate compactor with a high frequency, low amplitude plate or a rubber-roller mechanical vibrator.

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Aesthetic Mockup, Review, and Approval. A 1 sq yd (sq m) full-scale mock-up using actual job specific edge restraint (if other than combination concrete curb and gutter), materials, brick dimension, colors, methods, and workmanship shall be provided by the Contractor. The actual vibrating equipment and vibrating rate to be used on the job shall be used on the mockup. The accepted mock-up will be the standard by which remaining work will be evaluated for technical and aesthetic merit. The mock up may be in a location of proposed installation where it may remain if approved by the Engineer.

CONSTRUCTION REQUIREMENTS

Preparation of Subgrade. The subgrade shall be prepared according to Section 301 of the Standard Specifications, except Articles 301.05 and 301.06 will not apply.

Edge Restraints. Edge restraints shall be placed to a depth of at least the bottom of the bedding course.

For pavement, a transverse full-depth cast-in-place concrete header shall be placed at the limits of the pavement.

Bedding Course. The fine aggregate for bedding shall be placed and screeded, without compaction, to a uniform thickness of 1 to 1.5 in. (25 to 38 mm). Prepared areas shall not be left overnight, unless they are protected from disturbance and moisture. Stockpiled material shall be kept covered. Any saturated bedding aggregate shall be removed and replaced.

Installation. The bricks or pavers shall be laid in the pattern shown on the plans with a joint width from 1/8 to 1/4 in. (3 to 6 mm) on all sides. Whole bricks or pavers shall be laid first, starting from an exact edge or from the centerline of the pavement, followed by cut bricks or pavers. Cut bricks or pavers shall be at least 33 percent of the whole unit size.

After the entire pavement or sidewalk has been laid, it shall be set into the bedding course by one pass of the vibrator/compactor. Vibration/compaction shall stop within 3 ft (1 m) of any unrestrained edge.

For pavement, construction equipment shall not be driven on the new surface until the joints have been filled.

Joint Filling. The fine aggregate for joint filling shall be spread over the pavement or sidewalk and hand broomed into the joints. The aggregate shall then be worked down into the joints with multiple passes of the vibrator/compactor. Each pass shall be alternated 90 degrees from the previous pass. This process shall be repeated until the joints are completely filled.

Excess fine aggregate shall be removed by hand brooming.

All bricks and pavers within 6 ft (1.8 m) of the laying face shall be compacted and the joints completely filled with sand at the end of each workday.

For pavement, final rolling shall be completed with a 5 – 10 ton (4.5 – 9 metric ton) static pneumatic-tired roller.

Smoothness. For pavement, the completed surface will be tested for smoothness with a 16 ft (5 m) straightedge. Surface variations of the mainline pavement shall not exceed 3/16 in. (5 mm).

Method of Measurement. This work will be measured for payment as follows:

- (a) Contract Quantities. The requirements for the use of contract quantities shall conform to Article 202.07(a) of the Standard Specifications.
- (b) Measured Quantities. This work will be measured for payment in place and the area computed in square yards (square meters). Measurements will not include the edge restraints.

Edge restraints constructed of combination concrete curb and gutter will be measured according to Article 606.14 of the Standard Specifications.

Basis of Payment. This work will be paid for at the contract unit price per square meter (square yard) for PAVING BRICK PAVEMENT FOR LIGHT TRAFFIC, PAVING BRICK PAVEMENT FOR HEAVY TRAFFIC, CONCRETE PAVER PAVEMENT, PAVING BRICK SIDEWALK, or CONCRETE PAVER SIDEWALK.

Edge restraints constructed of combination concrete curb and gutter will be paid for according to Article 606.15 of the Standard Specifications.

CHECK SHEET #LRS15

State of Illinois
Department of Transportation

**SPECIAL PROVISION
FOR
PARTIAL PAYMENTS**

Effective: January 1, 2007

Add the following after the first paragraph of Article 109.07(a) of the Standard Specifications:

“The State will deduct from the amount so determined for the first 50 percent of the completed work a sum of ten percent to be retained until after the completion of the entire work to the satisfaction of the Engineer. After 50 percent or more of the work is completed, the Engineer may, at his/her discretion, certify the remaining partial payments without any further retention, provided that satisfactory progress is being made, and provided that the amount retained is not less than five percent of the total adjusted contract price. When the principal items of the work have been satisfactorily completed, a semi-final estimate may be made with the consent of the surety. Payment to the Contractor under such an estimate shall not exceed 90 percent of the amount retained after making partial payments, but in no event shall the amount retained after making the semi-final payment be less than one percent of the adjusted contract price, nor less than \$500.00.

When any payment is made directly to the State, payments for completed work shall have deducted the proportionate share of the cost to be borne by the State. The deduction will be the estimated cost to the State divided by the awarded contract value with this percentage applied to the value of work in place. Any adjustment to be made because of changed quantities will be made when the final payment is being processed. No retainage will be held from the value of such payments.”

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

**SPECIAL PROVISION
FOR
PROTESTS ON LOCAL LETTINGS**

Effective: January 1, 2007

Revised: January 1, 2013

Except for apprenticeship and training certification issues, all protests shall be handled according to Sections 6.390 through 6.440 of Title 44 Subtitle A Chapter III Part 6 of the Illinois Administrative Code. For the purpose of a protest under this special provision, a representative of the awarding local authority executing the contract will perform the functions of the Chief Procurement Officer (CPO) and the State Purchasing Officer (SPO).

CHECK SHEET #LRS17

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

**SPECIAL PROVISION
FOR
SUBSTANCE ABUSE PREVENTION PROGRAM**

Effective: January 1, 2008

Revised: January 1, 2014

In addition to all other labor requirements set forth in this proposal and in the Standard Specification for Road and Bridge Construction, adopted by the Department, during the performance of this contract, the Contractor for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

Substance Abuse Prevention Program. Before the Contractor and any subcontractor commences work, the Contractor and any subcontractor shall have in place a written Substance Abuse Prevention Program for the prevention of substance abuse among its employees which meets or exceeds the requirements in 820 ILCS 265 or shall have a collective bargaining agreement in effect dealing with the subject matter of 820 ILCS 265.

The Contractor and any subcontractor shall file with the public body engaged in the construction of the public works: a copy of the Substance Abuse Prevention Program along with a cover letter certifying that their program meets the requirements of the Act, or a letter certifying that the Contractor or a subcontractor has a collective bargaining agreement in effect dealing with the subject matter of this Act.

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISIONS
FOR
MULTIGRADE COLD MIX ASPHALT

Effective: January 1, 2007

Revised: January 1, 2013

Add the following Article to Section 1032 of the Standard Specifications:

“1032.12 Multigrade Cold Mix Asphalt. Multigrade Cold Mix Asphalt will be accepted according to the latest revision of the Bureau of Materials and Physical Research Policy Memorandum, “Cutback Asphalt and Road Oil Acceptance Procedure”. These materials shall conform to the requirements listed in the following table:

Test	Grades		
	CM-90	CM-150	CM-300
Viscosity (Modified Koppers), (ASTM D 4957), @ 77 °F (25 °C), 1 sec ⁻¹ , Pa·s	150 - 2000	80 - 1000	30 - 500
Flash Point, (Cleveland Open Cup), (AASHTO T 48), °F (°C)	150 min. (65 min.)	150 min. (65 min.)	150 min. (65 min.)
Distillation Test (AASHTO T 78): Distillate, percent by volume of total distillate to 680 °F (360 °C)			
Distillate to 437 °F (225 °C)	0 - 4	0 - 5	0 - 5
Distillate to 500 °F (260 °C)	0 - 5	0 - 5	0 - 5
Distillate to 600 °F (315 °C)	10 - 65	30 - 75	40 - 85
Residue from distillation to 680 °F (360 °C), percent volume by difference	80 min.	75 min.	70 min.
Water, (AASHTO T 55), %	1.0 max.	1.0 max.	1.0 max.
Tests on residue from distillation:			
Penetration @ 77 °F (25 °C), 100 g, 5 sec, (AASHTO T 55), 0.1 mm	90 - 225	100 - 275	200 min.
Float Test @ 140 °F (60 °C), (AASHTO T 50), sec	1200 min.	1200 min.	1200 min.
Solubility in trichloroethylene, (AASHTO T 44), %	99.0 min.	99.0 min.	99.0 min.”

