

Supplemental Specifications and Recurring Special Provisions

Adopted January 1, 2010



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 January 1, 2007. 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, 2010

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 1-1-07) (Revised 1-1-10)

SUPPLEMENTAL SPECIFICATIONS

<u>Std. Spec. Sec.</u>		<u>Page No.</u>
201	Clearing, Tree Removal and Protection	1
205	Embankment	2
251	Mulch	3
253	Planting Woody Plants	4
280	Temporary Erosion Control	6
406	Hot-Mix Asphalt Binder and Surface Course	7
420	Portland Cement Concrete Pavement	11
443	Reflective Crack Control Treatment	12
502	Excavation for Structures	15
503	Concrete Structures	16
504	Precast Concrete Structures	17
505	Steel Structures	18
540	Box Culverts	19
581	Waterproofing Membrane System	20
630	Steel Plate Beam Guardrail	21
633	Removing and Reerecting Guardrail and Terminals	22
637	Concrete Barrier	23
669	Removal and Disposal of Regulated Substances	24
672	Sealing Abandoned Water Wells	25
701	Work Zone Traffic Control and Protection	26
720	Sign Panels and Appurtenances	27
721	Sign Panel Overlay	28
722	Demountable Sign Legend Characters and Arrows	29
726	Mile Post Marker Assembly	30
733	Overhead Sign Structures	31
783	Pavement Marking and Marker Removal	32
801	Electrical Requirements	33
805	Electrical Service Installation – Traffic Signals	34
836	Pole Foundation	35
838	Breakaway Devices	36
862	Uninterruptable Power Supply	37
873	Electric Cable	39
878	Traffic Signal Concrete Foundation	41
1003	Fine Aggregates	42
1004	Coarse Aggregates	43

1005	Stone and Broken Concrete	44
1006	Metals	45
1008	Structural Steel Coatings	47
1010	Finely Divided Materials	48
1020	Portland Cement Concrete	49
1022	Concrete Curing Materials	58
1024	Nonshrink Grout	59
1030	Hot-Mix Asphalt	60
1032	Bituminous Materials	65
1042	Precast Concrete Products	68
1062	Reflective Crack Control System	70
1069	Pole and Tower	72
1074	Control Equipment	75
1076	Wire and Cable	80
1080	Fabric Materials	81
1081	Materials for Planting	82
1083	Elastomeric Bearings	84
1090	Sign Base	85
1091	Sign Face	87
1092	Sign Legend and Supplemental Panels	95
1093	Sign Supports	96
1094	Overhead Sign Structures	98
1095	Pavement Markings	104
1101	General Equipment	106
1102	Hot-Mix Asphalt Equipment	107
1103	Portland Cement Concrete Equipment	109
1106	Work Zone Traffic Control Devices	110

RECURRING SPECIAL PROVISIONS

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

<u>CHECK SHEET #</u>	<u>PAGE NO.</u>
1 Additional State Requirements for Federal-Aid Construction Contracts (Eff. 2-1-69) (Rev. 1-1-10)	111
2 Subletting of Contracts (Federal-Aid Contracts) (Eff. 1-1-88) (Rev. 5-1-93)	114
3 EEO (Eff. 7-21-78) (Rev. 11-18-80)	115
4 Specific Equal Employment Opportunity Responsibilities Non Federal-Aid Contracts (Eff. 3-20-69) (Rev. 1-1-94)	125
5 Required Provisions - State Contracts (Eff. 4-1-65) (Rev. 1-1-10)	130
6 Reserved	135
7 Reserved	136
8 Haul Road Stream Crossings, Other Temporary Stream Crossings, and In-Stream Work Pads (Eff. 1-2-92) (Rev. 1-1-98)	137
9 Construction Layout Stakes Except for Bridges (Eff. 1-1-99) (Rev. 1-1-07)	138
10 Construction Layout Stakes (Eff. 5-1-93) (Rev. 1-1-07)	141
11 Use of Geotextile Fabric for Railroad Crossing (Eff. 1-1-95) (Rev. 1-1-07)	144
12 Subsealing of Concrete Pavements (Eff. 11-1-84) (Rev. 1-1-07)	146
13 Hot-Mix Asphalt Surface Correction (Eff. 11-1-87) (Rev. 1-1-09)	150
14 Pavement and Shoulder Resurfacing (Eff. 2-1-00) (Rev. 1-1-09)	152
15 PCC Partial Depth Hot-Mix Asphalt Patching (Eff. 1-1-98) (Rev. 1-1-07)	153
16 Patching with Hot-Mix Asphalt Overlay Removal (Eff. 10-1-95) (Rev. 1-1-07)	155
17 Polymer Concrete (Eff. 8-1-95) (Rev. 1-1-08)	156
18 PVC Pipeliner (Eff. 4-1-04) (Rev. 1-1-07)	158
19 Pipe Underdrains (Eff. 9-9-87) (Rev. 1-1-07)	159
20 Guardrail and Barrier Wall Delineation (Eff. 12-15-93) (Rev. 1-1-97)	160
21 Bicycle Racks (Eff. 4-1-94) (Rev. 1-1-07)	164
22 Temporary Modular Glare Screen System (Eff. 1-1-00) (Rev. 1-1-07)	166
23 Temporary Portable Bridge Traffic Signals (Eff. 8-1-03) (Rev. 1-1-07)	168
24 Work Zone Public Information Signs (Eff. 9-1-02) (Rev. 1-1-07)	170
25 Night Time Inspection of Roadway Lighting (Eff. 5-1-96)	171
26 English Substitution of Metric Bolts (Eff. 7-1-96)	172
27 English Substitution of Metric Reinforcement Bars (Eff. 4-1-96) (Rev. 1-1-03)	173
28 Calcium Chloride Accelerator for Portland Cement Concrete (Eff. 1-1-01)	174
29 Reserved	175
30 Quality Control of Concrete Mixtures at the Plant (Eff. 8-1-00) (Rev. 1-1-09)	176
31 Quality Control/Quality Assurance of Concrete Mixtures (Eff. 4-1-92) (Rev. 1-1-09)	184
32 Asbestos Bearing Pad Removal (Eff. 11-1-03)	196
33 Asbestos Hot-Mix Asphalt Surface Removal (Eff. 6-1-89) (Rev. 1-1-09)	197

LOCAL ROADS AND STREETS RECURRING SPECIAL PROVISIONS

Table of Contents

<u>CHECK SHEET #</u>	<u>PAGE NO.</u>
LRS1	Reserved 199
LRS2	Furnished Excavation 200
LRS3	Work Zone Traffic Control Surveillance 201
LRS4	Flaggers in Work Zones 202
LRS5	Contract Claims 203
LRS6	Bidding Requirements and Conditions for Contract Proposals 204
LRS7	Bidding Requirements and Conditions for Material Proposals 210
LRS8	Failure to Complete the Work on Time 216
LRS9	Bituminous Surface Treatments 217
LRS10	Reserved 218
LRS11	Employment Practices 219
LRS12	Wages of Employees on Public Works 221
LRS13	Selection of Labor 222
LRS14	Paving Brick and Concrete Paver Pavements and Sidewalks 223
LRS15	Partial Payments 226

State of Illinois
Department of Transportation

ERRATA
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

Adopted: January 1, 2007

Revised: January 1, 2010

- Page 60 Article 109.07(a). In the second line of the first paragraph change “amount” to “quantity”.
- Page 85 Article 206.02(a). Change “1005.01” to “1004.04”.
- Page 154 Article 312.05. In the second line of the fifth paragraph change “180 °C” to “175 °C”.
- Page 180 Article 354.09. In the last line of the first paragraph change “407.10” to “407.10(b)”.
- Page 182 Article 355.09. In the last line change “407.10” to “407.10(b)”.
- Page 207 Article 406.14. In the second line of the second paragraph change “MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS, of the mixture composition specified;” to “MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS;”.
- Page 225 Article 420.05(b). In the last line of the table add “lb” after “19,750”.
- Page 237 Article 420.18. In the second line of the first paragraph change “October 15” to “November 1”.
- Page 345 Article 505.08(l). In the third line of the first paragraph change “1/8 mm” to “1/8 in.”.
- Page 345 Article 505.08(l). In the nineteenth line of the first paragraph change “is” to “in”.
- Page 379 Article 512.15. In the first and sixth lines of the third paragraph change “50 percent” to “ten percent”.
- Page 383 Article 516.04(b)(1). In the fifth line of the first paragraph change “drillingpouring” to “pouring”.
- Page 386 Article 516.08. In the first line of the third paragraph change “submittedaccepted” to “accepted”.
- Page 390 Article 520.02(h). Change “1027.021” to “1027.01”.
- Page 435 Article 542.04(b). Delete the last sentence of the last paragraph.

- Page 465 Article 551.06. In the second line of the first paragraph change “or” to “and/or”.
- Page 515 Article 609.03. In the first line of the first paragraph change “Inlet boxes shall be either cast-in-place of Class SI” to “Cast-in-place inlet boxes shall be Class SI”.
- Page 530 Article 637.04. In the fourth line of the first paragraph change “503.09(a)” to “503.15(a)”.
- Page 585 Article 701.19(a). Add “701400” to the second line of the first paragraph.
- Page 586 Article 701.19(c). Delete “701400” from the second line of the first paragraph.
- Page 587 Article 701.20(b). Delete “TRAFFIC CONTROL AND PROTECTION STANDARD 701400;” from the first paragraph.
- Page 639 Article 805.04. In the first line of the second paragraph change “changes” to “charges”.
- Page 742 Article 1006.34(b). In the fifth line of the second paragraph change “2 x18 in. (50 x 450 mm)” to “24 in. (600 mm)”.
- Page 773 Article 1020.06. In the third line of the first paragraph change “moisture in” to “moisture on”.
- Page 800 Article 1030.05(a)(12). Revise “Dust Collection Factor” to “Dust Correction Factor”.
- Page 800 Article 1030.05(a)(14). Revise the first occurrence of Article 1030.05(a)(14) to Article 1030.05(a)(13).
- Page 800 Article 1030.05(a). Add to the list of QC/QA documents “(16) Calibration of Equipment for Asphalt Content Determination”.
- Page 809 Article 1030.05. Revise the subparagraph “(a) Quality Assurance by the Engineer.” to read “(e) Quality Assurance by the Engineer.”.
- Page 889 Article 1069.02(a)(2). In the third line of the first paragraph add “stainless steel” in front of “screws”.
- Page 889 Article 1069.02(b). Delete the third paragraph.
- Page 890 Article 1069.02(c). Delete subparagraph (c).
- Page 934 Article 1077.01(d). Delete “in” in the second line of the first paragraph.
- Page 946 Article 1080.03(a)(1). In the third line of the first paragraph revise “(300 µm)” to “(600 µm)”.

- Page 963 Article 1083.02(b). In the second line of the first paragraph revise “ASTM D 4894” to “ASTM D 4895”.
- Page 969 Article 1088.01(a)(2). In the second line of the first paragraph revise “UL Standard 1424” to “UL Standard 1242”.
- Page 996 Article 1095.01(a)(4). Revise this Article to read “Glass Beads. The glass beads used as intermix beads with the thermoplastic pavement marking material shall meet the requirements of Article 1095.07. The glass beads shall be uniformly mixed throughout the material at the rate of not less than 30 percent by weight of the thermoplastic compound, retained on a No. 100 (150 µm) sieve.”
- Page 1076 In the Index of Pay Items delete the pay item “BITUMINOUS SURFACE REMOVAL – BUTT JOINT”.

State of Illinois
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SUPPLEMENTAL SPECIFICATION
FOR
SECTION 201. CLEARING, TREE REMOVAL AND PROTECTION

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

201.11 Basis of Payment. Revise the first paragraph of Article 201.11(a) to read:

- “(a) Tree Removal. Tree removal will be paid for at the contract unit price per unit diameter for TREE REMOVAL (6 to 15 UNITS DIAMETER) or TREE REMOVAL (OVER 15 UNITS DIAMETER); and per acre (hectare) for TREE REMOVAL, ACRES (HECTARES).”

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SUPPLEMENTAL SPECIFICATION
FOR
SECTION 205. EMBANKMENT

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

205.03 Preparation of Existing Ground Surface. Revise the headings of subparagraphs a) and b) of this Article to read:

- “a) Aggregate Surfaces and Bituminous Surface Treatments over Aggregate Bases.”
- “b) Hot-Mix Asphalt Base Courses, Surfaces, and Pavements; and Portland Cement Concrete Base Courses and Pavements.”

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SUPPLEMENTAL SPECIFICATION
FOR
SECTION 251. MULCH

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

251.01 Description. Revise this Article to read:

“**251.01 Description.** This work shall consist of furnishing, transporting, and placing mulch, erosion control blanket, or turf reinforcement mat over seeded areas.”

251.02 Materials. Add the following to this Article:

“(k) Turf Reinforcement Mat 1081.10(g)”

251.05 Method of Measurement. Revise this Article to read:

“**251.05 Turf Reinforcement Mat (TRM).** The TRM shall be specifically manufactured for both temporary and permanent erosion control, revegetation, and the reduction of water velocities in ditches and overflows. TRM shall be installed according to the manufacturer’s recommendations.”

251.06 Basis of Payment. Revise this Article to read:

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

- (a) Contract Quantities. The requirement for use of contract quantities shall be according to Article 202.07(a).
- (b) Measured Quantities. Mulch Methods 1, 2, 3, and 4 will be measured for payment in acres (hectares) of surface area mulched. Erosion control blanket, heavy duty erosion control blanket, and turf reinforcement mat will be measured for payment in square yards (square meters) of actual surface area covered.”

Add the following Article to this Section:

“**251.07 Basis of Payment.** This work will be paid for at the contract unit price per acre (hectare) for MULCH, METHOD 1; MULCH, METHOD 2; MULCH, METHOD 3; or MULCH, METHOD 4; and at the contract unit price per square yard (square meter) for EROSION CONTROL BLANKET, HEAVY DUTY EROSION CONTROL BLANKET, or TURF REINFORCEMENT MAT.”

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SUPPLEMENTAL SPECIFICATION
FOR
SECTION 253. PLANTING WOODY PLANTS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

253.08 Excavation of Plant Holes. Revise the first sentence of the first paragraph of this Article to read:

“Plant holes shall be dug to the required depth and width, and shall be saucer shaped.”

Revise the second sentence of the first paragraph of Article 253.08(a) to read:

“The diameter of the hole shall be equal to three times the diameter of the root ball and depth of the hole shall be equal to the depth of the root ball minus 2 in. (50 mm).”

Delete the table from Article 253.08(a).

253.14 Period of Establishment. Revise the first and second paragraphs of this Article to read:

“**253.14 Period of Establishment.** Prior to being accepted, the plants shall endure a period of establishment. This period shall begin in June and end in September of the same year. To qualify for inspection, plants shall have been in place, in a live healthy condition, on or before June 1 of the year of inspection. To be acceptable, plants shall be in a live healthy condition, representative of their species, at the time of inspection in the month of September.

When the planting work is performed by a subcontractor, this delay in inspection and acceptance of plants shall not delay acceptance of the entire project and final payment due if the Contractor requires and receives from the subcontractor a third party performance bond naming the Department as obligee in the full amount of the planting quantities listed in the contract, multiplied by their contract unit prices. The bond shall be executed prior to acceptance and final payment of the non-planting items and shall be in full force and effect until final inspection and acceptance of all plants including replacements. Execution of the third party bond shall be the option of the prime Contractor.”

253.16 Method of Measurement. Revise this Article to read:

“**253.16 Method of Measurement.** This work will be measured for final payment, in place, after the period of establishment. Trees, shrubs, and vines will be

measured as each individual plant. Seedlings will be measured in units of 100 plants.”

253.17 Basis of Payment. Revise this Article to read:

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

- (a) Initial Payment. Upon planting, 75 percent of the pay item(s) will be paid.
- (b) Final Payment. Upon inspection and acceptance of the plant material, or upon execution of a third party bond, the remaining 25 percent of the pay item(s) will be paid.”

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SUPPLEMENTAL SPECIFICATION
FOR
SECTION 280. TEMPORARY EROSION CONTROL

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

280.04 Temporary Erosion Control Systems. Replace the second sentence of the first paragraph of Article 280.04(a) with the following:

“Temporary ditch checks shall be constructed with rolled excelsior, products from the Department’s approved list, or with aggregate when specified. Manufactured ditch checks shall be installed according to the manufacturer’s specifications.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 406. HOT-MIX ASPHALT BINDER AND SURFACE COURSE

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

406.03 Equipment. Add the following to Article 406.03(e):

“(e) Spreading and Finishing Machine (Note 1) 1102.03

Note 1. When a notched wedge joint is required, the strike off device shall produce the notches and wedge of the joint and shall be adjustable. The device shall be attached to the paver and shall not restrict operation of the main screed.

The wedge roller shall have a minimum diameter of 12 in. (300 mm), a minimum weight of 50 lb/in. (9 N/mm) of width, and a width equal to the wedge. The roller shall be attached to the paver.”

406.05 Preparation, Priming and Leveling of Brick, Concrete, HMA or Aggregate Bases. Revise the table and the second paragraph of Article 406.05(c) to read:

“Leveling Binder	
Nominal, Compacted, Leveling Binder Thickness, in. (mm)	Mixture Composition
≤ 1 1/4 (32)	IL-4.75, IL-9.5, or IL-9.5L
> 1 1/4 to 2 (32 to 50)	IL-9.5, IL-12.5, or IL-9.5L

The density requirements of Article 406.07(c) shall apply for leveling binder, machine method, when the nominal compacted thickness is: 3/4 in. (19 mm) or greater for IL-4.75 mixtures; 1 1/4 in. (32 mm) or greater for IL-9.5 and IL-9.5L mixtures; and 1 1/2 in. (38 mm) or greater for IL-12.5 mixtures.”

406.06 Placing. Revise Article 406.06(b) to read:

“(b) Placement Conditions. Placement of HMA shall be under the following conditions.

(1) General Conditions. HMA shall be placed on a clean, dry base and when weather conditions are suitable. The leveling binder and binder courses shall be placed only when the temperature in the shade is at least 40 °F (5 °C) and the forecast is for rising temperatures. The

surface course shall be placed only when the air temperature in the shade is at least 45 °F (8 °C) and the forecast is for rising temperatures.

The HMA shall be delivered at a temperature of 250 to 350 °F (120 to 175 °C).

Intermingling of different mixture compositions at any one paver will not be permitted.

- (2) Special Conditions for mixture IL-4.75.
 - a. The surface shall be dry for at least 24 hours, and clean, prior to placement of the mixture.
 - b. Work shall not begin when local conditions indicate rain is imminent.
 - c. The mixture shall be placed only when the temperature in the shade is at least 50 °F (10 °C) and the forecast is for rising temperatures.
 - d. The mixture temperature shall be 310 to 350 °F (155 to 175 °C) and shall be measured in the truck just prior to placement.
 - e. When used as leveling binder, the mixture shall be overlaid within five days of being placed.”

Add the following paragraph to the end of Article 406.06(d):

“The minimum and maximum compacted lift thickness for mixture IL-4.75 shall be 3/4 in. (19 mm) and 1 1/4 in. (32 mm) respectively.”

Revise Article 406.06(g) to read:

- “(g) Construction Joints. Transverse and longitudinal construction joints shall be constructed according to the following.

Joints between old and new pavements or between successive days’ work shall be made so as to ensure thorough and continuous bond between the old and new mixtures.

- (1) Transverse Joints. The HMA shall be placed away from transverse construction joints.

Transverse construction joints in previously laid material may be constructed by cutting the material back for its full depth to expose a fresh surface. Where a wooden header is used at a construction joint, the cutting may be omitted provided the joint conforms to the specified thickness.

- (2) Longitudinal Joints. Unless prohibited by stage construction, any HMA lift shall be complete before construction of the subsequent lift. The

longitudinal joint in all lifts shall be at the centerline of the pavement if the roadway comprises two lanes in width, or at lane width if the roadway is more than two lanes in width.

When stage construction prohibits the total completion of a particular lift, the longitudinal joint in one lift shall be offset from the longitudinal joint in the preceding lift by not less than 3 in. (75 mm). The longitudinal joint in the surface course shall be at the centerline of the pavement if the roadway comprises two lanes in width, or at lane width if the roadway is more than two lanes in width.

A notched wedge longitudinal joint shall be used between successive passes of HMA binder course that has a difference in elevation of greater than 2 in. (50 mm) between lanes on pavement that is open to traffic.

The notched wedge longitudinal joint shall consist of a 1 to 1 1/2 in. (25 to 38 mm) vertical notch at the lane line, a 9 to 12 in. (230 to 300 mm) wide uniform taper sloped toward and extending into the open lane, and a second 1 to 1 1/2 in. (25 to 38 mm) vertical notch at the outside edge.

The notched wedge longitudinal joint shall be formed by the strike off device on the paver. The wedge shall then be compacted by the joint roller.

When using a notched wedge joint, the bituminous material specified for the mainline prime coat shall be applied to the entire face of the longitudinal joint immediately prior to placing the adjacent lift of binder. The material shall be uniformly applied at a rate of 0.05 to 0.1 gal/sq yd (0.2 to 0.5 L/sq m).”

406.07 Compaction. Revise Table 1 of Article 406.07 to read:

"TABLE 1 - MINIMUM ROLLER REQUIREMENTS FOR HMA ^{4/}				
	Breakdown Roller (one of the following)	Intermediate Roller	Final Roller (one or more of the following)	Density Requirement
Level Binder: (When the density requirements of Article 406.05(c) do not apply.)	P ^{3/}	--	V _S , P, T _B , T _F , 3W	To the satisfaction of the Engineer.
Binder and Surface ^{1/} Level Binder ^{1/} : (When the density requirements of Article 406.05(c) apply.)	V _D , P, T _B , 3W	P ^{3/}	V _S , T _B , T _F	As specified in Articles: 1030.05(d)(3), (d)(4), and (d)(7).
Bridge Decks ^{2/}	T _B	--	T _F	As specified in Articles: 582.05 and 582.06.

- 1/ If the average delivery at the job site is 85 ton/hr (75 metric ton/hr) or less, any roller combination may be used provided it includes a steel wheeled roller and the required density and smoothness is obtained.
- 2/ One T_B roller may be used for both breakdown and final rolling on bridge decks 300 ft (90 m) or less in length, except when the air temperature is less than 60 °F (15 °C).
- 3/ A V_D roller may be used in lieu of the P roller on mixtures containing polymer modified asphalt binder.
- 4/ For mixture IL-4.75, a minimum of two T_B rollers and one T_F roller shall be provided. P and V rollers will not be permitted.”

406.14 Basis of Payment. Add the following paragraph after the third paragraph of Article 406.14:

“Mixture IL-4.75 will be paid for at the contract unit price per ton (metric ton) for POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50; and POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-4.75, N50.”

State of Illinois
Department of Transportation

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 January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

420.09 Strike Off, Consolidation, Finishing, Longitudinal Floating, Straightedging, Edging, and Final Finish. Revise the first sentence of the third paragraph of Article 420.09(e)(1) to read:

“The metal comb shall consist of a single line of tempered spring steel tines variably spaced as shown in the table below and securely mounted in a suitable head.”

Revise the fifth sentence of the third paragraph of Article 420.09(e)(1) to read:

“The tining device shall be operated so as to produce a pattern of grooves, 1/8 to 3/16 in. (3 to 5 mm) deep and 1/10 to 1/8 in. (2.5 to 3.2 mm) wide across the pavement. The tining device shall be operated at a 1:6 skew across the pavement for facilities with a posted speed limit of 55 mph or greater. The tining pattern shall not overlap or leave gaps between successive passes.”

Add the following table after the third paragraph of Article 420.09(e)(1):

“Center to Center Spacings of Metal Comb Tines in. (mm) (read spacings left to right)”				
1 5/16 (34)	1 7/16 (36)	1 7/8 (47)	2 1/8 (54)	1 7/8 (48)
1 11/16 (43)	1 1/4 (32)	1 1/4 (31)	1 1/16 (27)	1 7/16 (36)
1 1/8 (29)	1 13/16 (46)	13/16 (21)	1 11/16 (43)	7/8 (23)
1 5/8 (42)	2 1/16 (52)	15/16 (24)	11/16 (18)	1 1/8 (28)
1 9/16 (40)	1 5/16 (34)	1 1/16 (27)	1 (26)	1 (25)
1 1/16 (27)	13/16 (20)	1 7/16 (37)	1 1/2 (38)	2 1/16 (52)
2 (51)	1 3/4 (45)	1 7/16 (37)	1 11/16 (43)	2 1/16 (53)
1 1/16 (27)	1 7/16 (37)	1 5/8 (42)	1 5/8 (41)	1 1/8 (29)
1 11/16 (43)	1 3/4 (45)	1 3/4 (44)	1 3/16 (30)	1 7/16 (37)
1 5/16 (33)	1 9/16 (40)	1 1/8 (28)	1 1/4 (31)	1 15/16 (50)
1 5/16 (34)	1 3/4 (45)	13/16 (20)	1 3/4 (45)	1 15/16 (50)
2 1/16 (53)	2 (51)	1 1/8 (29)	1 (25)	11/16 (18)
2 1/16 (53)	11/16 (18)	1 1/2 (38)	2 (51)	1 9/16 (40)
11/16 (17)	1 15/16 (49)	1 15/16 (50)	1 9/16 (39)	2 (51)
1 7/16 (36)	1 7/16 (36)	1 1/2 (38)	1 13/16 (46)	1 1/8 (29)
1 1/2 (38)	1 15/16 (50)	15/16 (24)	1 5/16 (33)”	

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 443. REFLECTIVE CRACK CONTROL TREATMENT

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

443.01 Description. Revise the third sentence of the first paragraph of this Article to read:

“Strip reflective crack control treatment shall be either System A, B, C, or D at the option of the Contractor.”

443.02 Materials. Add the following to this Article:

- “(c) Hot-Poured Joint Sealer 1050.02
- (d) Bituminous Materials (Note 1) (Note 2) (Note 3) (Note 4) 1032

Note 1. The asphalt binder used for System A shall be PG 58-22 or PG 64-22 meeting the requirements of Article 1032.05(a).

Note 2. The primer to be used with System B shall be supplied by the manufacturer of the membrane and shall be compatible with the membrane.

Note 3. The tack coat to be used with System C shall be SS-1, SS-1h, SS-1hP, CSS-1, CSS-1h, or CSS-1hP meeting the requirements of Article 1032.06.

Note 4. The two applications of tack coat to be used with System D shall be according to the following.

The tack coat for applying the membrane to the pavement surface shall be PG 64-22, PG 58-28, or PG 52-28 meeting the requirements of Article 1032.05(a).

The tack coat applied to the top of the membrane prior to the HMA overlay shall be SS-1, SS-1h, SS-1hP, CSS-1, CSS-1h, or CSS-1hP meeting the requirements of Article 1032.06. Cutback asphalts shall not be used.”

443.09 Method of Measurement. Revise this Article to read:

“**443.09 Reflective Crack Control System D.** The stress relief membrane shall be applied when the surface temperature is a minimum of 50 °F (10 °C) and rising.

- (a) Tack Coat Placement for Membrane. The tack coat shall be applied to the existing surface using one of the following methods.
- (1) A hand held wand with a nozzle that produces a fan shaped spray to apply the tack coat evenly according to the rate specified by the manufacturer.
 - (2) A hand held wand without a spray nozzle. The tack coat shall be spread with a squeegee according to the rate specified by the manufacturer.
 - (3) A distributor bar attached to a distributor truck, for longitudinal applications only. The distributor bar nozzles shall be set at 20 degrees to the axis of the bar and the tack coat shall be applied according to the rate specified by the manufacturer. Application of the tack coat directly from a distributor bar attached to a distributor truck will not be permitted for transverse applications.

The maximum width of the tack coat application shall be such that the tack coat extends a maximum of 1 1/2 in. (40 mm) on both sides of the stress relief membrane strip.

- (b) Stress Relief Membrane Placement. The open grid woven polyester side of the material shall be placed up with the nonwoven side placed into the tack. The stress relief membrane shall be centered over the crack or joint on the existing surface and with a minimum of 6 in. (150 mm) of the membrane extending beyond the edges of the joint.

The material shall be laid smooth with no uplifted edges. The stress relief membrane shall be placed and rolled immediately with a riding static drum roller or a rubber tire roller. A maximum of three minutes shall pass between the first and second rolling efforts.

The stress relief membrane shall be butted where transverse and longitudinal joints meet or where two rolls must be joined. When required, the stress relief membrane shall be cut with a razor knife from the woven polyester side.

The stress relief membrane shall be placed at least two hours in advance of paving operations. If application must immediately precede the paving operation, hot-poured joint sealer may be required as a tack coat to bond the stress relief membrane to the existing surface.

- (c) Traffic Exposure. Exposing the membrane to traffic shall be minimized. Small amounts of washed sand may be used to blot excess tack coat when necessary to facilitate movement of traffic or construction equipment over the membrane prior to placement of the overlay. Damaged membranes shall be removed and replaced.
- (d) Paving Tack Coat/Paving. Paving operations shall only begin when the membrane is thoroughly bonded to the existing surface. The membrane may be exposed to moisture and rain prior to the application of the overlay,

however, the stress relief membrane must be dry at the time the overlay is placed.

A tack coat shall be applied prior to paving over the membrane. Hot-mix asphalt or dry washed sand may be broadcast ahead of the paver if the membrane is sticking to the tires of the paving equipment. The minimum asphalt overlay thickness (total) shall be 2 in. (50 mm) compacted.

When using a vibratory roller for compaction, it shall be set to the lowest amplitude and highest frequency settings.”

443.10 Basis of Payment. Revise this Article to read:

“**443.10 Method of Measurement.** Area reflective crack control treatment will be measured for payment in place and the area computed in square yards (square meters). Strip reflective crack control treatment will be measured for payment in feet (meters) along the joint or crack.”

Add the following Article to this Section:

“**443.11 Basis of Payment.** This work will be paid for at the contract unit price per square yard (square meter) for AREA REFLECTIVE CRACK CONTROL TREATMENT or per foot (meter) for STRIP REFLECTIVE CRACK CONTROL TREATMENT.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 502. EXCAVATION FOR STRUCTURES

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

502.12 Method of Measurement. Add the following to the end of the first paragraph of Article 502.12(b):

“The volume of any unstable and/or unsuitable material removed within the structure excavation will be measured for payment in cubic yards (cubic meters).”

502.13 Basis of Payment. Revise the fourth paragraph of this Article to read:

“Removal and disposal of unstable and/or unsuitable material will be paid for at the contract unit price per cubic yard (cubic meter) for REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES. When the contract does not contain a pay item for removal and disposal of unstable and/or unsuitable material for structures and this item is required, it will be paid for according to Article 109.04.”

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 January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

503.05 Falsework. Revise the first paragraph of this Article to read:

“**503.05 Falsework.** The falsework shall be designed, constructed, and maintained for the required loads and site conditions. The Contractor shall submit detailed plans for falsework, prepared and sealed by an Illinois Licensed Structural Engineer, for examination by the Engineer. If such plans are not satisfactory to the Engineer, the Contractor shall make such changes in them as may be required.”

503.06 Forms. Revise the third paragraph of Article 503.06(b)(2) to read:

“Ties shall be a minimum of No. 4 (No. 13) epoxy coated reinforcement bars with threaded ends. Each tie bar shall be furnished with a tie bar stabilizing system capable of drawing the tie bar taut. The tie bar stabilizing system shall be approved by the Engineer and shall consist of adjustable tie clips, lag studs, and turnbuckles. The tie clips shall mechanically attach to the outside fascia girder or interior girders as required, and the individual tie bar. The tie bars shall be placed parallel to the transverse reinforcement. The tie bar shall not be placed lower than the bottom transverse reinforcement or higher than the top transverse reinforcement. No welding will be permitted to the structural steel or stud shear connectors, or reinforcement bars for concrete beams, for the installation of the tie bar stabilizing system. After installation, the tie bar shall be drawn taut until the bar does not vary from a straight line from center of tie clip to center of opposite tie clip.”

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 January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

504.06 Precast, Prestressed Concrete Members. Revise Article 504.06(c) to read:

- “(c) Handling, Storing, and Transporting. The members shall be maintained in upright position at all times and shall be supported as described herein. During lifting, members shall be supported only by the inserts provided for that purpose. During transportation, wood blocks or other suitable material shall be placed under the tie down chains to prevent chipping of the concrete. If temporary storage is required at the jobsite the members shall be supported on timber, at least 4 in. (100 mm) wide, and shall be maintained in level position so that no twisting of the member will occur. For both transportation and temporary storage, the ends of I-beams shall not extend a distance of more than the depth of the beam and, in no case, more than 3.5 ft (1.1 m) beyond the bolsters or other supports. The ends of Bulb T-beams shall not extend more than 6 ft (1.8 m) beyond the supports. The ends of deck beams shall not extend a distance of more than 1 1/2 times their depth, and in no case more than 3 ft (0.9 m), beyond the supports. No stacking of deck beams will be allowed at the jobsite.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 505. STEEL STRUCTURES

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

505.04 Fabrication. Revise the first paragraph of Article 505.04(f)(2)d.1. to read:

- “1. Installation. After all bolts in a connection are brought to a “snug tight” condition, the outer face of the nut shall be match-marked with the protruding portion of the bolt to visually determine the relative rotation occurring between the bolt and the nut during the process of final tightening. The wrench operator shall make marks with a permanent ink type marker or other approved means.”

505.08 Erection. Revise Article 505.08(d) to read:

- “(d) Falsework. The falsework shall be designed, constructed, and maintained for the required loads and site conditions. The Contractor shall submit detailed plans for falsework, prepared and sealed by an Illinois Licensed Structural Engineer, for examination by the Engineer. If such plans are not satisfactory to the Engineer, the Contractor shall make such changes in them as may be required.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 540. BOX CULVERTS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

540.02 Materials. Delete subparagraph (f) and Note 2 from this Article.

540.06 Precast Concrete Box Culverts. Revise the fifth paragraph of this Article to read:

“The joints between precast box sections shall be sealed and all voids filled with a mastic joint sealer. In addition, the joints shall be externally sealed on the sides and top using 13 in. (325 mm) wide external sealing bands. Prior to applying the sealing band, the concrete surface shall be cleaned to remove dirt or laitance and allowed to dry. The sealing band shall be centered over the joint, secured in place, and protected from damage during the backfilling operation.”

540.07 Method of Measurement. Add the following two paragraphs after the third paragraph of Article 540.07(b):

“Excavation in rock will be measured for payment according to Article 502.12.

The volume of any unstable and/or unsuitable material removed below plan bedding grade will be measured for payment in cubic yards (cubic meters).”

540.08 Basis of Payment. Add the following two paragraphs after the fifth paragraph of this Article:

“Excavation in rock will be paid for according to Article 502.13.

Removal and disposal of unstable and/or unsuitable material below plan bedding grade will be paid for according to Article 502.13.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 581. WATERPROOFING MEMBRANE SYSTEM

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

581.06 Application of Membrane System. Revise the first sentence of the sixth paragraph of this Article to read:

“Coal tar pitch emulsion shall not be applied until the primer has cured according to manufacturer's recommended dry time or until all solvents that may cause bleeding of the emulsion have evaporated.”

581.08 Sequence of Construction Operations. Revise Article 581.08(a) to read:

“(a) Penetrating Primer 0.01 gal/sq yd (0.05 L/sq m) [manufacturer's recommended cure time]”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 630. STEEL PLATE BEAM GUARDRAIL

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

630.02 Materials. Add the following to Article 630.02:

“(g) Plastic Blockouts (Note 1.)

Note 1. Plastic blockouts may be used in lieu of wood blockouts for steel plate beam guardrail. The plastic blockouts shall be the minimum dimensions shown on the plans and shall be on the Department’s approved list.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 633. REMOVING AND REERECTING GUARDRAIL AND TERMINALS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

633.03 General. Revise the second sentence of the third paragraph of this Article to read:

“The existing steel posts may be drilled to match the bolt pattern shown on the plans for the wood block-out or a new steel post shall be provided.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 637. CONCRETE BARRIER

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

637.12 Basis of Payment. Add the following paragraph after the first paragraph of Article 637.12:

“When a double face concrete barrier with a variable cross-section is required, and the variation exceeds 3 in. (75 mm), the barrier will be paid for at the contract unit price per foot (meter) for CONCRETE BARRIER, VARIABLE CROSS-SECTION, of the height specified.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 669. REMOVAL AND DISPOSAL OF REGULATED SUBSTANCES

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

669.01 Description. Revise this Article to read:

"669.01 Description. This work shall consist of the excavation, removal, and proper disposal of contaminated soil, water, and underground storage tanks (UST), their content and associated underground piping to the point where the piping is above the ground, including determining the content types and estimated quantities."

669.15 Method of Measurement. Revise the first paragraph this Article 669.15 to read:

"669.15 Method of Measurement. Non-special waste, special waste, and hazardous waste soil will be measured for payment according to Article 202.07(b) when performing earth excavation, Article 502.12(b) when excavating for structures, or by computing the volume of the trench using the maximum trench width permitted and the actual depth of the trench."

669.16 Basis of Payment. Revise the second paragraph of this Article to read:

"The excavation, transportation, and disposal of soil and other materials from an excavation determined to be contaminated will be paid for at the contract unit price per cubic yard (cubic meter) for NON-SPECIAL WASTE DISPOSAL, SPECIAL WASTE DISPOSAL, or HAZARDOUS WASTE DISPOSAL."

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 672. SEALING ABANDONED WATER WELLS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

Revise this section to read:

“SECTION 672. SEALING ABANDONED WELLS

672.01 Description. This work shall consist of sealing abandoned water wells and monitoring wells.

CONSTRUCTION REQUIREMENTS

672.02 General. Work shall be performed according to the “Illinois Water Well Construction Code” (77 Illinois Administrative Code 920) and shall be performed by a licensed water well driller. A list of licensed water well drillers is available from the Illinois Department of Public Health offices in Springfield.

Any available information, such as well type, diameter, depth, and geologic data will be shown on the plans. Unless otherwise noted, monitoring wells are assumed to be 2 in. (50 mm) in diameter and a maximum of 25 ft (7.6 m) deep.

672.03 Basis of Payment. This work will be paid for at the contract unit price per each for SEALING ABANDONED WATER WELLS or SEALING ABANDONED MONITORING WELLS.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 701. WORK ZONE TRAFFIC CONTROL AND PROTECTION

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

701.17 Specific Construction Operations. Revise Article 701.17(e)(3)b. to read:

- “b. Strength Tests. For patches constructed with Class PP-1 concrete, the pavement may be opened to traffic when test specimens have obtained a minimum flexural strength of 600 psi (4,150 kPa) or a minimum compressive strength of 3200 psi (22,100 kPa) according to Article 1020.09.

For patches constructed with Class PP-2, PP-3, PP-4, or PP-5 concrete, the pavement may be opened to traffic when test specimens have obtained a minimum flexural strength of 300 psi (2050 kPa) or a minimum compressive strength of 1600 psi (11,000 kPa) according to Article 1020.09. However, the concrete mixture shall obtain a minimum flexural strength of 600 psi (4150 kPa) or a minimum compressive strength of 3200 psi (22,100 kPa) in the time specified in Table 1 of Article 1020.04.

With the approval of the Engineer, concrete strength may be determined according to Illinois Modified AASHTO T 325.”

701.18 Highway Standards Application. Revise the third paragraph of Article 701.18(i) to read:

“Raised reflectorized pavement markers at 25 ft (8 m) centers may be used in lieu of tape where the pavement marking is to be placed adjacent to the barricades or drums.”

701.19 Method of Measurement. Add the following to this Article:

- “(f) Removal of existing pavement markings and raised reflective pavement markers will be measured for payment according to Article 783.05.”

701.20 Basis of Payment. Add the following to this Article:

- “(j) Removal of existing pavement markings and raised reflective pavement markers will be paid for according to Article 783.06.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 720. SIGN PANELS AND APPURTENANCES

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

720.02 Materials. Revise Articles 720.02(b) and (c) to read:

“(b) Sign Face, Sign Legend and Supplemental Panels 1091”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 721. SIGN PANEL OVERLAY

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

721.02 Materials. Revise Article 721.02(c) to read:

“(c) Sign Legends (Note 2) 1091”

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Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 722. DEMOUNTABLE SIGN LEGEND CHARACTERS AND ARROWS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

722.02 Materials. Revise this Article to read:

“**722.02 Materials.** Materials shall be according to Article 1091.02 for sign legend specified for Type 3 sign panels.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 726. MILE POST MARKER ASSEMBLY

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

726.02 Materials. Revise Article 726.02(a) to read:

“(a) Sign Legend, Type 1 1091”

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Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 733. OVERHEAD SIGN STRUCTURES

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

733.04 Fabrication. Revise this Article to read:

“**733.04 Fabrication.** Structural steel shall be fabricated and inspected according to the applicable portions of Articles 505.04 and 505.05.

Aluminum shall be fabricated according to Article 1094.05 and the following. Thermal cutting will not be permitted. Holes and cuts in extruded alloys shall be made by mechanical methods (drilled, sawed, machined). All holes in castings or forgings shall be drilled from solid or formed and reamed for final fit. Damage to exposed aluminum surfaces producing an objectionable appearance, in the opinion of the Engineer, shall be cause for rejection. Cast or forged parts shall have all fins, flash, runner or riser remnants, or other irregularities removed. Tubing shall be seamless and uniform in quality and temper. Exterior and interior surfaces shall be clean, smooth, and free from slivers, laminations, cracks, or other defects.”

733.06 Erection. Revise this Article to read:

“**733.06 Erection.** Erection of all structural steel and structural aluminum shall be according to the applicable requirements of Article 505.08. High strength bolts, nuts, and washers shall be assembled and tightened according to Article 505.04(f)(2).”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 783. PAVEMENT MARKING AND MARKER REMOVAL

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

783.02 Materials. Add the following to this Article:

“(c) Water Blaster with Vacuum Recovery 1101.12”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 801. ELECTRICAL REQUIREMENTS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

801.14 Contract Guarantee. Add the following paragraph to the end of this Article:

“The warranty for an uninterruptable power supply (UPS) shall cover a minimum of two years from date the equipment is placed in operation; however, the batteries of the UPS shall be warranted for full replacement for a minimum of five years.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 805. ELECTRICAL SERVICE INSTALLATION – TRAFFIC SIGNALS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

805.02 Materials. Add the following to this Article:

“(d) Wood Pole 1069.04”

805.03 Installation. Add the following to the end of the first paragraph of this Article:

“When a service pole is necessary, it shall be installed according to Article 830.03(c).”

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Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 836. POLE FOUNDATION

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

836.03 Installation. Revise the second paragraph of Article 836.03(a) to read:

“The submittal requirements as stated in Article 516.04 shall not apply and the entire length of the drilled shaft shall be vibrated.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 838. BREAKAWAY DEVICES

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

838.03 Installation. Revise the first paragraph of this Article to read:

“**838.03 Installation.** All entryway points created by the use of breakaway devices shall be permanently and completely sealed against rodent entry. This includes the pole base plate and foundation plate openings, elongated holes for anchor rods, the opening below the pole base plate, and the wiring windows in both steel and concrete foundations. Where breakaway couplings are used in conjunction with steel foundations, the Contractor shall match the plate sizes in order to seal out rodents between the foundation and pole base. Breakaway devices are not allowed on bridge parapets, barrier walls, or pedestrian conflict areas, and are not required behind guardrail. The Contractor shall verify that the loading of the pole, arm(s), luminaire(s), and appurtenances does not exceed the capacity of the breakaway device.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 862. UNINTERRUPTABLE POWER SUPPLY

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

Add the following Section to the Standard Specifications:

“SECTION 862. UNINTERRUPTABLE POWER SUPPLY (UPS)

862.01 Description. This work shall consist of furnishing and installing an uninterruptable power supply (UPS).

862.02 Materials. Materials shall be according to the following.

Item	Article/Section
(a) Uninterruptable Power Supply	1074.04

CONSTRUCTION REQUIREMENTS

862.03 General. The UPS shall provide power for full run-time operation for an “LED-only” intersection (all colors red, yellow, and green) or flashing mode operation for an intersection using red LED’s. A UPS that provides a minimum of two hours of full run-time operation will be designated as “standard”. A UPS that provides a minimum of six hours of full run-time operation will be designated as “extended”.

The UPS shall include, but not be limited to the following: inverter/charger, power transfer relay, batteries, a separate manually operated non-electronic bypass switch, and all necessary hardware and interconnect wiring according to the plans. The UPS shall provide reliable emergency power to the traffic signals in the event of a power failure or interruption. The transfer from utility power to battery power and visa versa shall not interfere with the normal operation of traffic controller, conflict monitor/malfunction management unit, or any other peripheral devices within the traffic controller assembly.

The UPS shall be designed for outdoor applications, and shall meet the environmental requirements of, “NEMA Standards Publication No. TS 2 – Traffic Controller Assemblies”, except as modified herein.

862.04 Installation. When a UPS is installed at an existing traffic signal cabinet, the UPS cabinet shall partially rest on the lip of the existing controller cabinet foundation and be secured to the existing controller cabinet by means of at least four

bolts. The UPS cabinet shall include a bottom constructed of the same material as the cabinet.

When a UPS is installed at a new signal cabinet and foundation, it shall be mounted as shown on the plans.

862.05 Basis of Payment. This work will be paid for at the contract unit price per each for UNINTERRUPTABLE POWER SUPPLY, STANDARD or UNINTERRUPTABLE POWER SUPPLY, EXTENDED.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 873. ELECTRIC CABLE

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

873.03 Materials. Revise this Article to read:

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

Item	Article/Section
(a) Electric Cable – Signal, Lead-in, Communication, Service, and Equipment Grounding Conductor	1076.04
(b) Electrical Raceway Materials	1088.01”

873.04 Method of Measurement. Revise this Article to read:

“**873.04 Grounding System.** All traffic signal circuits shall include an equipment grounding conductor according to Article 801.04. The equipment grounding conductor shall consist of a continuous, green, insulated conductor Type XLP, No. 6 AWG, stranded copper installed in raceways and bonded to each metal enclosure (handhole, post, mast arm pole, signal cabinet, etc.). All clamps shall be bronze or copper, and UL listed as ground connectors.

A grounding cable with connectors shall be installed between each handhole cover and frame. The grounding cable shall be looped over cable hooks installed in the handholes and 5 ft (1.5 m) of extra cable shall be provided between the frame and cover.

All equipment grounding conductors shall terminate at the ground bus in the controller cabinet. The neutral conductor and the equipment grounding conductor shall be connected in the service installation. At no other point in the traffic signal system shall the neutral and equipment grounding conductors be connected.”

873.05 Basis of Payment. Revise this Article to read:

“**873.05 Method of Measurement.** Electric cable will be measured for payment in feet (meters) in place. The length of measurement shall be the distance horizontally and vertically measured between the changes in direction, including cables in mast arms, mast arm poles, signal posts, and extra cable length as specified in Article 873.03. The vertical cable length shall be measured according to the following schedule.

Location	Cable Length
Foundation (signal post, mast arm pole, controller cabinet)	3 ft (1 m)
Mast Arm Pole (mast arm mounted signal head)	20 ft (6 m)
Mast Arm Pole (bracket mounted signal head attached to mast arm pole)	13 ft (4 m)
Signal Post (bracket or post mounted signal head)	13 ft (4 m)
Pedestrian Push Button	6 ft (2 m)"

Add the following Article to this Section:

“873.06 Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for ELECTRIC CABLE, of the method of installation (IN TRENCH, IN CONDUIT, or AERIAL SUSPENDED), of the type, size, and number of conductors specified.

The type specified will indicate the method of installation and whether the electric cable is Service, Signal, Lead-in, Communication, or Equipment Grounding Conductor.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 878. TRAFFIC SIGNAL CONCRETE FOUNDATION

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

878.03 Installation. Revise the second paragraph of Article 878.03(b) to read:

“The submittal requirements as stated in Article 516.04 shall not apply and the entire length of the drilled shaft shall be vibrated.”

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 January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1003.03 Fine Aggregate for Hot-Mix Asphalt (HMA). Revise the first paragraph of Article 1003.03(c) to read:

- “(c) Gradation. The fine aggregate gradation for High ESAL, Low ESAL, and All Other HMA shall be FA 1, FA 2, FA 20, or FA 21; except FA 21 will not be permitted for mixture IL-4.75.”

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 January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1004.01 Materials. Add the following to the gradation tables of Article 1004.01(c):

"COARSE AGGREGATE GRADATIONS													
Grad No.	Sieve Size and Percent Passing												
	3 in.	2 1/2 in.	2 in.	1 1/2 in.	1 in.	3/4 in.	1/2 in.	3/8 in.	No. 4	No. 8	No. 16	No. 50	No. 200 ^{1/}
CA 20							100	92±8	20±10	5±5	3±3		

COARSE AGGREGATE GRADATIONS (metric)													
Grad No.	Sieve Size and Percent Passing												
	75 mm	63 mm	50 mm	37.5 mm	25 mm	19 mm	12.5 mm	9.5 mm	4.75 mm	2.36 mm	1.18 mm	300 µm	75 µm ^{1/}
CA 20							100	92±8	20±10	5±5	3±3"		

1004.03 Coarse Aggregate for Hot-Mix Asphalt (HMA). Revise the table entry for C Surface Mixture in Article 1004.03(a) to read:

"Use	Mixture	Aggregates Allowed
HMA High ESAL Low ESAL	C Surface IL-12.5, IL-9.5, or IL-9.5L	Crushed Gravel Crushed Stone Crushed Sandstone Crushed Slag (ACBF) Crushed Steel Slag (except when used as leveling binder)"

Revise the second sentence of the first paragraph of Article 1004.03(b) to read:

"For Class A (seal or cover coat), and other binder courses, the coarse aggregate shall be Class C quality or better."

Revise the first line of the table in Article 1004.03(c) to read:

"Use	Size/Application	Gradation No.
Class A-1, 2, & 3	3/8 in. (10 mm) Seal	CA 16 or CA 20"

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1005. STONE AND BROKEN CONCRETE

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1005.01 Stone for Erosion Protection, Sediment Control, and Rockfill. Revise the first sentence of note 1/ of the Erosion Protection and Sediment Control Gradations table of Article 1005.01(c)(1) to read:

“A maximum of 15 percent of the total test sample by weight may be oversized material.”

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 January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1006.10 Concrete Reinforcement Bars, Fabric, and Strand. Revise
Article 1006.10(a) to read:

- “(a) Reinforcement Bars. Reinforcement bars will be accepted according to the current Bureau of Materials and Physical Research Policy Memorandum, “Reinforcement Bar and/or Dowel Bar Plant Certification Procedure”. The Department will maintain an approved list of producers.
- (1) Reinforcement Bars (Non-Coated). Reinforcement bars shall be according to ASTM A 706 (A 706M), Grade 60 (420) for deformed bars and the following.
- a. For straight bars furnished in cut lengths and with a well-defined yield point, the yield point shall be determined as the elastic peak load, identified by a halt or arrest of the load indicator before plastic flow is sustained by the bar and dividing it by the nominal cross-sectional area of the bar.
 - b. Tensile strength shall be a minimum of 1.20 times the yield strength.
 - c. For bars straightened from coils or bars bent from fabrication, there shall be no upper limit on yield strength; and for bar designation Nos. 3 - 6 (10 - 19), the elongation after rupture shall be at least 9 percent.
 - d. Heat Numbers. Bundles or bars at the construction site shall be marked or tagged with heat identification numbers of the bar producer.
 - e. Guided Bend Test. Bars may be subject to a guided bend test across two pins which are free to rotate, where the bending force shall be centrally applied with a fixed or rotating pin of a certain diameter as specified in Table 3 of ASTM A 706 (A 706M). The dimensions and clearances of this guided bend test shall be according to ASTM E 190.

- f. Spiral Reinforcement. Spiral reinforcement shall be deformed or plain bars conforming to the above requirements or cold-drawn steel wire conforming to AASHTO M 32.
- (2) Epoxy Coated Reinforcement Bars. Epoxy coated reinforcement bars shall be according to Article 1006.10(a)(1) and shall be epoxy coated according to AASHTO M 284 (M 284M) and the following.
- a. Certification. The epoxy coating applicator shall be certified according to the current Bureau of Materials and Physical Research Policy Memorandum, "Epoxy Coating Plant Certification Procedure". The Department will maintain an approved list.
 - b. Coating Thickness. When spiral reinforcement is coated after fabrication, the thickness of the epoxy coating shall be 7 to 20 mils (0.18 to 0.50 mm).
 - c. Cutting Reinforcement. Reinforcement bars may be sheared or sawn to length after coating, providing the end damage to the coating does not extend more than 0.5 in. (13 mm) back and the cut is patched before any visible rusting appears. Flame cutting will not be permitted."

1006.25 Steel Plate Beam Guardrail. Revise the first paragraph of Article 1006.25 to read:

"1006.25 Steel Plate Beam Guardrail. Steel plate beam guardrail, including bolts, nuts, and washers, shall be according to AASHTO M 180. The guardrail shall be Class A, with a Type II galvanized coating; except the weight (mass) of the coating for each side of the guardrail shall be at least 2.00 oz/sq ft (610 g/sq m). The coating will be determined for each side of the guardrail using the average of at least three non-destructive test readings taken on that side of the guardrail. The minimum average thickness for each side shall be 3.4 mils (86 µm)."

1006.28 Woven Wire Fence. Revise Article 1006.28(a) to read:

"(a) Woven Wire Fencing. Woven wire fencing shall be according to AASHTO M 279. The Design Number of the fence fabric shall be either 939-6-11, Grade 60 or 939-6-12 1/2, Grade 125. The metallic coating shall be either Type A or Type Z, Class 3."

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1008. STRUCTURAL STEEL COATINGS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1008.03 Aluminum Epoxy Mastic. Revise the first paragraph of Article 1008.03(c) to read:

- “(c) Packaged Components. The epoxy coating shall be supplied as a two-component material. It shall be well ground, free of caking, skins, gellation, and excessive setting. The shelf life of each component shall not be less than 12 months.”

Revise the first paragraph of Article 1008.03(d)(1) to read:

- “(1) The mixed epoxy shall contain a minimum of 87 percent solids by weight, when tested according to ASTM D 1644, Method A, except that the sample shall be heated for 72 hours at 100 ± 2 °F (37.8 ± 1 °C).”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1010. FINELY DIVIDED MATERIALS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1010.04 High-Reactivity Metakaolin (HRM). Revise the second paragraph of this Article to read:

“The HRM used in portland cement concrete shall be according to AASHTO M 321, except the fineness shall be a maximum 15 percent retained on the No. 325 (45 μ m) sieve.”

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 January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1020.04 Concrete Classes and General Mix Design Criteria. Revise Table 1 of this Article to read:

(See Next Page)

TABLE 1. CLASSES OF PORTLAND CEMENT CONCRETE AND MIX DESIGN CRITERIA

Class of Conc.	Use	Specification Section Reference	Cement Factor		Water / Cement Ratio lb/lb	S l u m p in. (4)	Mix Design Compressive Strength (Flexural Strength)			Air Content %	Coarse Aggregate Gradations
			cwt/cu yd (3)				psi, minimum				
			Min.	Max			Days				
							3	14	28		
PV	Pavement Base Course	420 or 421	5.65 (1) 6.05 (2)	7.05	0.32 - 0.42	2 - 4 (5)	Ty III 3500 (650)	3500 (650)		5.0 - 8.0	CA 5 & CA 7, CA 5 & CA 11, CA 7, CA 11, or CA 14
	Base Course Widening	353									
	Driveway Pavement	354									
	Shoulders	423									
	Shoulder Curb	483 662									
PP	Pavement Patching Bridge Deck Patching (10)	442					3200 (600)				CA 7, CA 11, CA 13, CA 14, or CA 16
	PP-1		6.50 6.20 (Ty III)	7.50 7.20 (Ty III)	0.32 - 0.44	2 - 4	at 48 hours			4.0 - 7.0	
	PP-2		7.35	7.35	0.32 - 0.38	2 - 6	at 24 hours			4.0 - 6.0	
	PP-3		7.35 (Ty III) (8)	7.35 (Ty III) (8)	0.32 - 0.35	2 - 4	at 16 hours			4.0 - 6.0	
	PP-4		6.00 (9)	6.25 (9)	0.32 - 0.50	2 - 6	at 8 hours			4.0 - 6.0	
	PP-5		6.75 (9)	6.75 (9)	0.32 - 0.40	2 - 8	at 4 hours			4.0 - 6.0	
RR	Railroad Crossing	422	6.50 6.20 (Ty III)	7.50 7.20 (Ty III)	0.32 - 0.44	2 - 4	3500 (650) at 48 hours			4.0 - 7.0	CA 7, CA 11, or CA 14
BS	Bridge Superstructure	503	6.05	7.05	0.32 - 0.44	2 - 4 (5)	4000 (675)			5.0 - 8.0	CA 7, CA 11, or CA 14 (7)
PC	Various Precast Concrete Items Wet Cast Dry Cast	1042	5.65 5.65 (TY III)	7.05 7.05 (TY III)	0.32 - 0.44 0.25 - 0.40	1 - 4 0 - 1	See Section 1042			5.0 - 8.0 N/A	CA7, CA11, CA 13, CA 14, CA 16, or CA 7 & CA 16
PS	Precast Prestressed Members	504	5.65 5.65 (TY III)	7.05 7.05 (TY III)	0.32 - 0.44	1 - 4			Plans	5.0 - 8.0	CA 7, CA 11, CA 13, CA 14, CA 16, or CA 7 & CA 16
	Precast Prestressed Piles and Extensions	512							5000		
	Precast Prestressed Sight Screen	639							3500		
MS	Massive Structures (except Superstructure) (11)	503	5.65 (1) 6.05 (2)	7.05	0.32 - 0.46	2 - 4	3500 (650)			5.0 - 8.0	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA7, CA5 & CA11, CA 7, or CA 11

TABLE 1. CLASSES OF PORTLAND CEMENT CONCRETE AND MIX DESIGN CRITERIA

Class of Conc.	Use	Specification Section Reference	Cement Factor		Water / Cement Ratio lb/lb	S l u m p in. (4)	Mix Design Compressive Strength (Flexural Strength)			Air Content %	Coarse Aggregate Gradations
			cwt/cu yd (3)				psi, minimum				
			Min.	Max			Days				
							3	14	28		
DS	Drilled Shaft (12) Metal Shell Piles (12) Sign Structures Drilled Shaft (12) Light Tower Foundation (12)	516 512 734 837	6.65	7.05	0.32 - 0.44	6 - 8 (6)		4000 (675)		5.0 - 8.0	CA 13, CA 14, CA 16, or a blend of these gradations.
SC	Seal Coat	503	5.65 (1) 6.05 (2)	7.05	0.32 - 0.46	3 - 5		3500 (650)		N/A	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 7 & CA 11, CA 7, or CA 11
SI	Structures (except Superstructure) Sidewalk Slope Wall Encasement Box Culverts End Section and Collar Curb, Gutter, Curb & Gutter, Median, and Paved Ditch Concrete Barrier Sign Structures Spread Footing Concrete Foundation Pole Foundation (12) Traffic Signal Foundation Drilled Shaft (12) Square or Rectangular	503 424 511 512 540 542 606 637 734 836 878	5.65 (1) 6.05 (2)	7.05	0.32 - 0.46	2 - 4 (5)		3500 (650)		5.0 - 8.0	CA 7, CA 11, CA 13, CA 14, or CA 16

- Notes:
- (1) Central mixed.
 - (2) Truck mixed or shrink mixed.
 - (3) For Class SC concrete and for any other class of concrete that is to be placed underwater, except Class DS concrete, the cement factor shall be increased by ten percent.
 - (4) The maximum slump may be increased to 7 in. when a high range water-reducing admixture is used for all classes of concrete, except Class PV, SC, and PP. For Class SC, the maximum slump may be increased to 8 in. For Class PP-1, the maximum slump may be increased to 6 in. For Class PS, the 7 in. maximum slump may be increased to 8 1/2 in. if the high range water-reducing admixture is the polycarboxylate type.
 - (5) The slump range for slipform construction shall be 1/2 to 1 1/2 in.
 - (6) If concrete is placed to displace drilling fluid, or against temporary casing, the slump shall be 7 - 9 in. at the point of placement. If a water-reducing admixture is used per Article 1020.05(b)(8), the slump shall be 2 - 4 in.
 - (7) For Class BS concrete used in bridge deck patching, the coarse aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching.
 - (8) In addition to the cement, 100 lb/cu yd of ground granulated blast-furnace slag and 50 lb/cu yd of microsilica (silica fume) shall be used. For an air temperature greater than 85 °F, the Type III cement may be replaced with Type I cement.
 - (9) The cement shall be a rapid hardening cement from the Department's "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs" for PP-4 and calcium aluminate cement for PP-5.
 - (10) For Class PP concrete used in bridge deck patching, the aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching. In addition, the mix design strength at 48 hours shall be increased to 4,000 psi compressive or 675 psi flexural.
 - (11) At the Contractor's option, Class SI concrete may be used when Class MS concrete is specified.
 - (12) The concrete mix shall be designed to remain fluid throughout the anticipated duration of the pour plus one hour. At the Engineer's discretion, the Contractor may be required to conduct a minimum 1 cu yd trial batch to verify the mix design.

TABLE 1. CLASSES OF PORTLAND CEMENT CONCRETE AND MIX DESIGN CRITERIA (metric)

Class of Conc.	Use	Specification Section Reference	Cement Factor		Water / Cement Ratio kg/kg	S l u m p mm (4)	Mix Design Compressive Strength (Flexural Strength) kPa, minimum			Air Content %	Coarse Aggregate Gradations
			kg/cu m (3)				Days				
			Min.	Max			3	14	28		
PV	Pavement Base Course	420 or 421									CA 5 & CA 7, CA 5 & CA 11, CA 7, CA 11, or CA 14
	Base Course Widening	353									
	Driveway Pavement	354	335 (1)	418	0.32 - 0.42	50 - 100 (5)	Ty III	24,000 (4500)		5.0 - 8.0	
	Shoulders	423	360 (2)								
	Shoulder Curb	483 662									
PP	Pavement Patching Bridge Deck Patching (10)	442					22,100 (4150)				CA 7, CA 11, CA 13, CA 14, or CA 16
	PP-1		385 365 (Ty III)	445 425 (Ty III)	0.32 - 0.44	50 - 100	at 48 hours			4.0 - 7.0	
	PP-2		435	435	0.32 - 0.38	50 - 150	at 24 hours			4.0 - 6.0	
	PP-3		435 (Ty III) (8)	435 (Ty III) (8)	0.32 - 0.35	50 - 100	at 16 hours			4.0 - 6.0	
	PP-4		355 (9)	370 (9)	0.32 - 0.50	50 - 150	at 8 hours			4.0 - 6.0	
	PP-5		400 (9)	400 (9)	0.32 - 0.40	50 - 200	at 4 hours			4.0 - 6.0	
RR	Railroad Crossing	422	385 365 (Ty III)	445 425 (Ty III)	0.32 - 0.44	50 - 100	24,000 (4500) at 48 hours			4.0 - 7.0	CA 7, CA 11, or CA 14
BS	Bridge Superstructure	503	360	418	0.32 - 0.44	50 - 100 (5)	27,500 (4650)			5.0 - 8.0	CA 7, CA 11, or CA 14 (7)
PC	Various Precast Concrete Items Wet Cast Dry Cast	1042	335 335 (TY III)	418 418 (TY III)	0.32 - 0.44 0.25 - 0.40	25 - 100 0 - 25	See Section 1042			5.0 - 8.0 N/A	CA7, CA11, CA13, CA 14, CA 16, or CA 7 & CA 16
PS	Precast Prestressed Members	504	335 335 (TY III)	418 418 (TY III)	0.32 - 0.44	25 - 100			Plans	5.0 - 8.0	CA 7, CA 11, CA 13, CA 14, CA 16, or CA 7 & CA 16
	Precast Prestressed Piles and Extensions	512							34,500		
	Precast Prestressed Sight Screen	639							24,000		
MS	Massive Structures (except Superstructure) (11)	503	335 (1) 360 (2)	418	0.32 - 0.46	50 - 100	24,000 (4500)			5.0 - 8.0	CA3 & CA7, CA3 & CA11, CA5 & CA7, CA5 & CA11, CA7, or CA11

TABLE 1. CLASSES OF PORTLAND CEMENT CONCRETE AND MIX DESIGN CRITERIA (metric)

Class of Conc.	Use	Specification Section Reference	Cement Factor		Water / Cement Ratio kg/kg	S l u m p mm (4)	Mix Design Compressive Strength (Flexural Strength)			Air Content %	Coarse Aggregate Gradations
			kg/cu m (3)				kPa, minimum				
			Min.	Max			Days				
							3	14	28		
DS	Drilled Shaft (12) Metal Shell Piles (12) Sign Structures Drilled Shaft (12) Light Tower Foundation (12)	516 512 734 837	395	418	0.32 - 0.44	150 - 200 (6)		27,500 (4650)		5.0 - 8.0	CA 13, CA 14, CA 16, or a blend of these gradations.
SC	Seal Coat	503	335 (1) 360 (2)	418	0.32 - 0.46	75 - 125		24,000 (4500)		N/A	CA 3 & CA 7, CA 3 & CA 11, CA 5 & CA 7, CA 7 & CA 11, CA 7, or CA 11
SI	Structures (except Superstructure) Sidewalk Slope Wall Encasement Box Culverts End Section and Collar Curb, Gutter, Curb & Gutter, Median, and Paved Ditch Concrete Barrier Sign Structures Spread Footing Concrete Foundation Pole Foundation (12) Traffic Signal Foundation Drilled Shaft (12) Square or Rectangular	503 424 511 512 540 542 606 637 734 836 878	335 (1) 360 (2)	418	0.32 - 0.46	50 - 100 (5)		24,000 (4500)		5.0 - 8.0	CA 7, CA 11, CA 13, CA 14, or CA 16

- Notes:
- (1) Central mixed.
 - (2) Truck mixed or shrink mixed.
 - (3) For Class SC concrete and for any other class of concrete that is to be placed underwater, except Class DS concrete, the cement factor shall be increased by ten percent.
 - (4) The maximum slump may be increased to 175 mm when a high range water-reducing admixture is used for all classes of concrete except Class PV, SC, and PP. For Class SC, the maximum slump may be increased to 200 mm. For Class PP-1, the maximum slump may be increased to 150 mm. For Class PS, the 175 mm maximum slump may be increased to 215 mm if the high range water-reducing admixture is the polycarboxylate type.
 - (5) The slump range for slipform construction shall be 13 to 40 mm.
 - (6) If concrete is placed to displace drilling fluid, or against temporary casing, the slump shall be 175 - 225 mm at the point of placement. If a water-reducing admixture is used per Article 1020.05(b)(8), the slump shall be 50 – 100 mm.
 - (7) For Class BS concrete used in bridge deck patching, the coarse aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching.
 - (8) In addition to the cement, 60 kg/cu m of ground granulated blast-furnace slag and 30 kg/cu m of microsilica (silica fume) shall be used. For an air temperature greater than 30 °C, the Type III cement may be replaced with Type I cement.
 - (9) The cement shall be a rapid hardening cement from the Department's "Approved List of Packaged, Dry, Rapid Hardening Cementitious Materials for Concrete Repairs" for PP-4 and calcium aluminate cement for PP-5.
 - (10) For Class PP concrete used in bridge deck patching, the aggregate gradation shall be CA 13, CA 14, or CA 16, except CA 11 may be used for full-depth patching. In addition, the mix design strength at 48 hours shall be increased to 27,500 kPa compressive or 4,650 kPa flexural.
 - (11) At the Contractor's option, Class SI concrete may be used when Class MS concrete is specified.
 - (12) The concrete mix shall be designed to remain fluid throughout the anticipated duration of the pour plus one hour. At the Engineer's discretion, the Contractor may be required to conduct a minimum 0.76 cu m trial batch to verify the mix design.

1020.05 Other Concrete Criteria. Add the following paragraph after the first paragraph of Article 1020.05(b)(6):

“For PP-5 concrete, a non-chloride accelerator, high range water-reducing admixture, and air-entraining admixture shall be used. The accelerator, high range water-reducing admixture, and air-entraining admixture shall be per the Contractor’s recommendation and dosage. The approved list of Concrete Admixtures shall not apply. A mobile portland cement concrete plant shall be used to produce the patching mixture. The high range water-reducing admixture shall not be used to reduce the cement factor.”

1020.11 Mixing Portland Cement Concrete. Revise Article 1020.11(b) to read:

“(b) Class PC Concrete. The concrete shall be central-mixed or truck mixed. Variations in plastic concrete properties shall be minimized between batches, and shall include having the truck mixer discharge all wash water prior to batching the concrete materials or receiving concrete from a stationary mixer.”

1020.13 Curing and Protection. Revise the Index Table of Curing and Protection of Concrete Construction to read:

"INDEX TABLE OF CURING AND PROTECTION OF CONCRETE CONSTRUCTION			
TYPE OF CONSTRUCTION	CURING METHODS	CURING PERIOD DAYS	LOW AIR TEMPERATURE PROTECTION METHODS
Cast-in-Place Concrete ^{11/}			
Pavement Shoulder	1020.13(a)(1)(2)(3)(4)(5) ^{3/ 5/}	3	1020.13(c)
Base Course			
Base Course Widening	1020.13(a)(1)(2)(3)(4)(5) ^{2/}	3	1020.13(c)
Driveway			
Median			
Barrier			
Curb			
Gutter	1020.13(a)(1)(2)(3)(4)(5) ^{4/ 5/}	3	1020.13(c) ^{16/}
Curb & Gutter			
Sidewalk			
Slope Wall			
Paved Ditch			
Catch Basin			
Manhole	1020.13(a)(1)(2)(3)(4)(5) ^{4/}	3	1020.13(c)
Inlet			
Valve Vault			
Pavement Patching	1020.13(a)(1)(2)(3)(4)(5) ^{2/}	3 ^{12/}	1020.13(c)
Railroad Crossing	1020.13(a)(3)(5)	1	1020.13(c)
Piles and Drilled Shafts	1020.13(a)(3)(5)	7	1020.13(d)(1)(2)(3)
Foundations & Footings			
Seal Coat	1020.13(a)(1)(2)(3)(4)(5) ^{4/ 6/}	7	1020.13(d)(1)(2)(3)
Substructure	1020.13(a)(1)(2)(3)(4)(5) ^{1/ 7/}	7	1020.13(d)(1)(2)(3)
Superstructure (except deck)	1020.13(a)(1)(2)(3)(5) ^{B/}	7	1020.13(d)(1)(2)
Deck	1020.13(a)(5)	7	1020.13(d)(1)(2) ^{17/}
Retaining Walls	1020.13(a)(1)(2)(3)(4)(5) ^{1/ 7/}	7	1020.13(d)(1)(2)
Pump Houses	1020.13(a)(1)(2)(3)(4)(5) ^{1/}	7	1020.13(d)(1)(2)
Culverts	1020.13(a)(1)(2)(3)(4)(5) ^{4/ 6/}	7	1020.13(d)(1)(2) ^{18/}
Other Incidental Concrete	1020.13(a)(1)(2)(3)(5)	3	1020.13(c)
Precast Concrete ^{11/}			
Bridge Slabs			
Piles and Pile Caps	1020.13(a)(3)(5) ^{9/ 10/}	As ^{13/}	19/
Other Structural Members		Required	
All Other Precast Items	1020.13(a)(3)(4)(5) ^{2/ 9/ 10/}	As ^{14/}	19/
		Required	
Precast, Prestressed Concrete ^{11/}			
All Items	1020(a)(3)(5) ^{9/ 10/}	Until Strand Tensioning is Released ^{15/}	19 ^m

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SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1022. CONCRETE CURING MATERIALS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1022.01 Membrane Curing Compounds. Revise Article 1022.01(d) to read:

“(d) Linseed Oil Emulsion. This material, which performs as a curing compound and sealer, shall be a blend of boiled linseed oil and high viscosity, heavy bodied linseed oil, emulsified in a water solution.

The oil phase shall be 50 ± 4 percent by volume and shall consist of boiled linseed oil according to ASTM D 260. The water phase shall be 50 ± 4 percent by volume. The Engineer will verify the oil and water phases according to the Illinois Laboratory Test Procedure “Linseed Oil Based Emulsion Curing Compound”.

The emulsion shall also meet the requirements of a Type I curing compound as described in (a) above, except the drying time requirement will be waived.”

1022.02 Burlap Curing Blankets and Cotton Mats. Revise the first paragraph of this Article to read:

“**1022.02 Burlap Curing Blankets and Cotton Mats**. These materials shall be according to AASHTO M 182 and shall be free from substances which may be deleterious to freshly placed concrete. Burlap shall meet the requirements for Class 3.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1024. NONSHRINK GROUT

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

Revise this section to read:

“SECTION 1024. NONSHRINK GROUT

“1024.01 Requirements. Nonshrink grout shall be according to Illinois Modified ASTM C 1107.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1030. HOT-MIX ASPHALT

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1030.02 Materials. Revise the second sentence of Note 3 of Article 1030.02 to read:

“For mixtures with an Ndesign \geq 90 and for mixture IL-4.75, at least 50 percent of the required fine aggregate fraction shall consist of either stone sand, slag sand, or steel slag meeting the FA/FM 20 gradation.”

1030.04 Mixture Design. Add the following to the list of Illinois Modified AASHTO references in Article 1030.04:

“AASHTO T 305 Standard Method of Test for Determination of Draindown Characteristics in Uncompacted Asphalt Mixtures”

Add the following to Article 1030.04(a):

“(4) IL-4.75 Mixture. The Job Mix Formula (JMF) shall fall within the following limits.

IL-4.75, MIXTURE COMPOSITION	
Sieve	Percent Passing
1/2 in. (12.5 mm)	100
3/8 in. (9.5 mm)	100
No. 4 (4.75 mm)	90-100
No. 8 (2.36 mm)	70-90
No. 16 (1.18 mm)	50-65
No. 30 (600 μ m)	35-55
No. 50 (300 μ m)	15-30
No. 100 (150 μ m)	10-18
No. 200 (75 μ m)	7-9
AB Content	7 % to 9 %”

1030.04 Mixture Design. Revise the table in Article 1030.04(b)(2) to read:

"VOLUMETRIC REQUIREMENTS Low ESAL				
Mixture Composition	Design Compactive Effort	Design Air Voids Target %	VMA (Voids in the Mineral Aggregate), % min.	VFA (Voids Filled with Asphalt Binder), %
IL-9.5L	N _{DES} =30	4.0	15.0	65-78
IL-19.0L	N _{DES} =30	4.0	13.0	N/A"

Add the following to Article 1030.04(b):

"(4) IL-4.75 Mixture.

VOLUMETRIC REQUIREMENTS IL-4.75	
Volumetric Parameter	Requirement
Design Air Voids	4.0 % at N _{design} 50
Voids in the Mineral Aggregate (VMA)	18.5 % minimum
Voids Filled with Asphalt (VFA)	78-88 %
Maximum Dust/AC Ratio	1.0
Maximum Draindown	0.3%"

1030.05 Quality Control/Quality Assurance (QC/QA). Add the following to the table in Article 1030.05(d)(2)a.:

"Parameter	Frequency of Tests High ESAL Mixture Low ESAL Mixture	Frequency of Tests All Other Mixtures	Test Method See Manual of Test Procedures for Materials
VMA Note 5.	Day's production ≥ 1200 tons: 1 per half day of production	N/A	Illinois-Modified AASHTO R 35
	Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)		
Air Voids Bulk Specific Gravity of Gyrotory Sample	Day's production ≥ 1200 tons: 1 per half day of production	1 per day	Illinois-Modified AASHTO T 312
	Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)		
Maximum Specific Gravity of Mixture	Day's production ≥ 1200 tons: 1 per half day of production	1 per day	Illinois-Modified AASHTO T 209
	Day's production < 1200 tons: 1 per half day of production for first 2 days and 1 per day thereafter (first sample of the day)		

Note 5. The G_{sb} used in the voids in the mineral aggregate (VMA) calculation shall be the same average G_{sb} value listed in the mix design."

Revise Article 1030.05(d)(4) to read:

“(4) Control Limits. Target values shall be determined by applying adjustment factors to the AJMF where applicable. The target values shall be plotted on the control charts within the following control limits.

CONTROL LIMITS					
Parameter	High ESAL Low ESAL	High ESAL Low ESAL	All Other	IL-4.75	IL-4.75
	Individual Test	Moving Avg. of 4	Individual Test	Individual Test	Moving Avg. of 4
% Passing: ^{1/}					
1/2 in. (12.5 mm)	± 6 %	± 4 %	± 15 %		
No. 4 (4.75 mm)	± 5 %	± 4 %	± 10 %		
No. 8 (2.36 mm)	± 5 %	± 3 %			
No. 16 (1.18 mm)				± 4 %	± 3 %
No. 30 (600 µm)	± 4 %	± 2.5 %			
Total Dust Content No. 200 (75 µm)	± 1.5 %	± 1.0 %	± 2.5 %	± 1.5 %	± 1.0 %
Asphalt Binder Content	± 0.3 %	± 0.2 %	± 0.5 %	± 0.3 %	± 0.2 %
Voids	± 1.2 %	± 1.0 %	± 1.2 %	± 1.2 %	± 1.0 %
VMA	-0.7 % ^{2/}	-0.5 % ^{2/}			

1/ Based on washed ignition oven

2/ Allowable limit below minimum design VMA requirement

DENSITY CONTROL LIMITS		
Mixture Composition	Parameter	Individual Test
IL-4.75	Ndesign = 50	93.0 - 97.4 % ^{1/}
IL-9.5, IL-12.5	Ndesign ≥ 90	92.0 – 96.0 %
IL-9.5,IL-9.5L, IL-12.5	Ndesign < 90	92.5 – 97.4 %
IL-19.0, IL-25.0	Ndesign ≥ 90	93.0 – 96.0 %
IL-19.0, IL-19.0L, IL-25.0	Ndesign < 90	93.0 – 97.4 %
All Other	Ndesign = 30	93.0 ^{2/} - 97.4 %

1/ Density shall be determined by cores or by correlated, approved thin lift nuclear gauge.

2/ 92.0 % when placed as first lift on an unimproved subgrade.”

Add the following to the table in Article 1030.05(d)(5):

“CONTROL CHART REQUIREMENTS	High ESAL Low ESAL	All Other
	VMA”	

Revise the heading of Article 1030.05(d)(6)a.1.:

“ 1. Voids, VMA, and Asphalt Binder Content.”

Revise the first sentence of the first paragraph of Article 1030.05(d)(6)a.1.(a.) to read:

“If the retest for voids, VMA, or asphalt binder content exceeds control limits, HMA production shall cease and immediate corrective action shall be instituted by the Contractor.”

Revise the table in Article 1030.05(e) of the Standard Specifications to read:

“Test Parameter	Acceptable Limits of Precision
% Passing: ^{1/}	
1/2 in. (12.5 mm)	5.0 %
No. 4 (4.75 mm)	5.0 %
No. 8 (2.36 mm)	3.0 %
No. 30 (600 μm)	2.0 %
Total Dust Content No. 200 (75 μm) ^{1/}	2.2 %
Asphalt Binder Content	0.3 %
Maximum Specific Gravity of Mixture	0.026
Bulk Specific Gravity	0.030
VMA	1.4 %
Density (% Compaction)	1.0 % (Correlated)

1/ Based on washed ignition.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1032. BITUMINOUS MATERIALS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1032.04 Spraying Application. Revise the table in Article 1032.04 to read:

“Spraying Application Temperature Ranges		
Type and Grade of Bituminous Material	Temperature Ranges	
	°F min. - max.	°C min. - max.
PEP	60 - 130	15 - 55
MC-30	85 - 190	30 - 90
MC-70, RC-70, SC-70	120 - 225	50 - 105
MC-250, SC-250	165 - 270	75 - 130
MC-800, SC-800	200 - 305	95 - 150
MC-3000, SC-3000	230 - 345	110 - 175
PG46-28	275 - 385	135 - 195
PG52-28	285 - 395	140 - 200
RS-2, CRS-2	110 - 160	45 - 70
SS-1, SS-1h, CSS-1, CSS-1h	75 - 130	25 - 55
SS-1hP, CSS-1hP	75 - 130	25 - 55
HFE-90, HFE-150, HFE-300	150 - 180	65 - 80
HFP, CRSP, HFRS-2	150 - 180	65 - 80
E-2	85 - 190	30 - 90
E-3	120 - 225	50 - 105
E-4	165 - 270	75 - 130”

1032.05 Asphalt Binder (Prepared from Petroleum). Add the following note after Table 1 and after Table 2 of Article 1032.05(b):

“Note. When SBS/SBR PG76-22 or SBS/SBR PG76-28 is specified for mixture IL-4.75, the elastic recovery shall be a minimum of 80.”

1032.06 Emulsified Asphalts. Revise Article 1032.06(e) to read:

- “(e) 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)	8000 (800) min.”

Revise Article 1032.06(f)(2) to read:

- “(2) Polymer modified emulsified asphalts CRSP (Cationic Rapid Setting) and HFP (Anionic High Float) shall be according to the following.
- a. The emulsified asphalt shall be modified with a styrene-butadiene diblock or triblock copolymer, or a styrene-butadiene rubber.
 - b. Upon examination of the storage stability test cylinder after standing undisturbed for 24 hours, the surface shall show no white, milky colored substance but shall be a homogenous brown color throughout.
 - c. The emulsions shall be according to the following requirements when tested according to AASHTO T 59.

	CRSP	HFP
Viscosity, Saybolt Furol, at 122 °F (50 °C), SFS	100-400	50 min.
Storage Stability Test, 24 hours, % ¹⁷	1 max.	1 max.
Particle Charge Test	Positive	N/A
Sieve Test, No. 20 (850 µm), retained on sieve, %	0.1 max.	0.1 max.
Demulsibility, 0.02N CaCl ₂ , %	N/A	30 min.
Distillation Test		
Residue from distillation test to 374 ± 9 °F (190 ± 5 °C), %	65 min.	65 min.
Oil distillate by volume, %	3 max.	3 max.

- d. The Tests on Residue from Distillation shall be according to the following.

	CRSP	HFP
Penetration, 77 °F (25 °C), 100 g, 5 sec., (AASHTO T 49), dmm	100-200	100-200
Ductility, 39.2 °F (4 °C), (AASHTO T 51), mm	300 min.	300 min.
Elastic Recovery, (AASHTO T 301), 39.2 °F (4 °C), %	50 min.	50 min.
Float test at 140 °F (60 °C), (AASHTO T 50), sec	N/A	1200 min.

The different grades are, in general, used for the following.

Grade	Use
SS-1, SS-1h, CSS-1, CSS-1h, HFE 90, SS-1hP, CSS-1hP	Tack or fog seal
PEP	Bituminous surface treatment prime
RS-2, HFE 90, HFE 150, HFE 300, CRSP, HFP, CRS-2, HFRS-2	Bituminous surface treatment
CSS-1h Latex Modified	Microsurfacing"

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1042. PRECAST CONCRETE PRODUCTS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1042.02 General. Add the following paragraph after the first paragraph of this Article:

“The reinforcement bars used in precast concrete products shall be according to Article 1006.10(a).”

1042.06 Precast Concrete Pipe (Sections 542, 550, 552, and 601). Revise the first paragraph of this Article to read:

“**1042.06 Precast Concrete Pipe (Sections 542, 550, 552, and 601)**. Precast concrete pipe shall be according to Articles 1042.03(c)(d)(e). Class PC concrete shall not apply. The concrete mix design specifications and material proportions shall be determined by the Contractor. Before the work begins, the concrete mix design specifications and material proportions shall be approved by the Engineer.”

Delete the second sentence of the first paragraph of Article 1042.06(a).

1042.07 Precast Reinforced Concrete Flared End Sections (Section 542). Revise the first paragraph of this Article to read:

“**1042.07 Precast Reinforced Concrete Flared End Sections (Section 542)**. Precast reinforced concrete flared end sections shall be according to Articles 1042.03(c)(d)(e). Class PC concrete shall not apply. The concrete mix design specifications and material proportions shall be determined by the Contractor. Before the work begins, the concrete mix design specifications and material proportions shall be approved by the Engineer.”

1042.10 Precast Concrete Catch Basins, Manhole, Inlets, Drainage Structures, and Valve Vault (Section 602). Revise the first paragraph of this Article to read:

“**1042.10 Precast Concrete Catch Basins, Manholes, Inlets, Drainage Structures, and Valve Vaults (Section 602)**. Precast concrete catch basins, manholes, inlets, drainage structures, and valve vaults shall be according to Articles 1042.03(c)(d)(e). Class PC concrete shall not apply. The concrete mix design specifications and material proportions shall be determined by the Contractor. Before the work begins, the concrete mix design specifications and material proportions shall be approved by the Engineer.”

1042.15 Precast Concrete Block, Brick, Masonry Units, and Pavers. Revise the last sentence of the first paragraph of this Article to read:

“Before the work begins, the concrete mix design specifications, material proportions, and aggregate gradations shall be approved by the Engineer.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1062. REFLECTIVE CRACK CONTROL SYSTEM

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

Add the following Article to this Section:

“**1062.04 Reflective Crack Control System D.** The stress relief membrane shall be 36 in. (900 mm) wide and 0.15 in. (4 mm) thick and shall be a system of materials manufactured in a composite three layer fashion with the following properties.

Stress Relief Membrane		
Property	Value	Test Method
Cold Flex	No cracking or separation of fabric	ASTM D 146 (modified)
Tensile Strength (Peak)	4,000 psi (27,580 kPa) min.	ASTM D 412 (modified)
Elongation (at Peak Tensile)	10% min.	ASTM D 412 (modified)
Weight	0.76 lbs/sq ft (3.7 kg/sq m)	
Density (mastic)	69 lbs/cu ft (1100 kg/cu m) min.	ASTM D 70
Thickness	0.15 in. (4 mm)	ASTM D 1777
Resistance to Puncture	5,000 psi (34,400 kPa)	ASTM D 3786
Absorption (mastic)	1 % max.	ASTM D 517
Brittleness	Passes	ASTM D 517
Softening Point (mastic)	220 °F (104 °C)	ASTM D 36

The bottom layer of the composite shall be a low strength, nonwoven, geotextile and shall be according to AASHTO M 288. The bottom geotextile shall be designed to fully bond with the existing pavement with the help of a tack coat. It shall be capable of accommodating sufficiently large stresses at the joint/crack without breaking its bond with the slab. The middle layer of the composite shall be a viscoelastic membrane designed to prevent water entry into the pavement through the cracks and/or joints in the pavement. It also acts as a stress absorbing member interlayer between the overlay and the underlying pavement. The top layer shall be a high strength woven geotextile with a tensile strength of 4,000 psi (27,580 kPa) at five percent strain according to ASTM D 4595. The top geotextile shall be designed to fully bond with the overlay and provide high stiffness and reinforcement to the overlay.

The stress relief membrane shall be stored in an inside enclosure with temperatures not exceeding 120 °F (49 °C). Any material that becomes wet prior to installation shall be removed from the jobsite and discarded.

The manufacturer shall furnish a certification with each shipment of stress relief membrane, stating the amount of product furnished, and that the material complies with these requirements.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1069. POLE AND TOWER

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1069.01 Light Poles. Revise Article 1069.01(a) to read:

- “(a) Loading. The following loading requirements shall include all possible luminaire and arm combinations up to and including the limits given. All other light pole configurations shall require the Contractor to submit for approval, detailed design calculations of each light pole including arm(s), luminaire(s), and any other attachments.
- (1) Poles with Arms. Poles with arms shall be designed and manufactured to withstand loadings of up to and including a 75 lb (34 kg) luminaire having an effective projected area of 1.6 sq ft (0.15 sq m) on a single 4 to 15 ft (1.2 to 4.5 m) arm, and shall also withstand loadings of up to and including the same luminaire on each of two 4 to 12 ft (1.2 to 3.6 m) arms (twin) oriented 180 degrees apart, meeting the criteria of AASHTO as specified above.
 - (2) Poles with Tenon Tops. Tenon top poles shall be designed and manufactured to withstand loadings of up to and including twin 100 lb (45 kg) luminaires having an effective projected area each of 3.85 sq ft (0.36 sq m) on a twin tenon bracket. The tenon at the top of the pole shall meet AASHTO loading requirements for twin luminaires as specified above.

The pole shall be designed to withstand wind induced vibrations in the shaft and arm(s) so that no damage occurs to the shaft, arm(s), luminaire(s), and/or their component parts. The pole shall be coordinated with all luminaires to be free of susceptibility to harmful harmonics and vibrations. A dampening device, as an integral part of the shaft, shall be installed in the shaft to alleviate such vibrations in aluminum poles and all other poles as necessary. The proposed vibration dampening device shall be included with the Contractor’s submittal.

Deflection of the pole top as caused by the combined effect of wind and deadload referenced above shall be as required by AASHTO. Pole deflection and loading compliance, certified by the manufacturer, shall be noted on the pole submittal.”

Revise Article 1069.01(c) to read:

“(c) Pole Dimensions. All light poles shall be according to the dimensions in the following tables.

Dimensions for Steel Light Poles ^{1/}			
	Mounting Height		
	35 ft (10.7 m) or less	Greater than 35 ft (10.7 m) to 50 ft (15.2 m)	Greater than 50 ft (15.2 m) to 60 ft (18.3 m)
Bolt Circle Diameter	11 1/2 in. (290 mm)	15.0 in. (380 mm)	15.0 in. (380 mm)
Minimum Shaft Base Diameter	8 in. (200 mm)	10 in. (250 mm)	10 in. (250 mm)
Base Plate Thickness	1 in. (25 mm)	1 1/4 in. (32 mm)	1 1/2 in. (40 mm)
Wall Thickness ^{2/}	10 gauge	7 gauge	5 gauge

Dimensions for Aluminum Light Poles ^{1/}			
	Mounting Height		
	35 ft (10.7 m) or less	Greater than 35 ft (10.7 m) to 45 ft (13.7 m)	Greater than 45 ft (13.7 m) to 50 ft (15.2 m)
Bolt Circle Diameter	11 1/2 in. (290 mm)	15.0 in. (380 mm)	15.0 in. (380 mm)
Minimum Shaft Base Diameter	8 in. (200 mm)	10 in. (250 mm)	10 in. (250 mm)
Wall Thickness	0.25 in. (6 mm)	0.25 in. (6 mm)	0.31 in. (8 mm)

Dimensions for Composite Light Poles	
Bolt Circle Diameter	15.0 in. (380 mm)
Minimum Shaft Base Diameter	10 in. (250 mm)
Base Plate Thickness	1 1/4 in. (32 mm)

1/ See Article 1069.02(b) for shaft diameters of aluminum davit style poles and Article 1069.03(b) for shaft diameters of steel davit style poles.

2/ Minimum wall thickness for stainless steel poles up to 35 ft (10.7 m) shall be 11 gauge.”

Revise the second paragraph of Article 1069.01(e) to read:

“Each base shall be equipped with four separate anchor rod covers. The covers shall be permanently attached and fit snugly to prevent rodent entry. On weathering steel poles, the covers shall not be in contact with the pole shaft.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1074. CONTROL EQUIPMENT

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

Add the following Article to this Section:

“1074.04 Uninterruptable Power Supply (UPS).

(a) Operation.

- (1) The UPS shall be line interactive and provide voltage regulation and power conditioning when utilizing utility power.

The UPS shall be sized appropriately for the intersection load. The total system load shall not exceed the manufacturer's specifications.

A standard UPS shall provide a minimum of two hours full run-time operation for LED signal modules load at 77 °F (25 °C) (minimum 700 W/1000 VA active output capacity, with 80 percent minimum inverter efficiency). An extended UPS shall provide a minimum of six hours full run-time operation for the same conditions.

- (2) The maximum transfer time from loss of utility power to switchover to battery backed inverter power shall be 65 milliseconds.
- (3) The UPS shall have four sets of normally open (NO) and normally closed (NC) single-pole double-throw (SPDT) relay contact closures, available on a panel-mounted terminal block, rated at a minimum 120 V/1 A, and labeled so as to identify each contact according to the plans.
 - a. The first set of NO and NC contact closures shall be energized whenever the unit switches to battery power. Contact shall be labeled or marked “On Batt”.
 - b. The second set of NO and NC contact closures shall be energized whenever the battery approaches approximately 40 percent of remaining useful capacity. Contact shall be labeled or marked “Low Batt”.
 - c. The third set of NO and NC contact closures shall be energized two hours after the unit switches to battery power. Contact shall be labeled or marked “Timer”.

- d. The fourth set of NO and NC contact closures shall be energized in the event of inverter/charger failure. Contact shall be labeled or marked "UPS Fail".
- (4) Operating temperature for the inverter/charger, power transfer relay, and manual bypass switch shall be -35 to 165 °F (-37 to +74 °C).
 - (5) Both the power transfer relay and manual bypass switch shall be rated at 240 VAC/30 amps, minimum.
 - (6) The UPS shall use a temperature-compensated battery charging system. The charging system shall compensate over a range of 1.4 – 2.2 mV/°F (2.5 - 4.0 mV/°C) per cell. The temperature sensor shall be external to the inverter/charger unit. The temperature sensor shall come with 6.5 ft (2 m) of wire.
 - (7) Batteries shall not be recharged when battery temperature exceeds 122 °F ± 5 °F (50 °C ± 3 °C).
 - (8) The UPS shall bypass the utility line power whenever the utility line voltage is outside of the following voltage range: 100 VAC to 130 VAC (± 2 VAC).
 - (9) When utilizing battery power, the UPS output voltage shall be between 110 and 125 VAC, pure sine wave output, ≤ 3 percent THD, 60 Hz ± 3 Hz.
 - (10) The UPS shall be compatible with the Department's traffic controller assemblies utilizing NEMA TS 1 or NEMA TS 2 controllers and cabinet components for full time operation.
 - (11) When the utility line power has been restored at above 105 VAC ± 2 VAC for more than 30 seconds, the UPS shall dropout of battery backup mode and return to utility line mode.
 - (12) When the utility line power has been restored at below 125 VAC ± 2 VAC for more than 30 seconds, the UPS shall dropout of battery backup mode and return to utility line mode.
 - (13) The UPS shall be equipped to prevent a malfunction feedback to the cabinet or from feeding back to the utility service.
 - (14) In the event of inverter/charger failure, the power transfer relay shall revert to the NC state, where utility line power is reconnected to the cabinet. In the event of an UPS fault condition, the UPS shall always revert back to utility line power.
 - (15) Recharge time for the battery, from "protective low-cutoff" to 80 percent or more of full battery charge capacity, shall not exceed twenty hours.

- (16) The manual bypass switch shall be wired to provide power to the UPS when the switch is set to manual bypass.
 - (17) When the intersection is in battery backup mode, the UPS shall bypass all internal cabinet lights, ventilation fans, and service receptacles.
 - (18) As the battery reserve capacity reaches 50 percent, the intersection shall automatically be placed in all-red flash. The UPS shall allow the controller to automatically resume normal operation after the power has been restored. The UPS shall log an alarm in the controller for each time it is activated.
 - (19) A blue LED indicator light shall be mounted on the front of the traffic signal cabinet or on the side of the UPS cabinet facing traffic and shall turn on to indicate when the cabinet power has been disrupted and the UPS is in operation. The light shall be a minimum 1 in. (25 mm) diameter, be viewable from the driving lanes, and able to be seen from 200 ft (60 m) away.
 - (20) All 24 volt and 48 volt systems shall include an external component that monitors battery charging to ensure that every battery in the string is fully charged. The device shall compensate for the effects of adding a new battery to an existing battery system by ensuring that the charge voltage is spread equally across all batteries.
- (b) Mounting/Configuration.
- (1) General.
 - a. The inverter/charger unit shall be rack or shelf-mounted.
 - b. All interconnect wiring provided between the power transfer relay, manual bypass switch, and cabinet terminal service block shall be at least 6.5 ft (2 m) of #10 AWG wire.
 - c. Relay contact wiring provided for each set of NO/NC relay contact closure terminals shall be 6.5 ft (2 m) of #18 AWG wire.
 - d. To ensure interchangeability between all UPS manufacturers, the UPS power transfer relay and manual bypass switch shall be interconnected with Type IV or Type V NEMA cabinets as shown on the plans.
 - (2) Battery Cabinet.
 - a. The inverter/charger and power transfer relay shall be installed inside the external battery cabinet and the manually bypass switch shall be installed inside the traffic signal cabinet.
 - b. Batteries shall be housed in a separate NEMA Standard TS 2 rated Type II cabinet. This external battery cabinet shall be according to Article 1074.03 for the construction and finish of the cabinet.

- c. No more than two batteries shall be mounted on individual shelves for a cabinet housing four batteries and no more than four batteries per shelf for a cabinet housing eight batteries.
 - d. A minimum of three shelves shall be provided. Each shelf shall support a load of 132 lb (60 kg) minimum for dual batteries.
 - e. The battery cabinets housing four batteries shall have nominal outside dimensions according to a NEMA Type II cabinet; or alternatively, a width of 14 in. (355 mm), a depth of 9 in. (230 mm), and a height of 45 to 55 in. (1.14 to 1.4 m). The battery cabinets housing eight batteries shall have nominal outside dimensions according to a NEMA Type III cabinet; or alternatively, a width of 28 in. (710 mm), a depth of 9 in. (230 mm), and a height of 45 to 55 in. (1.14 to 1.4 m). Clearance between shelves shall be a minimum of 10 in. (250 mm).
 - f. The battery cabinet shall be ventilated through the use of louvered vents, filters, and one thermostatically controlled fan as per NEMA TS 2 specifications. The cabinet fan shall not be energized when the traffic signals are on UPS power.
 - g. The battery cabinet shall have a door opening to the entire cabinet. The door shall be attached to the cabinet through the use of a continuous stainless steel or aluminum piano hinge. The cabinet shall be provided with a main door lock which shall operate with a traffic industry conventional No. 2 key. Provisions for padlocking the door shall be provided.
 - h. The UPS with battery cabinet shall come with all bolts, conduits and bushings, gaskets, shelves, and hardware needed for mounting.
 - i. A warning sticker shall be placed on the outside of the cabinet indicating that there is an uninterruptable power supply inside the cabinet.
- (c) Maintenance, Displays, Controls, and Diagnostics.
- (1) The UPS shall include a display and/or meter to indicate current battery charge status and conditions.
 - (2) The UPS shall have lightning surge protection compliant with IEEE/ANSI C.62.41.
 - (3) The UPS shall be equipped with an integral system to prevent battery from destructive discharge and overcharge.
 - (4) The UPS hardware and batteries shall be easily replaced without requiring any special tools or devices.

- (5) The UPS shall include a resettable front-panel event counter display to indicate the number of times the UPS was activated and a front-panel hour meter to display the total number of hours the unit has operated on battery power.
 - (6) The UPS shall be equipped with an RS-232 port.
 - (7) The manufacturer shall include two sets of equipment lists, operation and maintenance manuals, board-level schematic and wiring diagrams of the UPS, and battery data sheets. The manufacturer shall include any software needed to monitor, diagnose, and operate the UPS. The manufacturer shall include any required cables to connect the UPS to a laptop computer.
- (d) Battery System.
- (1) Individual batteries shall be 12 V type, 65 amp-hour minimum capacity at 20 hours, and shall be easily replaced and commercially available off the shelf.
 - (2) Batteries used for the UPS shall consist of four to eight batteries with a cumulative minimum rated capacity of 240 amp-hours.
 - (3) Batteries shall be premium gel cell, deep cycle, completely sealed, prismatic lead-calcium based, silver alloy, valve regulated lead acid (VRLA) requiring no maintenance.
 - (4) Batteries shall be certified by the manufacturer to operate over a temperature range of -13 to 160 °F (-25 to + 71 °C).
 - (5) The batteries shall be provided with appropriate interconnect wiring and corrosion-resistant mounting trays and/or brackets appropriate for the cabinet into which they will be installed.
 - (6) Batteries shall indicate maximum recharge data and recharging cycles.
 - (7) Battery interconnect wiring shall be via a modular harness. Batteries shall be shipped with positive and negative terminals pre-wired with red and black cabling that terminates into a typical power-pole style connector. The harness shall be equipped with mating power-pole style connectors for the batteries and a single, insulated plug-in style connection to the inverter/charger unit. The harness shall allow batteries to be quickly and easily connected in any order and shall be keyed and wired to ensure proper polarity and circuit configuration.
 - (8) Battery terminals shall be covered and insulated so as to prevent accidental shorting.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1076. WIRE AND CABLE

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1076.04 Electric Cable – Signal, Lead-in, Communication, and Service. Revise the heading of this Article to read:

“1076.04 Electric Cable – Signal, Lead-in, Communication, Service, and Equipment Grounding Conductor.”

Add the following paragraph to the end of this Article:

- “(e) Equipment Grounding Conductor. The cross linked polyethylene (XLP) insulated conductor shall be according to Articles 1066.02 and 1066.03. The stranded copper conductor shall be No. 6 AWG and the insulation color shall be green.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1080. FABRIC MATERIALS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1080.02 Geotextile Fabric. Revise Article 1080.02 to read:

“1080.02 Geotextile Fabric. The fabric for silt filter fence shall be a woven fabric meeting the requirements of AASHTO M 288 for unsupported silt fence with less than 50 percent geotextile elongation.

The fabric for ground stabilization shall consist of woven or nonwoven filaments of polypropylene, polyester, or polyethylene. Nonwoven fabric may be needle punched, heat-bonded, resin-bonded, or combination thereof. The fabric shall be resistant to ultraviolet radiation and be according to the following.

Physical Properties	Ground Stabilization
Grab Tensile Strength (lb) ASTM D 4632 ^{1/}	200 min.
Grab Elongation @ Break (%) ASTM D 4632 ^{1/}	12 min.
Burst Strength (psi) - ASTM D 3786 ^{2/}	250 min.
Trapezoidal Tear Strength (lb) ASTM D 4533 ^{2/}	75
Weight (oz/sq yd) – ASTM D 3776	4.0 min.

Physical Properties (Metric)	Ground Stabilization
Grab Tensile Strength (N) ASTM D 4632 ^{1/}	900 min.
Grab Elongation @ Break (%) ASTM D 4632 ^{1/}	12 min.
Burst Strength (kPa) – ASTM D 3786 ^{2/}	1720 min.
Trapezoidal Tear Strength (N) ASTM D 4533 ^{2/}	335
Weight (g/sq m) – ASTM D 3776	135 min.

- 1/ For woven fabric, test results shall be referenced to orientation with warp or weave, whichever the case may be. Both woven and nonwoven fabric shall be tested wet.
- 2/ Test results may be obtained by manufacturer's certification.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1081. MATERIALS FOR PLANTING

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1081.01 Trees, Shrubs, Vines, and Seedlings. Revise Article 1081.01(b)(3) to read:

“(3) Balled and Burlapped Plants. Plants marked “B&B” are to be balled and burlapped.”

1081.10 Erosion Control Blankets. Add the following to this Article:

“(g) Turf Reinforcement Mat (TRM). The TRM shall be comprised of non-degradable, ultraviolet stabilized synthetic fibers, filaments, netting, and/or wire mesh processed into a three-dimensional reinforced mat. The mats may include degradable material to assist with vegetation establishment. Soil filled mats will not be allowed.

The TRM shall meet the following physical and performance properties:

Property	Value	Test Method
Tensile Strength, lb/ft (kN/m)	150 (2.19) min.	ASTM D 6818
UV Stability, (% Tensile Retained)	80 min.	ASTM D 4355 (1000 Hour Exposure)
Resiliency, (% Thickness Retained)	80 min.	ASTM D 6524
Allowable Shear Stress, lb/sq ft (Pa) ^{1/}	8 (384)	ECTC approved test method and independent laboratory

1/ Minimum shear stress the TRM (fully vegetated) can sustain without physical damage or excess erosion (> 1/2 in. (13 mm) soil loss) during a 30 minute flow event in large scale testing.

For TRMs containing degradable components, all property values must be obtained on the non-degradable portion of the matting alone.”

1081.15 Temporary Erosion Control Materials. Revise the last sentence of Article 1081.15(b) to read:

“Silt filter fence stakes shall be a minimum of 4 ft (1.2 m) long and made of either wood or metal. Wood stakes shall be 2 in. x 2 in. (50 mm x 50 mm).

Metal stakes shall be a standard T or U shape having a minimum weight (mass) of 1.32 lb/ft (600 g/300 mm).”

Revise Article 1081.15(f) to read:

- “(f) Rolled Excelsior. Rolled excelsior shall consist of an excelsior fiber filling totally encased inside netting and sealed with metal clips or knotted at the ends. Each roll shall be a minimum of 20 in. (500 mm) in diameter and a minimum of 10 ft (3 m) in length. Each 10 ft (3 m) roll shall have a minimum weight (mass) of 30 lbs (13.6 kg). The excelsior fiber filling shall be weed free. At least 80 percent of the fibers shall be a minimum of 6 in. (150 mm) in length. The fiber density shall be a minimum of 1.38 lb/cu ft (22 kg/cu m). The netting shall be composed of a polyester or polypropylene material which retains 70 percent of its strength after 500 hours of exposure to sunlight. The maximum opening of the net shall be 1 x 1 in. (25 x 25 mm).”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1083. ELASTOMERIC BEARINGS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1083.02 Materials. Revise the table in Article 1083.02(b) to read:

"ASTM Standard	Physical Properties	
D 638	Tensile Strength	2800 psi min.
D 638	Elongation	200 % min.
D 792	Specific Gravity	2.15 - 2.20
D 2240	Hardness, Durometer D	50 - 65
---	Deformation Under Load	
	73 °F/100 psi/24 hrs (23 °C/690 kPa/24 hrs)	2 - 3 %
	122 °F/1200 psi/24 hrs (50 °C/8,300 kPa/24 hrs)	4 - 8 %
	73 °F/2000 psi/24 hrs (23 °C/13,800 kPa/24 hrs)	15 % max.
D 570	Water Absorption	0.01 % max.
---	Static Coefficient of Friction at 500 psi (3450 kPa) bearing pressure on stainless steel	0.07 max.
D 429, B	Adhesion to Steel Peel Strength	25 lb/in. (4.4 N/mm)"

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1090. SIGN BASE

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

Revise this section to read:

“SECTION 1090. SIGN BASE

1090.01 Sign Base Material Requirements. The sign base material for Type 1 sign panels shall be sheet aluminum. Type 2 sign panels may be sheet aluminum, bolted aluminum extrusions, or plywood. Type 3 sign panels shall be bolted aluminum extrusions.

<u>Sign Type</u>	<u>Description</u>
Type 1:	6 ft (1.8 m) wide or less and 9 sq ft (0.84 sq m) in area or less.
Type 2:	Over 9 sq ft (0.84 sq m) in area or over 6 ft (1.8 m) wide but less than 24 sq ft (2.22 sq m). (Note 1) (Note 2)
Type 3:	24 sq ft (2.22 sq m) in area or larger.

Note 1. Plywood may be used only when specified.

Note 2. On freeways and expressways, Type 2 panels used for guide, information, or service signing shall have the same sign legend as the Type 3 sign panels.

1090.02 Sheet Aluminum. The sign base material shall be flat sheet aluminum to which a chemical conversion coating has been applied. The material shall comply with ASTM B 209, Alloy 6061-T6 or 5052-H 38 and conversion coated according to either MIL-DTL-5541 or ASTM B 449.

Type 1 sign panels shall be at least 0.080 in. (2.03 mm) thick. Type 2 sign panels shall be at least 0.125 in. (3.17 mm) thick. All panels shall be a flat continuous section of the length, width and shape specified in the plans for Standard Sign Design Criteria of the MUTCD with specified mounting holes and corner radii. Sign panels shall be according to dimensions specified, within $\pm 1/32$ in. (± 0.794 mm) and shall not be out of square more than 1/16 in. (1.588 mm). Warps and buckles shall not exceed 1/16 in. (1.588 mm) for each foot in length or width when laid on a true flat surface. All fabrication shall be accomplished prior to the chemical conversion coating process.

Before retroreflective sheeting is applied to the sign panel, the application surface shall be thoroughly cleaned, prepared or etched according to the sheeting manufacturer's recommendations. The chemical conversion coating shall remain

intact on the backside of the sign panel. There shall be no opportunity for the clean metal surface to oxidize or come in contact with grease, oils, or other contaminants prior to the application of reflective sheeting or paint.

1090.03 Bolted Aluminum Extrusions. Sign panels of this type shall be made of aluminum according to ASTM B 221, Alloy 6063-T6.

Panel preparation shall be according to Article 1090.02, except etching may be omitted and holes for demountable sign legend units may be drilled after assembly and reflectorization.

Sign molding shall be an aluminum extrusion designed for the sign panel extrusion with which it is to be used and its color shall match the color of the sign background. The sign molding shall be riveted to the sign panel on 2 ft (600 mm) centers.

Aluminum dome head rivets shall be used to secure the sign molding, sign panel overlays, demountable legend unit, and supplemental panel to the sign face. The dome head rivets shall be 3/16 x 1/4 in. (4.75 x 6.35 mm) blind made from 5052 aluminum with an aluminum alloy mandrel. The dome head rivets shall have a grip range from 0.126 to 0.250 in. (3.2 to 6.4 mm) with a flange diameter of 0.114 in. (2.9 mm) and a rivet length of 0.450 in. (11.4 mm). The dome head rivets shall be color anodized according to the sheeting color of the unit being installed.

All bolts, nuts, and other hardware and material used in assembling aluminum extrusions into sign panels shall be stainless steel and shall be supplied by the manufacturer of the panels. In place of the standard stainless steel post clips the manufacturer may substitute an aluminum post clip meeting the requirements of this specification.

Stainless steel post clips shall be according to ASTM A 276, Type 304. Aluminum post clips shall be according to ASTM B 108, 356-T6. A flat washer shall be used under each nut to prevent gouging of the clip.

Stainless steel bolts and washers used for fastening extruded aluminum sign panels to supports, shall be according to ASTM A 276, Type 304. Stainless steel nuts shall be according to ASTM A 240, Type 304. Stainless steel bolts, nuts, and washers shall be used with post clips when installing overhead mounted sign panels.

1090.04 Plywood. Plywood shall be according to AASHTO M 133. Each panel shall bear the mark of an approved testing agency or independent testing laboratory.

If slip sheets are used, they shall not deposit any wax, silicone, or other substance on the surface of the overlays.

There shall be no caulk lubricant residue left on the surface of the overlays that will affect the adhesion of retroreflective sheeting.

Plywood sign panels shall not be used with Type A reflective sheeting.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1091. SIGN FACE

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

Revise this section to read:

“SECTION 1091. SIGN FACE, SIGN BASE AND SUPPLEMENTAL PANELS

1091.01 Sign Face Material Requirements. The sign face material shall be in accordance with the Department’s Fabrication of Highway Signs Policy.

The sheeting for the background, legend, border, shields, and symbols shall be provided by the same manufacturer

1091.02 Sign Legend and Supplemental Panel Material Requirements. The sign legend and supplemental panel material shall be in accordance with the Department’s Fabrication of Highway Signs Policy and the Illinois Manual for Uniform Traffic Control Devices.

Signs shall be fabricated such that the material for the background, legend, border, shields, and symbols are applied in the preferred orientation for the maximum retroreflectivity per the manufacturer’s recommendation. When using Type ZZ retroreflective sheeting, the nesting of legend, border, shields, or symbols will not be permitted.

Letters and numerals used shall be according to the standard alphabets for highway signs (available from the Federal Highway Administration) of the series indicated in the design details for the sign.

The finished letters, numerals, symbols, panels, and borders shall show careful workmanship and be clean cut, sharp, and have essentially a plane surface.

- (a) If demountable copy is specified, each demountable legend unit and supplemental panel shall be supplied with mounting holes and shall be secured to the sign face with aluminum dome head rivets with aluminum mandrels and may not be held in place, even temporarily, using any type of adhesive that would damage the sign face, legend unit, or border when removed at a later date. All rivets shall be color matched to the legend or supplemental panel being installed.
- (b) Direct Applied Legend. All direct applied sign legend and borders shall be affixed to clean, dust-free sign panels in a manner specified by the legend

manufacturer. The legend and border shall be cut neatly at any intersecting panel edge.

Direct applied retroreflective sheeting and nonreflective sheeting used for legend and border shall be according to Article 1091.03.

The sheeting may be manufactured with a thin aluminum layer between the sheeting and the precoated adhesive.

- (c) Flat Frames. The retroreflective sheeting and nonreflective sheeting used on flat frames for legend and border shall be according to Article 1091.03.

Flat frames shall be 0.032 in. (0.8 mm) aluminum according to ASTM B 209, Alloy 3003-H 14. The frames shall be properly degreased and etched and treated with a light, tight, amorphous chromate type coating before any sheeting is applied.

- (d) Supplemental Panels. All supplemental panels shall consist of 0.080 in. (2 mm) sheet aluminum according to Article 1090.02 with reflective sheeting applied according to Article 1091.03.

1091.03 Retroreflective and Nonreflective Sheeting and Translucent Overlay Films. The retroreflective sheeting shall serve as the reflectorized background for sign messages and as cutout legends and symbols applied to the reflectorized background. Nonreflective sheeting shall be used as material for cutout legends and symbols applied to the reflectorized background. Translucent overlay films may be used to provide color to white retroreflective sheeting. Messages may be applied in opaque black or transparent colors.

All material furnished under this specification shall have been manufactured within 18 months of the delivery date. All material used to fabricate individual signs shall be supplied by the same manufacturer.

- (a) Retroreflective Sheeting Properties. Retroreflective sheeting shall consist of a flexible, colored, prismatic, or glass lens elements adhered to a synthetic resin, encapsulated by a flexible, transparent plastic having a smooth outer surface. Only suppliers whose products have been tested and approved in the Department's periodic Sheeting Study will be eligible to supply material. All individual batches and or lots of material shall be tested and approved by the Department. The Department reserves the right to sample and test delivered materials according to ASTM D 4956.

- (1) Adhesive. The sheeting shall have a Class 1, pre-coated, pressure sensitive adhesive according to ASTM D 4956. The adhesive shall have a protective liner that is easily removed when tested according to ASTM D 4956. The adhesive shall be capable of being applied to new or refurbished aluminum and reflectorized backgrounds without additional adhesive.

- (2) Color. The sheeting shall be uniform in color and devoid of streaks throughout the length of each roll. The color shall conform to the latest appropriate standard color tolerance chart issued by the U.S.

Department of Transportation, Federal Highway Administration and to the daytime and nighttime color requirements of ASTM D 4956. Sheeting used for side by side overlay applications shall have a Hunter Lab Delta E of less than 3.

- (3) Coefficient of Retroreflection. When tested according to ASTM E 810, without averaging, the sheeting shall have a minimum coefficient of retroreflection as shown in the following tables. The brightness of the sheeting when totally wet shall be a minimum of 90 percent of the values shown when tested according to the standard rainfall test specified in Section 7.10.1 of AASHTO M 268-84.

Type A Sheeting
Minimum Coefficient of Retroreflection
candelas/foot candle/sq ft (candelas/lux/sq m) of material

Type A

Observation Angle (deg.)	Entrance Angle (deg.)	White	Yellow	Orange	Red	Green	Blue	Brown
0.2	-4	250	170	100	45	45	20	12
0.2	+30	150	100	60	25	25	12	8.5
0.5	-4	95	65	30	15	15	8	5
0.5	+30	75	50	25	10	10	5	3.5

Type AA Sheeting
Minimum Coefficient of Retroreflection
candelas/foot candle/sq ft (candelas/lux/sq m) of material

Type AA (0 and 90 degree rotation)

Observation Angle (deg.)	Entrance Angle (deg.)	White	Yellow	Red	Green	Blue	FO
0.2	-4	800	660	215	80	43	200
0.2	+30	400	340	100	35	20	120
0.5	-4	200	160	45	20	9.8	80
0.5	+30	100	85	26	10	5.0	50

Type AA (45 degree rotation)

Observation Angle (deg.)	Entrance Angle (deg.)	Yellow	FO
0.2	-4	550	165
0.2	+30	130	45
0.5	-4	145	70
0.5	+30	70	40

Type AP Sheeting
 Minimum Coefficient of Retroreflection
 candelas/foot candle/sq ft (candelas/lux/sq m) of material

Type AP

Observation Angle (deg.)	Entrance Angle (deg.)	White	Yellow	Red	Green	Blue	Brown	FO
0.2	-4	550	425	100	75	50	30	275
0.2	+30	200	150	40	35	25	15	90
0.5	-4	300	250	60	35	25	20	150
0.5	+30	100	70	20	20	10	5	50

Type AZ Sheeting
 Minimum Coefficient of Retroreflection
 candelas/foot candle/sq ft (candelas/lux/sq m) of material

Type AZ (0 degree rotation)

Observation Angle (deg.)	Entrance Angle (deg.)	White	Yellow	Red	Green	Blue	FYG	FY
0.2	-4	430	350	110	45	20	325	240
0.2	+30	235	140	60	24	11	200	150
0.5	-4	250	200	60	25	10	235	165
0.5	+30	170	135	40	19	7	105	75
1.0	-4	70	45	10	10	4	70	30
1.0	+30	30	20	7	5	2.5	45	15

Type AZ (90 degree rotation)

Observation Angle (deg.)	Entrance Angle (deg.)	White	Yellow	Red	Green	Blue	FYG	FY
0.2	-4	320	250	100	45	20	300	220
0.2	+30	235	140	40	24	11	200	150
0.5	-4	240	200	60	25	10	235	165
0.5	+30	100	85	20	10	7	80	75
1.0	-4	30	30	7	5	4	65	20
1.0	+30	15	15	5	2	2	30	10

Type ZZ Sheeting
 Minimum Coefficient of Retroreflection
 candelas/foot candle/sq ft (candelas/lux/sq m) of material

Type ZZ (0 degree rotation)

Observation Angle (deg.)	Entrance Angle (deg.)	White	Yellow	Red	Green	Blue	FYG	FY	FO
0.2	-4	725	545	145	75	35	580	435	255
0.2	+30	300	225	60	30	15	240	180	105
0.5	-4	450	340	90	45	20	360	270	160
0.5	+30	180	135	40	20	10	145	110	65
1.0	-4	130	100	30	15	6	105	80	50
1.0	+30	70	55	15	10	3	60	45	25

Type ZZ (90 degree rotation)

Observation Angle (deg.)	Entrance Angle (deg.)	White	Yellow	Red	Green	Blue	FYG	FY	FO
0.2	-4	415	305	85	42	17	340	145	85
0.2	+30	80	60	18	14	4.4	64	48	23
0.5	-4	350	260	70	35	16	280	210	80
0.5	+30	75	56	15	12	3.6	60	45	25
1.0	-4	110	80	18	11	4.8	87	64	22
1.0	+30	20	13	3	2	1	12	9	3

- (4) Durability. When processed and applied, the sheeting shall be weather resistant. Accelerated laboratory weathering will be used for provisional qualification of sheeting before the results from accelerated outdoor weathering are available. When they become available, the results from outdoor weathering take precedence over the results from laboratory-accelerated weathering tests.

Accelerated weathering testing will be performed for 1000 hours (300 hours for orange/FO) according to ASTM G 151. The testing cycle will consist of 8 hours of light at 140 °F (60 °C), followed by 4 hours of condensation at 104 °F (40 °C). Following accelerated weathering, the sheeting shall exhibit a minimum of 80 percent of its initial minimum coefficient of retroreflection as listed in the previous tables. The sheeting shall exhibit a Hunter Lab Delta E of 5 or less when compared to the original.

Outdoor weathering will entail an annual evaluation of material placed in an outdoor rack with a 45 degree angle and a southern sun exposure. The sheeting will be evaluated for five years. Following weathering, the test specimens will be cleaned by immersing them in a five percent hydrochloric acid solution for 45 seconds, then rinsed with water and blotted dry with a soft clean cloth. Following cleaning, the applied sheeting shall show no appreciable discoloration, cracking, streaking,

crazing, blistering, or dimensional change. The sheeting shall exhibit a Hunter Lab Delta E of 5 or less when compared to the original.

- (5) Shrinkage. When tested according to ASTM D 4956, the sheeting shall not shrink in any dimension more than 1/32 in. (0.8 mm) in ten minutes and not more than 1/8 in. (3 mm) in 24 hours.
- (6) Workability. The sheeting shall show no cracking, scaling, pitting, blistering, edge lifting, inter-film splitting, curling, or discoloration when processed and applied using mutually acceptable processing and application procedures.
- (7) Adhesive Bond. The sheeting shall form a durable bond to smooth, corrosion-resistant, and weather-resistant surfaces and adhere securely when tested according to ASTM D 4956.
- (8) Positionability. Sheeting, with ASTM D 4956 Class 3 adhesive, used for manufacturing cutout legends and borders shall provide sufficient positionability during the fabrication process to permit removal and reapplication without damage to either the legend or sign background and shall have a plastic liner suitable for use on bed cutting machines. Thereafter, all other adhesive and bond requirements contained in the specification shall apply.

Positionability shall be verified by cutting 4 in. (100 mm) letters E, I, K, M, S, W, and Y out of the positionable material. The letters shall then be applied to a sheeted aluminum blank using a single pass of a 2-lb (0.90-kg) roller. The letters shall sit for five minutes and then a putty knife shall be used to lift a corner. The thumb and fore finger shall be used to slowly pull the lifted corner to lift letters away from the sheeted aluminum. The letters shall not tear or distort when removed.

- (9) Thickness. The thickness of the sheeting without the protective liner shall be less than or equal to 0.015 in. (0.4 mm), or 0.025 in. (0.6 mm) for prismatic material.
- (10) Processing. The sheeting shall permit cutting and color processing according to the sheeting manufacturer's specifications at temperatures of 60 to 100 °F (15 to 38 °C) and within a relative humidity range of 20 to 80 percent. The sheeting shall be heat resistant and permit forced curing without staining the applied or unapplied sheeting at temperatures recommended by the manufacturer. The sheeting shall be solvent resistant and capable of being cleaned with VM&P naphtha, mineral spirits, and turpentine.

Transparent color and opaque black inks shall be single component and low odor. The inks shall dry within eight hours and not require clear coating. After color processing on white sheeting, the sheeting shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change when tested for durability (4). The ink on the weathered, prepared panel shall exhibit a Hunter Lab Delta E of 5 or less when compared to the original.

Transparent color electronic cutting films shall be acrylic. After application to white sheeting, the films shall show no appreciable discoloration, cracking, streaking, crazing, blistering, or dimensional change when tested for durability (4). The films on the weathered, prepared panel shall exhibit a Hunter Lab Delta E of 5 or less when compared to the original.

Transparent colors screened, or transparent acrylic electronic cutting films, on white sheeting, shall meet the minimum initial coefficient of retroreflection values of the 0.2 degree observation angle, -4.0 degree entrance angle values as listed in the previous tables for the color being applied. After durability testing, the colors shall retain a minimum 80 percent of the initial coefficient of retroreflection.

- (11) Identification. The sheeting shall have a distinctive overall pattern in the sheeting unique to the manufacturer. If material orientation is required for optimum retroreflectivity, permanent orientation marks shall be incorporated into the face of the sheeting. Neither the overall pattern nor the orientation marks shall interfere with the retroreflectivity of the sheeting.
 - (12) Packaging. Both ends of each box shall be clearly labeled with the sheeting type, color, adhesive type, manufacturer's lot number, date of manufacture, and supplier's name. Material Safety Data Sheets and technical bulletins for all materials shall be furnished with each shipment.
- (b) Nonreflective Sheeting Properties. Nonreflective sheeting shall consist of a flexible, pigmented cast vinyl film having a smooth, flat outer surface and shall meet the following requirements. The Department reserves the right to sample and test delivered materials according to ASTM D 4956.
- (1) Adhesive. The sheeting shall have a Class 1, pre-coated, pressure sensitive adhesive according to ASTM D 4956. The adhesive shall have a protective liner that is easily removed when tested according to ASTM D 4956. The adhesive shall be capable of being applied to new or refurbished aluminum and reflectorized backgrounds without additional adhesive.
 - (2) Color. The sheeting shall be uniform in color and devoid of streaks throughout the length of each roll.
 - (3) Gloss. The sheeting shall exhibit a minimum 85 degree gloss-meter rating of 40 when tested according to ASTM D 523.
 - (4) Durability. Applied sheeting that has been vertically exposed to the elements for seven years shall show no appreciable discoloration, cracking, crazing, blistering, delamination, or loss of adhesion. A slight amount of chalking is permitted but the sheeting shall not support fungus growth.

- (5) Testing. Test panels shall be prepared by applying the sheeting to 6 1/2 x 6 1/2 in. (165 x 165 mm) pieces of aluminum according to the manufacturer's specifications. The edges of the panel shall be trimmed evenly and aged 48 hours at 70 to 90 °F (21 to 32 °C). Shrinkage and immersion testing shall be as follows.
- a. Shrinkage. The sheeting shall not shrink more than 1/64 in. (0.4 mm) from any panel edge when subjected to a temperature of 150 °F (66 °C) for 48 hours and shall be sufficiently heat resistant to retain adhesion after one week at 150 °F (66 °C).
 - b. Immersion Testing. The sheeting shall show no appreciable decrease in adhesion, color, or general appearance when examined one hour after being immersed to a depth of 2 or 3 in. (50 or 75 mm) in the following solutions at 70 to 90 °F (21 to 32 °C) for specified times.

Solution	Immersion Time (hours)
Reference Fuel (M I L-F-8799A) (15 parts xylol and 85 parts mineral spirits by weight)	1
Distilled Water	24
SAE No. 20 Motor Oil	24
Antifreeze (1/2 ethylene glycol, 1/2 distilled water)	24

- (6) Adhesive Bond: The sheeting shall form a durable bond to smooth, corrosion-resistant, and weather-resistant surfaces and adhere securely when tested according to ASTM D 4956.
- (7) Thickness. The thickness of the sheeting without the protective liner shall be a maximum of 0.005 in. (0.13 mm).
- (8) Cutting. Material used on bed cutting machines shall have a smooth plastic liner.
- (9) Packaging. Both ends of each box shall be clearly labeled with the sheeting type, color, adhesive type, manufacturer's lot number, date of manufacture, and supplier's name. Material Safety Data Sheets and technical bulletins for all materials shall be furnished with each shipment."

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1092. SIGN LEGEND AND SUPPLEMENTAL PANELS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

Revise this section to read:

"SECTION 1092. RESERVED"

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1093. SIGN SUPPORTS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

Revise this section to read:

“SECTION 1093. SIGN SUPPORTS

1093.01 Structural Steel Supports. The structural steel shall have a silicone content suitable for galvanizing.

- (a) Breakaway. All structural steel shall be according to AASHTO M 270 (M 270M).

After fabrication, the post, fuse plate, base plate, and upper 6 in. (150 mm) of the stub post shall be galvanized according to AASHTO M 111. Bolts and nuts on the fuse plates may be plated according to ASTM B 633 (B 633M) SC3 and then painted with an approved zinc rich paint.

All high strength bolts, nuts, and washers shall be according to Article 1006.08(b).

- (b) Tubular. Hollow structural steel tubing shall be according to ASTM A 500 Grade B or ASTM A 501.

After fabrication, the post, base plate, and upper 6 in. (150 mm) of the stud post shall be galvanized according to AASHTO M 111.

All high strength bolts, nuts, and washers shall be according to Article 1006.08(b).

- (c) Telescoping. The post shall be a square tube formed of 12 gauge steel according to the standard specification for cold rolled carbon steel sheets commercial quality ASTM A 1008 (A 1008M). The post shall be formed to size and, if necessary, shall be welded in such a manner that weld or flash shall not interfere with telescoping. Holes $7/16 \pm 1/64$ in. (11 ± 0.4 mm) will be spaced on 1 in. (25 mm) centers on at least two opposite sides. The holes shall align to accept a 3/8 in. (10 mm) bolt through the post at any location. The post shall have a smooth galvanized finish applied either before or after forming.

The following tolerances will be permitted.

The nominal outside dimension will not vary more than ± 0.008 in. (± 0.2 mm) [± 0.10 in. (± 2.5 mm) for the 2 1/4 in. (57 mm) size] from the dimension stipulated. The wall thickness will not vary more than +0.011 to -0.008 in. (+0.28 to -0.20 mm) from the standard 12 gauge plate thickness. The maximum allowable twist in a 3 ft (1 m) length and the permissible variation in squareness shall be as shown in the following table.

Post Size	Squareness	Twist
1 3/4 x 1 3/4 in.	± 0.010 in.	0.062 in.
2 x 2 in.	± 0.012 in.	0.062 in.
2 1/4 x 2 1/4 in.	± 0.014 in.	0.062 in.

Post Size	Squareness	Twist
44 x 44 mm	± 0.25 mm	1.7 mm
51 x 51 mm	± 0.30 mm	1.7 mm
57 x 57 mm	± 0.35 mm	1.7 mm

The posts shall be straight and have a smooth uniform finish. It shall be possible to telescope all consecutive sizes of posts freely and for at least 10 ft (3.0 m) of their length without the necessity of matching any particular face to any other face. All holes and ends shall be free from burrs and ends shall be cut square.

The posts shall be hot-dipped galvanized according to AASHTO M 111, or given triple coated protection by in-line application of hot-dip galvanized zinc per AASHTO M 111 followed by a chromate conversion coating and a cross-linked polyurethane acrylic exterior coating. The inside surfaces shall be given corrosion protection by in-line application of a full zinc base organic coating after fabrication, tested in accordance with ASTM B 117. If a weld process is performed after galvanizing, the weld shall be zinc-coated after the scarfing operation.

1093.02 Base for Telescoping Sign Support. The base shall be cast from aluminum alloy according to ASTM B 26, Alloy 356.0-T6 or Alloy 514.0-F. Sections of this standard pertaining to governmental agencies shall also apply. The finished casting shall be free from burrs, cracks, voids, or other defects.

The nominal inside dimension of the square hole shall not vary more than 1/16 in. (2 mm) from the dimension shown on the plans.

1093.03 Reserved."

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1094. OVERHEAD SIGN STRUCTURES

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

Revise this section to read:

“SECTION 1094. OVERHEAD SIGN STRUCTURES

1094.01 General. Materials used in the fabrication of overhead sign structures, including their supports and walkways, shall be according to the specifications set forth in the plans and the following.

1094.02 Anchor Rods, Nuts, and Washers. Anchor rods, nuts, and washers shall be according to AASHTO M 314 or ASTM F 1554 Grades 36, 55, or 105 (Grades 250, 380, or 725) and shall be galvanized according to Article 1006.09.

Anchor bolts and rods, nuts and washers according to AASHTO M 314 or ASTM F 1554 shall satisfy the applicable specification for the grade specified and the supplemental Charpy V-Notch (CVN) toughness requirements specified herein. Grade 36 (Grade 250) and Grade 55 (Grade 380) anchor bolts and rods shall satisfy Supplemental Requirement S4 and Table S1.1 of ASTM F 1554. Grade 105 (Grade 725) anchor bolts and rods shall satisfy Supplemental Requirement S5 and Table S1.2 of ASTM F 1554.

1094.03 Conduit. All conduit furnished shall be 3 in. (75 mm) nominal size and shall comply with ANSI C 80.1 or 80.5. The interior and exterior surfaces of steel conduit shall be galvanized.

1094.04 Mounting Hardware. Carbon steel bolts, nuts, and washers shall be according to ASTM A 307, Grade A and shall be hot dip galvanized according to AASHTO M 232, Class D.

1094.05 Structural Aluminum. The aluminum alloys to be welded under these specifications may be any of the following ASTM designations.

- (a) Aluminum Fabrication. Aluminum shall be assembled, welded, and inspected according to ANSI/AWS D1.2, "Structural Welding Code-Aluminum", except as herein modified.
- (b) Load-carrying Elements. All primary load carrying elements shall be evaluated as Class I structures according to ANSI/AWS D1.2, "Structural Welding Code-Aluminum".

Wrought nonheat-treatable alloys: Alloy 3003 and Alloy 3004.

Wrought heat-treatable alloys: Alloy 6061 and Alloy 6063.

Cast heat-treatable alloys: ASTM B 108, Alloy A 356.0-T61 for permanent mold castings; ASTM B 26, Alloy 520.0-T4 or A356.0-T6 for sand castings; or ASTM B 618, Alloy 520.0-T4 or A3256.0-T6 for investment castings. All castings shall have a radiographic discontinuity level according to Grade C, 1/4 in. (6 mm) section thickness.

Material used for permanent backing shall be at least equivalent in weldability to the base metal being welded.

- (c) Welding Processes. These specifications include provisions for welding by the gas metal-arc process and the gas tungsten-arc process. Other processes shall not be used, except as permitted by the Engineer.

Tungsten electrodes for the gas tungsten-arc process shall be according to the requirements of the latest edition of Specification for Tungsten-Arc Welding Electrodes, AWS A 5.12.

Filler metals to be used with particular base metals shall be as shown in Table 1. Other filler metals may be used as approved by the Engineer or as specified in the plans.

Base Metal	Filler Metal
3003 to 3003	ER1100
3004 to 3004	ER4043
3003 to 6061	ER5183 or 5356
6061 to 6061	ER5356 *
6063 to 6063	ER5356 *
A356-T61 or A444-T4 to 3003	ER4043 or 4145
A356-T61 or A444-T4 to 6061	ER4043 or 4145
A356-T61 or A444-T4 to 6063	ER4043
A356-T61 to A356-T61	ER4043
A444-T4 to A444-T4	ER4043

* ER5356 and ER5556 may be used interchangeably for these base metals.

Filler metals shall be kept covered and stored in a dry place at relatively uniform temperatures. Original rod or wire containers shall not be opened until time to be used. Rod and wire shall be free of moisture, lubricant, or other contaminants. Spools of wire temporarily left unused on the welding machine shall be kept covered to avoid contamination by dirt and grease collecting on the wire. If a spool of wire is to be unused for more than a short length of time, it shall be returned to the carton and the carton tightly resealed.

- (d) Shielding Gases. Shielding gas for gas metal-arc welding shall be argon, helium, or a mixture of the two (approximately 75 percent helium and 25 percent argon).

Shielding gas for gas tungsten-arc welding done with alternating current shall be argon.

Shielding gas for tungsten-arc welding done with direct current, straight polarity, shall be helium.

Hose used for shielding gases shall be made of synthetic rubber or plastic. Natural rubber hose shall not be used. Hose that has been previously used for acetylene or other gases shall not be used.

- (e) Preparation of Materials. Joint details shall be according to design requirements and detail drawings. The locations of joints shall not be changed without the approval of the Engineer.

Edge preparation shall be by sawing, machining, clipping, or shearing. Cut surfaces shall meet the American Standards Association's surface roughness rating value of 1,000. Oxygen cutting shall not be used.

Surfaces and edges to be welded shall be free from fins, tears, and other defects that would adversely affect the quality of the weld.

Dirt, grease, forming or machining lubricants, or any organic materials shall be removed from the areas to be welded by cleaning with a suitable solvent or by vapor degreasing.

The oxide shall be removed from all edges and surfaces to be welded just prior to welding by wire brushing or by other mechanical methods, such as rubbing with steel wool or abrasive cloth, scraping, filing, rotary planing, or sanding. If wire brushing is used, the brushes shall be made of stainless steel. Hand or power driven wire brushes and other mechanical devices that have been used on other materials shall not be used on aluminum.

Where mechanical methods of oxide removal are found to be inadequate, a standard chemical method shall be used. Welding shall be done within 24 hours after chemical treatment.

When gas tungsten-arc welding with direct current, straight polarity, is being used, all edges and surfaces to be welded shall have the oxide removed by a standard chemical method.

Welding shall not be done on anodically treated aluminum unless the condition is removed from the joint area to be welded.

- (f) Welding Procedure. All butt welds requiring 100 percent penetration, except those produced with the aid of backing, shall have the root of the initial weld chipped or machined out to sound metal before welding is started from the second side. Butt welds made with the use of backing shall have the weld

metal thoroughly fused with the backing. Where accessible, backing for welds that are subject to computed stress or which are exposed to view on the completed structure and which are not otherwise parts of the structure shall be removed and the joints ground or machined smooth. In tubular members, butt welds subjected to computed stresses shall be made with the aid of permanent backing rings or strips.

The procedure used for production welding of any particular joint shall be the same as used in the procedure qualification for the joint.

All welding operations, either shop or field, shall be protected from air currents or drafts so as to prevent any loss of gas shielding during welding. Adequate gas shielding shall be provided to protect the molten metal during solidification.

The work shall be positioned for flat position welding whenever practicable.

In both shop and field, all weld joints shall be dry at time of welding.

The size of the electrode, voltage and amperage, welding speed, gas or gas mixture, and gas flow rate shall be suitable for the thickness of the material, design of joint, welding position, and other circumstances influencing the work, and shall be shown on the approved Weld Procedure Specification (WPS).

Gas metal-arc welding shall be done with direct current, reverse polarity.

Gas tungsten-arc welding shall be done with alternating current or straight polarity direct current.

The Contractor shall submit to the Engineer, at his request, two weld samples for destructive testing and macroetching. These samples shall be welded according to the procedures that will be used in production welding. The Contractor shall submit to the Engineer for approval, the procedure to be used for the test samples and production welding. Should test of these samples indicate unsatisfactory welding, additional samples shall be furnished without cost to the Department. Poor workmanship as noted by visual inspection shall be sufficient cause for rejection.

Where preheat is needed, the temperature of preheat shall not exceed 350 °F (177 °C) for nonheat-treated alloys. The temperature shall be measured by temperature indicating crayons, contact or accurate [± 3.6 °F (± 2 °C)] non-contact pyrometric equipment. Heat-treated alloys shall not be held at or near the maximum preheat temperature for more than 35 minutes.

- (g) Welding Quality. Regardless of the method of inspection, the acceptance or rejection of welds shall comply with the D1.2 Code and the following conditions.

Welds having defects exceeding the levels of acceptance specified shall be considered as rejected unless corrected according to Article 1094.05(i).

Undercut shall not be more than 0.01 in. (0.25 mm) deep when its direction is transverse to the primary stress in the part that is undercut. Undercut shall not be more than 1/32 in. (0.80 mm) deep when its direction is parallel to the primary stress in the part that is undercut. When undercut is present, the affected area shall be ground to a smooth transition.

- (h) Nondestructive Examination/Nondestructive Testing (NDE/NDT). To determine compliance with these specifications, all welds shall be visually inspected and, in addition, complete joint penetration welds subjected to computed stress shall be inspected by radiographic testing (RT) for butt welds and ultrasonic testing (UT) for T and corner joints. RT shall utilize aluminum edge blocks and location marks similar to those specified for steel in Article 505.04 in addition to the D1.2 requirements.

The dye penetrant testing (DPT) shall be performed according to ASTM E 165, Standard Methods for Liquid Penetrant Inspection, Method B, Procedure B-2 or B-3. DPT shall be used on partial joint penetration and fillet welds as follows: 100 percent of the top and bottom cantilever truss chords to connection and gusset plates near column; 25 percent of top connection plate to collar; 100 percent of simple span splice flanges to main chords; and random 10 percent of main chords to diagonals, horizontals, and verticals as directed by the Engineer.

Dye penetrant inspection may be omitted, provided the inspector examines each layer of weld metal with a magnifier of 3X minimum before the next successive layer is deposited.

Required NDE/NDT shall be the responsibility of the Contractor and its cost shall be included in the fabrication.

- (i) Corrections. In lieu of rejection of an entire member containing welding that is unacceptable, the corrective measures may be permitted by the Engineer, if the extent of repairs will not adversely affect the structure's serviceability.

Defective welds shall be corrected by removing and replacing the entire weld or as permitted by D1.2 Code. Copper or tungsten inclusions shall be completely removed.

Before rewelding, the joint shall be inspected to assure all of the defective weld has been removed. If dye penetrant has been used to inspect the weld, all traces of penetrant solutions shall be removed with solvent, water, heat, or other suitable means before rewelding.

Repaired areas shall be 100 percent inspected by RT, UT, or DPT as applicable.

- (j) Qualification of Procedures, Welders, and Welding Operators. Joint welding procedures that are to be employed under these specifications shall be qualified by tests prescribed in the D1.2 Code. The qualifications shall be at the expense of the Contractor. The Engineer may accept properly documented evidence of previous qualification of the joint welding procedures to be employed.

All welders and welding operators shall be qualified by tests specified by the D1.2 Code. The Engineer may accept properly documented evidence of previous qualification of the welders and welding operators to be employed.

1094.06 Structural Steel. All structural steel pipe shall be ASTM A 53 Grade B or A 500 Grade B or C. All structural steel plates and shapes shall be according to AASHTO M 270, Grades, 36, 50, or 50 W (M 270M, Grades 250, 345, or 345W), M 183 (M 183M), M 223 Grade 50 (M 223M, Grade 345) or M 222 (M 222M). Stainless steel for shims and handhole covers shall be ASTM A 240, Type 302 or 304, or another alloy suitable for exterior exposure and acceptable to the Engineer. Steel to be hot dip galvanized shall have a silicon content either less than 0.04 percent or between 0.15 percent and 0.25 percent.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1095. PAVEMENT MARKINGS

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1095.04 Epoxy Pavement Marking. Revise Article 1095.04(a) to read:

- “(a) The epoxy marking material shall consist of a 100 percent solid two part system formulated and designed to provide a simple volumetric mixing ratio of two components (must be two volumes of Part A and one volume of Part B). No volatile solvents or fillers will be allowed. Total solids shall not be less than 99 percent when determined, on the mixed material, according to ASTM D 2369, excluding the solvent dispersion.”

Revise Article 1095.04(d) to read:

- “(d) Composition by Weight of Component A as Determined by Low Temperature Ashing. A 0.5 gram sample of component A shall be dispersed with a paperclip on the bottom of an aluminum dish, weighed and then heated in a muffle furnace at 1000 °F (538 °C) for one hour and weighed again. No solvents shall be used for dispersion. The difference in the weights shall be calculated and meet the following.

Pigment*	White	Yellow
Titanium Dioxide ASTM D 476 Type II	21-24%	
Organic Yellow, Titanium Dioxide, Other		± 2%**
Epoxy Resin	76-79%	± 2%**

* No extender pigments are permitted.

** From the pigment and epoxy resin content determined on qualification samples.”

Revise Article 1095.04(f) to read:

- “(f) The daylight directional reflectance of the paint (without glass spheres) applied at 14 to 16 mils (0.35 to 0.41 mm) shall meet the following requirements when tested, using a color spectrophotometer with 45 degree circumferential/zero degree geometry, illuminant C, and two degree observer angle. The color instrument shall measure the visible spectrum from 380 to 720 nm with a wavelength measurement interval and spectral bandpass of 10 nm.

White:	Daylight Reflectance	80 % min.
Yellow:*	Daylight Reflectance	50 % min.

*Shall meet the coordinates of the following color tolerance chart.

x	0.490	0.475	0.485	0.530
y	0.470	0.438	0.425	0.456"

Revise Article 1095.04(h) to read:

- “(h) The epoxy pavement marking material, when mixed in the proper mix ratio and tested according to ASTM D 7234 shall have a degree of adhesion which results in a 100 percent concrete failure in the performance of this test.”

Revise Article 1095.04(n) to read:

- “(n) The epoxy paint shall be applied to an aluminum alloy panel (Federal Test Std. No. 141, Method 2013) at a film thickness of 14 to 16 mils (0.35 to 0.41 mm) and allowed to cure for 72 hours at room temperature. Subject the coated panel for 75 hours to accelerated weathering using the light and water exposure apparatus (fluorescent UV - condensation type) as specified in ASTM G 53 (equipped with UVB-313 lamps).

The cycle shall consist of four hours UV exposure at 122 °F (50 °C) followed by four hours of condensation at 104 °F (40 °C). UVB 313 bulbs shall be used. At the end of the exposure period, the panel shall show no more than 10 Hunter Lab Delta E units or substantial change in gloss from the original, non-exposed paint.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1101. GENERAL EQUIPMENT

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1101.12 Reserved. Revise this Article to read:

“**1101.12 Water Blaster with Vacuum Recovery.** The water blaster shall remove the stripe from the pavement using a high pressurized water spray with a vacuum recovery system to provide a clean, almost dry surface, without the use of a secondary cleanup process. The removal shall be to the satisfaction of the Engineer. The equipment shall contain a storage system that allows for the storage of the wastewater while retaining the debris. The operator shall be in immediate control of the blast head.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1102. HOT-MIX ASPHALT EQUIPMENT

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1102.01 Hot-Mix Asphalt Plant. Add the following paragraph after the second paragraph of Article 1102.01(a)(6):

“IL-4.75 mixtures which contain aggregate having absorptions greater than or equal to 2.5 percent, or which contain steel slag sand, shall have a minimum silo storage plus haul time of 1.5 hours.”

Add the following to Article 1102.01(a):

- “(13) For mixture IL-4.75, mineral filler and collected dust (baghouse) shall be proportioned according to the following.
- a. Mineral filler shall not be stored in the same silo as collected dust (baghouse).
 - b. Additional minus 200 material needed to meet the Job Mix Formula (JMF) may be entirely manufactured mineral filler.
 - c. Collected dust (baghouse) may be used in lieu of manufactured mineral filler according to the following.
 1. Sufficient collected dust (baghouse) is available for production of the IL-4.75 mixture for the entire project.
 2. A mix design was prepared based on collected dust (baghouse).
 - d. A combination of collected dust (baghouse) and manufactured mineral filler may be used according to the following.
 1. The amount (proportion) of each shall be established and not varied.
 2. A mix design was prepared based on the established proportions.”

1102.03 Spreading and Finishing Machine. Revise the fourth paragraph of this Article to read:

“The paver shall be equipped with a receiving hopper having sufficient capacity for a uniform spreading operation. The hopper shall be equipped with a distribution system to uniformly place a non-segregated mixture in front of the screed. The distribution system shall have chain curtains, deflector plates, and/or other devices designed and built by the paver manufacturer to prevent segregation during distribution of the mixture from the hopper to the paver screed. The Contractor shall submit a written certification that the devices recommended by the paver manufacturer to prevent segregation have been installed and are operational. Prior to paving, the Contractor, in the presence of the Engineer, shall visually inspect paver parts specifically identified by the manufacturer’s check list for excessive wear and the need for replacement. The Contractor shall supply the completed check list to the Engineer noting the condition of the parts. Worn parts shall be replaced. The Engineer may require an additional inspection prior to placement of the surface course or at other times throughout the work.”

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 January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1103.02 Batching and Weighing Equipment. Revise the seventh paragraph of Article 1103.02(c) to read:

“The scales shall be calibrated by an independent company. The independent company shall have scale testing equipment and standard weights meeting the requirements of NIST. The scale calibration will be observed by the Engineer. Scales shall be calibrated at the beginning of each construction season or each 12 month period, and each time the scales are moved, or when scale components are repaired or replaced.”

State of Illinois
Department of Transportation

SUPPLEMENTAL SPECIFICATION
FOR
SECTION 1106. WORK ZONE TRAFFIC CONTROL DEVICES

This Supplemental Specification amends the provisions of the Standard Specifications for Road and Bridge Construction, adopted January 1, 2007 and shall be construed to be a part thereof, superceding any conflicting provisions thereof applicable to the work under the contract.

1106.02 Devices. Revise the second sentence of Article 1106.02(h) to read:

“The boards shall be mounted as shown on Standard 701901.”

Revise the first paragraph of Article 1106.02(j) to read:

- “(j) Sign Trailers. Small, lightweight trailers may be used as temporary supports for construction and maintenance signs where post mounted signs are not required by the Highway Standards. The trailer, exclusive of signs, shall be no more than 300 lb (135 kg) and shall not be fabricated with heavier than 3 x 3 in. (75 x 75 mm) angles, 2 1/2 in. (63 mm) diameter pipes, or 3 x 2 in. (75 x 50 mm) rectangular tubing. The rim size of the wheels should not exceed 12 in. (300 mm). Automotive or truck rear axle assemblies with differential housings shall not be used. In the erected position, the tires may rest on the ground or be elevated with the bottom of the tires no greater than 6 in. (150 mm) above the ground. No weights other than sandbags shall be used and sandbags shall rest no higher than 12 in. (300 mm) above the ground. Wheel chocks other than sandbags shall not be used. The tongue may be pinned to the ground (or a paved area if approved by the Engineer) to reduce wind-induced rolling. Such a pin shall be designed to readily pull or break in the event of a vehicular impact. The method of pinning shall be approved by the Engineer.”

State of Illinois
Department of Transportation

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

Effective: February 1, 1969

Revised: January 1, 2010

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, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, 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 (according to the Department's 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, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, 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

CHECK SHEET #1

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 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.

- (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 Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.
- (6) That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the 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.
- (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 such provisions will be binding upon 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 such 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 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 each worker's name, address, telephone number, social security number, classification, rate of pay, number of hours worked each day, starting and ending times of work each day, total hours worked each week, itemized deductions made, and actual wages paid.

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."

"SUBLETTING OR ASSIGNING THE CONTRACT

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

CHECK SHEET #2

State of Illinois
Department of Transportation

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

Effective: January 1, 1988

Revised: May 1, 1993

This Special Provision supersedes paragraph VII 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.

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,

CHECK SHEET #3

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, Mublenberg, 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, Vermillion	7.8 4.8

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	

CHECK SHEET #3

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

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.

CHECK SHEET #3

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

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,

CHECK SHEET #3

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 or 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.

- 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

CHECK SHEET #3

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).

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY 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.

CHECK SHEET #4

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

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

CHECK SHEET #4

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.

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.

CHECK SHEET #5

State of Illinois
Department of Transportation

SPECIAL PROVISION FOR REQUIRED PROVISIONS - STATE CONTRACTS

Effective: April 1, 1965
Revised: January 1, 2010

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 only 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, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, 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 Department's 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, marital status, national origin or ancestry, age, physical or mental handicap unrelated to ability, 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 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 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.
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 Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.
6. That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the 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.
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 such provisions will be binding upon 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 such 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 Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

CHECK SHEET #5

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 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 three years from the date of completion of this contract, records of the wages paid to his/her workers. The payroll records shall include each worker's name, address, telephone number, social security number, classification, rate of pay, number of hours worked each day, starting and ending times of work each day, total hours worked each week, itemized deductions made, and actual wages paid. Upon two business days' notice, these records shall be available, at all reasonable hours at a location within the State, for inspection by the Department or the Department of Labor.
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

CHECK SHEET #5

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 which avers that: (i) 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 B 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 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.

RESERVED

RESERVED

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
HAUL ROAD STREAM CROSSINGS, OTHER 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., 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 nor 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.

- (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.

CHECK SHEET #9

- (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.

CHECK SHEET #10

- (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.

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 recirculating 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.

CHECK SHEET #12

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
 PCC PARTIAL DEPTH HOT-MIX ASPHALT PATCHING

Effective: January 1, 1998
 Revised: January 1, 2007

Description. This work shall consist of partial depth removal of the existing portland cement concrete pavement structure and replacement with hot-mix asphalt (HMA).

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

Item	Article/Section
(a) Bituminous Material for Prime Coat	406.02
(b) Hot-Mix Asphalt (Note 1)	1030

Note1. The HMA for partial depth patches shall be a binder or surface mixture of the same type as the proposed resurfacing.

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

Item	Article/Section
(a) Self-Propelled Milling Machine	1101.16
(b) Concrete Saw	442.03(f)
(c) Wheel Saw	442.03(g)
(d) Rollers	442.03
(e) Mechanical Sweeper	1101.03
(f) Air Equipment (Note 1)	

Note 1. The air equipment shall be capable of supplying compressed air at a minimum pressure of 100 psi (690 kPa) and shall have sufficient flow rate to remove all disturbed pavement debris. The equipment shall also be according to ASTM D 4285.

CONSTRUCTION REQUIREMENTS

General. Disposal of waste materials shall be according to Article 202.03 of the Standard Specifications.

Partial depth removal of the pavement shall be accomplished by the use of a milling machine and/or the wheel saw. The minimum patch dimension shall be 24 x 24 in. (600 x 600 mm). Debris from the milling or wheel saw operation shall be removed from the patch area by air equipment or mechanical sweeper and shall remove all disturbed pavement debris and any loose and/or unsound concrete.

CHECK SHEET #15

Exposed reinforcement shall be removed back to the point where the steel is in contact with sound portland cement concrete. Where high steel is encountered, the depth of milling may be reduced as directed by the Engineer.

When the Engineer determines the exposed pavement will be suitable for a partial depth patch, a bituminous prime coat shall be applied according to Article 406.05(b) of the Standard Specifications.

The prepared patch shall be filled with HMA with a maximum lift thickness of 3 in. (75 mm). Where more than one lift is needed, the top lift shall be a minimum of 2 in. (50 mm) thick. At the option of the Contractor, the 2 in. (50 mm) top layer may be constructed using HMA surface course. The HMA shall be compacted to the satisfaction of the Engineer.

Patches opened to traffic which are high or become rough by rutting, shoving, or heaving shall be corrected by trimming off high areas and/or filling depressions. Filled areas shall be rolled again.

When the Engineer determines the exposed pavement will not be suitable for a partial depth patch, or removal is one half or more of the pavement thickness, the Contractor shall remove the remaining portion of the pavement and place a full depth patch according to Section 442 of the Standard Specifications for the Class of full depth patches included in the contract.

Method of Measurement. Partial depth removal of the portland cement concrete pavement will be measured for payment in place and the area computed in square yards (square meters).

HMA for partial depth patching of the portland cement concrete pavement will be measured for payment in tons (metric tons) according to Article 406.13 of the Standard Specifications.

Basis of Payment. Partial depth removal of the portland cement concrete pavement will be paid for at the contract unit price per square yard (square meter) for PARTIAL DEPTH REMOVAL, of the thickness specified.

Partial depth patching will be paid for at the contract unit price per ton (metric ton) for PARTIAL DEPTH PATCHING.

When the Engineer determines to convert any partial depth patch to a full depth patch after the partial depth removal of the portland cement concrete pavement has begun, the partial depth removal will be paid for at the contract unit price for PARTIAL DEPTH REMOVAL. The removal for the full depth patch will be considered as included in the appropriate full depth patching pay item.

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 #17

State of Illinois
Department of Transportation

SPECIAL PROVISION FOR POLYMER CONCRETE

Effective: August 1, 1995
Revised: January 1, 2008

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 and placement shall be according to the manufacturer's written 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:

Compressive Strength (IL Mod. ASTM C 579)	1,100 psi (7,600 kPa) min. @ 15% strain 800 psi (5,000 kPa) min. @ 10% strain
Direct Shear (IL Test Procedure, "Shear Strength of Bonded Polymer Concrete")	3100 lb (13.8 kN) min. for concrete and steel stable/cycle
Freeze-Thaw (IL Mod. AASHTO T 161)	300 cycles min.
Salt Scale (IL Mod. ASTM C 672)	60 cycles min.
Traffic Bearing Time	4 hours max. @ 70 ± 4 °F (21 ± 2 °C)
Pot Life	5 minutes min. @ 70 ± 4 °F (21 ± 2 °C)
Impact Resistance (IL Mod. ASTM D 2444):	
-20 ± 4 °F (-29 ± 2 °C)	5 ft (1.5 m)
73 ± 4 °F (23 ± 2 °C)	8 ft (2.4 m)
158 ± 4 °F (70 ± 2 °C)	5 ft (1.5 m)

The Department will maintain an approved 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 written product information, installation procedures, and instructional video 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 clean 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 written 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 #18

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
PIPE UNDERDRAINS**

Effective: September 9, 1987
Revised: January 1, 2007

This work shall be according to Section 601 of the Standard Specifications and Standard 601001, except CA 16 shall be used in lieu of FA 1 or FA 2 for trench backfill. The CA 16 shall be according to Article 1004.05 and Article 1004.01 of the Standard Specifications, except in the table, Coarse Aggregate Gradation, the percent passing the No. 16 (1.18 mm) sieve shall be $4 \pm 4\%$. The trench shall be wrapped using a fabric envelope meeting the requirements of Article 1080.05 of the Standard Specifications. The fabric encompassing the trench shall be in addition to the fabric required to be placed in direct contact with the pipe.

CHECK SHEET #20

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
GUARDRAIL AND BARRIER WALL DELINEATION

Effective: December 15, 1993
Revised: January 1, 1997

Description. This work shall consist of furnishing and installing reflectorized guardrail markers, bridge rail markers, or barrier wall markers complete with reflectors or reflective faces as specified, and terminal marker post, when specified.

Materials. Materials shall be according to the following.

- (a) Terminal Marker Post. The posts shall be according to Article 1006.29 of the Standard Specifications for Type C galvanized posts.

Hardware for attaching sign panels to posts shall be stainless steel and be according to Article 1006.29(d) of the Standard Specifications.

- (b) Terminal Markers.

- (1) Direct Applied Reflectorized Terminal Marker. Direct applied reflectorized terminal markers shall be fabricated using Type A or Type AP reflectorized sheeting. All materials used shall be according to Sections 1090 and 1091 of the Standard Specifications.

The sheeting shall be uniform in color throughout and be according to the latest appropriate standard color tolerance chart issued by the U.S. Department of Transportation, Federal Highway Administration of through instrumental color testing, the diffuse day color of the reflective material shall be according to Table 1.

TABLE 1
Color Specification Limits (Daytime)
Type AP

Color	1		2		3		4		Reflectance Limit Y(%)	
	X	Y	X	Y	X	Y	X	Y	Min.	Max.
Yellow	0.498	0.412	0.557	0.442	0.479	0.520	0.438	0.472	30	45
White	0.303	0.287	0.368	0.353	0.340	0.380	0.274	0.316	50	-

The four pairs of chromaticity coordinates determine the acceptable color in terms of the CIE 1391 standard colorimetric system measured with standard illuminant D 65.

Type AP sheeting shall have the minimum values shown in Table 1091-2 for the type and color of material specified.

Type AP sheeting surface shall exhibit an 85 degree gloss-meter rating of not less than 50 when tested according to ASTM D 523.

The thickness of Type AP sheeting without protective liner shall not be more than 0.025 in. (0.64 mm).

- (2) Post Mounted Reflectorized Terminal Marker. Post mounted reflectorized markers shall be fabricated using a Type I Sign Panel complete with reflectorized sheeting. The reflectorized material shall be Type A or Type AP Sheeting. All materials used shall be according to Sections 1090 and 1091 of the Standard Specifications.

(c) Guardrail and Barrier Wall Markers.

- (1) Type A Reflector Marker. The reflectors shall conform to the requirements of Section 1097 of the Standard Specifications.

The steel mounting bracket utilized for attaching reflectors to guardrail shall be fabricated from 12 gauge (minimum) steel, and galvanized according to AASHTO M 111.

The steel banding utilized for attaching reflectors to bridge rail shall be 3/4 in. (19 mm) stainless steel banding.

- (2) Type B Reflector Marker. The reflectors shall be according to Section 1097 of the Standard Specifications.

The lexan mounting bracket shall be made of high impact lexan approved by the Department. The bracket shall be white or brown in color. Brown brackets shall be specified for use with weathering M 222 (M 222M) steel guardrail applications, and white brackets shall be specified for all other applications.

- (3) Type C Reflector Marker. Molded reflective surfaces, when used, shall be according to Section 1097 of the Standard Specifications, except subparagraph (d) shall not apply.

Flexible reflective sheeting faces, when used, shall be fabricated of either a weather resistant sealed microprismatic sheeting or a high-performance reflective sheeting meeting the minimum reflective values for incidence angles of -4 and +30 degrees for Type A sheeting as set forth in Table 1091-2 of the Standard Specifications or the requirements for Type AP sheeting contained herein. The sheeting shall be manufactured by either 3M, Stimonsite, Reflexite, or an approved equivalent. The Contractor shall furnish written documentation from the sheeting manufacturer that the sheeting is approved as being compatible for use as a permanent reflector face. The sheeting shall adhere securely to the bracket at temperatures of -30 °F to +160 °F (-34 °C to +71 °C) and shall not crack when struck at -10 °F (-23 °C).

CHECK SHEET #20

The base material shall be fabricated from high impact thermoplastic, lexan, nylon, or other approved material which shall not shatter or crack under impact at temperatures of -30 °F (-34 °C).

CONSTRUCTION REQUIREMENTS

- (a) Terminal Marker Posts. The posts shall be driven by hand or mechanical means to a minimum depth of 3 ft (900 mm) and installed according to the details shown on the plans or as directed by the Engineer. The top of the post shall be 30 in. (760 mm) above ground. The post shall be protected by a suitable driving cap and if required by the Engineer, the material around the post shall be compacted after driving. The posts shall be vertical and oriented so the face of the terminal marker shall be at 90 degrees to the center line of the adjacent pavement.

Scratching, chipping, or other damage to the post shall be avoided during handling and installation. Chips and scratches may be recoated in the field by a method meeting the coating manufacturer's recommendation, except chips and scratches totaling more than five percent of the surface area of any one post and/or more than five percent of the surface area in 1 ft (300 mm) segment of any one post shall be cause for rejection of the post.

- (b) Terminal Markers.

(1) Direct Applied Reflectorized Terminal Marker. The direct applied reflectorized guardrail terminal markers shall be installed directly on the guardrail nose. The marker shall be installed as shown on the plans and directly to the guardrail terminal end. The surface of the guardrail terminal end shall be cleaned of all contaminants prior to the installation of the terminal marker. The surface shall be cleaned using a 5-8 percent phosphoric acid solution and rinsed with clean water or as recommended by the manufacturer of the direct applied terminal marker sheeting and as approved by the Engineer.

(2) Post Mounted Reflectorized Terminal Marker. Post mounted reflectorized terminal markers shall be installed on terminal marker posts. A minimum of two bolts per post shall be required for reflectorized terminal marker panel attachment.

- (c) Guardrail and Barrier Wall Markers.

(1) Type A Reflector Marker. Type A reflector marker shall be installed on guardrail or bridgerail as shown on the plans. When installed on guardrail, bolts for fastening will be required. The bolt-on guardrail marker shall consist of one or two round prismatic reflectors as specified attached to a steel mounting bracket. The reflector(s) shall be securely fastened to the bracket with an aluminum rivet. When used with "W" section guardrail, it shall be attached by loosening a guardrail bolt, then slipping the slotted bracket under the head of the bolt and retightening the bolt.

Type A Reflective Markers shall be used on oval or circular bridge rails. The marker shall be attached to the bridge rail using stainless steel banding.

The face of the marker shall be vertical and oriented so the reflector face shall be at 90 degrees to the centerline of the guardrail web, or to the centerline of the bridge rail.

- (2) Type B Reflector Marker. Type B reflector marker shall be installed on the concrete barrier wall or guardrail, as shown on the plans, using an adhesive. The direct applied marker shall consist of one or two round prismatic reflectors as specified attached to a lexan mounting bracket. The locations for mounting the markers on barrier walls shall be as directed by the Engineer.

The surface of the guardrail or the barrier/bridge parapet wall to which the marker is to be applied shall be free of foreign matter and any material which would adversely affect the bond of the adhesive. Cleaning of the surfaces shall be to the satisfaction of the Engineer.

An adhesive meeting the reflector unit manufacturer's specifications shall be placed either on the surface or the bottom of the marker in sufficient quantity to ensure complete coverage of the contact area with no voids present and with a slight excess after the marker is pressed firmly in place.

The face of the marker shall be vertical and oriented so the reflector face shall be at 90 degrees to the centerline of the guardrail web, or to the surface of the barrier.

- (3) Type C Reflector Marker. Type C reflector marker shall be installed on concrete barrier wall as shown on the plans. The direct applied barrier wall marker shall consist of one or two reflective surfaces as specified applied to a base fabricated of suitable material.

Basis of Payment. This work will be paid for at the contract unit price per each for TERMINAL MARKER-DIRECT APPLIED, TERMINAL MARKER-POST MOUNTED, TERMINAL MARKER POSTS; and GUARDRAIL MARKERS and BARRIER WALL MARKERS of the types and lens color specified.

The cost of work and material involved to perform any necessary alterations to the embedment length of the terminal marker post shall be included in the contract unit price bid for Terminal Marker Posts.

CHECK SHEET #21

State of Illinois
Department of Transportation

SPECIAL PROVISION FOR BICYCLE RACKS

Effective: April 1, 1994
Revised: January 1, 2007

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

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 of the type specified.

CHECK SHEET #22

State of Illinois
Department of Transportation

SPECIAL PROVISION FOR TEMPORARY MODULAR GLARE SCREEN SYSTEM

Effective: January 1, 2000

Revised: January 1, 2007

Description. This work shall consist of furnishing, installing, and maintaining a temporary modular glare screen system on top of temporary barrier.

Materials. Materials shall be according to the following.

- (a) Specifications. The base unit and blades shall be supplied from the same manufacturer.

The maximum length and width of the modular base units shall equal the dimensions of the top of the individual temporary concrete barrier sections.

The glare screen blades shall be FHWA highway green in color and made of impact resistant, non-metallic, high-density plastic material. The blades shall have a height from 24 to 30 in. (600 to 750 mm) and a width from 6 to 9 in. (150 to 225 mm). The same sized blades shall be used throughout the project.

- (b) Producers. The following modular glare screen systems shall be used:

- (1) Modular Guidance System
Carsonite International
605 Bob Gifford Blvd.
Early Branch, SC 29916
Phone: (800) 648-7974
- (2) Safe-Hit Glare Screen
Safe-Hit Corporation
35 East Wacker Drive, Suite 1100
Chicago, IL 60601
Phone: (800) 537-8958
- (3) FlexStake Glare Screen
FlexStake, Inc.
2150 Andrea Lane
Ft. Myers, FL 33912
Phone: (800) 348-9839

Installation. The temporary modular glare screen system shall be installed according to the manufacturer's instructions such that it is centered along the top of the concrete barrier and does not extend over the joints between the concrete barrier

sections. The glare screen blades shall be installed so the combination of blade width and spacing provide for a minimum 22 degree sight cut-off angle.

Method of Measurement. This work will be measured for payment in feet (meters) in place, along the centerline of the modular glare screen system.

Basis of Payment. This work will be paid for at the contract unit price per foot (meter) for MODULAR GLARE SCREEN SYSTEM.

CHECK SHEET #23

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.

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.

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.

CHECK SHEET #24

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.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
NIGHT TIME INSPECTION OF ROADWAY LIGHTING

Effective: May 1, 1996

The Contractor shall provide traffic control and protection for the night time 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 night time 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.

CHECK SHEET #26

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
ENGLISH SUBSTITUTION OF METRIC BOLTS

Effective: July 1, 1996

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

For ASTM A 325M and AASHTO M 164M, 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

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
ENGLISH SUBSTITUTION OF METRIC REINFORCEMENT BARS

Effective: April 1, 1996
Revised: January 1, 2003

Description. This special provision consists of giving the Contractor the option of replacing metric reinforcement bars as shown on the plans with English size reinforcement bars or metric size bars which have been soft converted. Soft Conversion is an exact conversion to the nearest millimeter.

Reinforcement for Structures. A metric reinforcement bar shown on the plans may be replaced bar for bar with the next size English bar or soft converted metric reinforcement bar of equal or greater cross-sectional area. The exception is the #5 English bar or #16 soft converted metric bar may be substituted bar for bar for the #15 metric bar shown on the plans.

For slab bridges and slabs of culverts, re-evaluation of the slab design will be required prior to any reinforcement bar substitutions. The Contractor shall submit the design to the Bridge Office for approval.

Metric Size Shown on the Plans	Area sq mm
#10	100
#15	200
#20	300
#25	500
#30	700
#35	1000
#45	1500

English Size	Metric Size Soft Converted (ASTM A 615 m - 96a)	Area sq mm
#4	#13	127
#5	#16	198
#7	#22	388
#8	#25	507
#10	#32	817
#11	#36	1007
#18	#57	2581

Reinforcement for Pavement. For English substitution of metric bars in pavements and appurtenances the Contractor may use the given English sizes shown on the Standards or metric size bars which have been soft converted, as shown in this specification.

Basis of Payment. No additional payment will be made for any additional weight of steel furnished in substituting English size reinforcement bars or metric size reinforcement which have been soft converted for metric bars shown on the plans.

CHECK SHEET #28

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
CALCIUM CHLORIDE ACCELERATOR FOR PORTLAND CEMENT CONCRETE

Effective: January 1, 2001

The Contractor has the option to use a calcium chloride accelerator for Class PP-1 or Class PP-2 concrete.

RESERVED

CHECK SHEET #30

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
QUALITY CONTROL OF CONCRETE MIXTURES AT THE PLANT

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

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" form.

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.

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.

CHECK SHEET #30

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.

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,

CHECK SHEET #30

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 MI 504M shall be completed by the Contractor, and shall be submitted to the Engineer weekly or as required by the Engineer. A correctly completed Form MI 504M is required to authorize payment by the Engineer, for applicable pay items.

The Engineer will be responsible for completing form MI 654 and form MI 655.

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.

SCHEDULE A

CONTRACTOR PLANT SAMPLING AND TESTING - DOUBLE A			
Item	Test	Frequency	IL Modified AASHTO, IL Modified ASTM, or Department Test Method ^{1/}
Aggregates (Arriving at Plant)	Gradation ^{2/}	As needed to check source for each gradation number	T 2, T 11, T 27, and T 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Gradation ^{2/}	2,500 cu yd (1,900 cu m) for each gradation number ^{3/}	T 2, T 11, T 27, and T 248
Aggregates (Stored at Plant in Stockpiles or Bins)	Moisture: ^{4/} Fine Aggregate	Once per week for moisture sensor, otherwise daily for each gradation number	Flask, Dunagan, Pycnometer Jar, or T 255
	Moisture: ^{4/} Coarse Aggregate	As needed to control production for each gradation number	Dunagan, Pycnometer Jar, or T 255
Mixture ^{5/}	Slump, Air Content, Unit Weight / Yield, and Temperature	As needed to control production	T 141 and T 119 T 141 and T 152 or T 196 T 141 and T 121 T 141 and ASTM C 1064

1/ Refer to the Department's "Manual of Test Procedures for Materials".

2/ All gradation tests shall be washed. Testing shall be completed no later than 24 hours after the aggregate has been sampled.

3/ One per week (Sunday through Saturday) minimum unless the stockpile has not received additional aggregate material since the previous test.

One per day minimum for a bridge deck pour unless the stockpile has not received additional aggregate material since the previous test. The sample shall be taken and testing completed prior to the pour. The bridge deck aggregate sample may be taken the day before the pour or as approved by the Engineer.

4/ If the moisture test and moisture sensor disagree by more than 0.5 percent, retest. If the difference remains, adjust the moisture sensor to an average of two or more moisture tests, using the Dunagan or Illinois Modified AASHTO T 255 test method. The Department's "Water/Cement Ratio Worksheet" form shall be completed when applicable.

5/ The Contractor may also perform strength testing according to Illinois Modified AASHTO T 141, T 23, and T 22 or T 177; or water content testing according to Illinois Modified AASHTO T 318; or other tests at the plant to control mixture production.

CHECK SHEET #30

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		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins ^{2/}	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 10% of total tests required of the Contractor will be performed per aggregate gradation number and per plant.
	Slump and Air Content	As determined by the Engineer.

- 1/ The Engineer will perform the testing throughout the period of quality control testing by the Contractor.
- 2/ The Engineer will witness, a minimum of one a month, the split sample obtained by the Contractor.

SCHEDULE C

IDOT CONCRETE QUALITY CONTROL 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 (*)
- (f) Water/Cement Ratio Worksheet (*)
- (g) Field/Lab Gradations (Form MI 504M)
- (h) Aggregate Technician Course Workbook |
- (i) Portland Cement Concrete Tester Course Manual |
- (j) Portland Cement Concrete Level I Technician Course Manual |
- (k) Portland Cement Concrete Level II Technician Course Manual |
- (l) Portland Cement Concrete Level III Technician Course Manual |
- (m) Manual of Test Procedures for Materials

* Refer to the Manual of Test Procedures for Materials

CHECK SHEET #31

State of Illinois
Department of Transportation

SPECIAL PROVISION FOR QUALITY CONTROL/QUALITY ASSURANCE OF CONCRETE MIXTURES

Effective: April 1, 1992
Revised: January 1, 2009

Description. This special provision specifies the quality control responsibilities of the Contractor, 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 D.

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

The laboratory shall be of sufficient size and be furnished with the necessary equipment, supplies, and current published test methods for adequately and safely performing all required tests. The laboratory will be approved by the Engineer 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" form.

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

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

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 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.

Mix Design Requirements. A Level III PCC Technician shall be required to develop Contractor mix designs for concrete, cement aggregate mixture II, and controlled low-strength material. The mix design, submittal information, and Engineer verification shall be according to the "Portland Cement Concrete Level III Technician" course manual.

The Contractor shall provide the concrete, cement aggregate mixture II, and controlled low-strength material mix designs to the Engineer, a minimum of 45 calendar days prior to production. The mix design shall meet all the criteria specified in the contract. More than one mix design may be submitted for each class or type used.

The Contractor may provide a mix design previously developed by the Engineer. The Engineer will verify the mix design if the Department's historical test data shows compliance with specification requirements. This would also apply to a mix design previously developed by the Contractor.

Verification of a concrete, cement aggregate mixture II, or controlled low-strength material mix design shall in no manner be construed as acceptance of any mixture produced. The Engineer shall be notified in writing of any proposed changes, subsequent to verification of a mix design.

Tests performed at the jobsite will determine if a concrete, cement aggregate mixture II, or controlled low-strength material mix design can meet specifications. The Contractor shall make adjustments to a mix design, or submit a new mix design if necessary, to comply with the specifications.

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

CHECK SHEET #31

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

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

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

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

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

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

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

- (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.
- (c) 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 Schedule B.

Quality Assurance by Engineer. The Engineer will perform quality assurance tests on independent samples and split samples. An independent sample is a field sample obtained and tested by only one party. A split sample is one of two equal portions of a field sample, where two parties each receive one portion for testing. The Engineer may request the Contractor to obtain a split sample. Aggregate split samples and any failing strength specimen shall be retained until permission is given by the Engineer for disposal. The results of all quality assurance tests by the Engineer will be made available to the Contractor. However, Contractor split sample test results shall be provided to the Engineer before Department test results are revealed. The Engineer's quality assurance independent sample and split sample testing is indicated in Schedule C.

- (a) Strength Testing. For strength testing, Article 1020.09 of the Standard Specifications shall apply, except the Contractor and Engineer beam strength specimens may be cured in the same tank.
- (b) Comparing Test Results. Differences between the Engineer's and the Contractor's split sample test results will not be considered extreme if within the following limits:

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

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

CHECK SHEET #31

(c) Test Results and Specification Limits.

- (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 specification limits; immediate retests on a split sample shall be performed for slump, air content, or aggregate gradation. A passing retest result by each party will require no further action. If either the Engineer's or Contractor's slump, air content, or aggregate gradation split sample retest result is a failure; or if either the Engineer's or Contractor's strength test result is a failure, and the other party is within specification limits; the following actions shall be initiated to investigate the test failure:
 - 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.

For aggregate gradation, jobsite slump, and jobsite 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, or if a failing strength test result is not resolved according to a., b., or c., 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 a., b., and c.

- (2) Independent Sample Testing. For aggregate gradation, jobsite slump, and jobsite air content; if the result of a quality assurance test on a sample independently obtained by the Engineer is not within specification limits, and the mixture has not been placed, the Contractor shall reject the material, unless the Engineer accepts the material for incorporation in the work according to Article 105.03 of the Standard Specifications. If the mixture has already been placed or the Engineer obtains a failing strength test result, the material will be considered unacceptable.

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) 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.
- (c) 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 (a), (b), or (c).

Documentation.

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

The Department's form MI 504 M, form MI 654, and form MI 655 shall be completed by the Contractor, and shall be submitted to the Engineer weekly or as required by the Engineer. A correctly completed form MI 504 M, form MI 654, and form MI 655 are required to authorize payment by the Engineer, for applicable pay items.

- (b) Delivery Truck Ticket. The following information shall be recorded on each delivery ticket or in a bound hardback field book: initial/final revolution counter reading, at the jobsite, if the mixture is truck-mixed; time discharged at the jobsite; total amount of each admixture added at the jobsite; and total amount of water added at the jobsite.

Basis of Payment. Quality Control/Quality Assurance of portland cement concrete mixtures will not be paid for separately, but shall be considered as included in the cost of the various concrete contract items.

SCHEDULE A

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

1/ Refer to the Department's "Manual of Test Procedures for Materials".

2/ All gradation tests shall be washed. Testing shall be completed no later than 24 hours after the aggregate has been sampled.

3/ One per week (Sunday through Saturday) minimum unless the stockpile has not received additional aggregate material since the previous test.

One per day minimum for a bridge deck pour unless the stockpile has not received additional aggregate material since the previous test. The sample shall be taken and testing completed prior to the pour. The bridge deck aggregate sample may be taken the day before the pour or as approved by the Engineer.

4/ If the moisture test and moisture sensor disagree by more than 0.5 percent, retest. If the difference remains, adjust the moisture sensor to an average of two or more moisture tests, using the Dunagan or Illinois Modified AASHTO T 255 test method. The Department's "Water/Cement Ratio Worksheet" form shall be completed when applicable.

5/ The Contractor may also perform strength testing according to Illinois Modified AASHTO T 141, T 23, and T 22 or T 177; or water content testing according to Illinois Modified AASHTO T 318; or other tests at the plant to control mixture production.

SCHEDULE B

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

CHECK SHEET #31

CONTRACTOR JOBSITE SAMPLING & TESTING ^{1/}			
Curb, Gutter, Median, Barrier, Sidewalk, Slope Wall, Paved Ditch, Fabric Formed Concrete Revetment Mat ^{11/} , Miscellaneous Items, Incidental Items	Slump ^{3/ 4/}	1 per 100 cu yd (80 cu m) or minimum 1/day	T 141 and T 119
	Air Content ^{3/ 5/} _{6/}	1 per 50 cu yd (40 cu m) or minimum 1/day	T 141 And T 152 or T 196
	Compressive Strength ^{7/ 8/} or Flexural Strength ^{7/ 8/}	1 per 400 cu yd (300 cu m) or minimum 1/day	T 141, T 22 and T 23 Or T 141, T 177 and T 23
All	Temperature ^{3/}	As needed to control production	T 141 and T 309
Controlled Low- Strength Material (CLSM)	Air Content, Flow and Compressive Strength	As needed to control production	Test according to CLSM specification

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 "Quality Control by Contractor, (a) Personnel Requirements." The Contractor shall also provide recent evidence that similar material has been found to be satisfactory under normal sampling and testing procedures. The total quantity that may be waived for testing shall not exceed 100 cu yd (76 cu m) per contract.

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. 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 observe the selection of a random number by the Contractor or 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. 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 (40 cu m) is pumped, or an additional 100 cu yd (80 cu m) is conveyed. This shall continue throughout the pour. If the re-check indicates the correction factor has changed, a minimum of two truck loads 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 3.0 percent or more, the Contractor shall take corrective action to reduce the loss of air content during transport by the pump or conveyor. The Contractor shall record all air content test results, correction factors and corrected air contents. The corrected air content shall be reported on Form MI 654.
- 6/ If the Contractor's or Engineer's air content test result is within the specification limits, and 0.2 percent or closer to either limit, the next truck load delivered shall be tested by the Contractor. For example, if the specified air content range is 5.0 to 8.0 percent and the test result is 5.0, 5.1, 5.2, 7.8, 7.9 or 8.0 percent, the next truck shall be tested by the Contractor.

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

- 7/ The test of record for strength shall be the day indicated in the Standard Specifications. For cement aggregate mixture II, a strength requirement is not specified and testing is not required. Additional strength testing to determine early falsework and form removal, early pavement or bridge opening to traffic, or to monitor strengths is at the discretion of the Contractor. Strength shall be defined as the average of at least two cylinder or two beam breaks for field tests.

In some instances, such as Articles 503.05 and 503.06 of the Standard Specifications, only a flexural strength is specified. An equivalent compressive strength may be used if approved by the Engineer.

- 8/ In addition to the strength test, an air test, slump test, and temperature test shall be performed on the same sample. For mixtures pumped or conveyed, the Contractor has the option to sample at the discharge end.
- 9/ The air content test will be required for each delivered truck load.
- 10/ For seal coat, the slump test shall be performed as needed to control production.
- 11/ For fabric formed concrete revetment mat, the slump test is not required and the flexural strength test is not applicable.

CHECK SHEET #31

SCHEDULE C

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

ENGINEER QUALITY ASSURANCE SPLIT SAMPLE TESTING		
Location	Measured Property	Testing Frequency ^{1/}
Plant	Gradation of aggregates stored in stockpiles or bins ^{2/}	At the beginning of the project, the first test performed by the Contractor. Thereafter, a minimum of 10% of total tests required of the Contractor will be performed per aggregate gradation number and per plant.
	Slump and Air Content	As determined by the Engineer.
Jobsite	Slump ^{3/} and Air Content ^{3/ 4/}	At the beginning of the project, the first three tests performed by the Contractor. Thereafter, a minimum of 10% of total tests required of the Contractor will be performed per plant, which will include a minimum of one test per mix design.
	Strength ^{3/}	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 plant, which will include a minimum of one test per mix design.

- 1/ The Engineer will perform the testing throughout the period of quality control testing by the Contractor.
- 2/ The Engineer will witness, a minimum of one a month, the split sample obtained by the Contractor.
- 3/ The Engineer will witness the split sample obtained by the Contractor.
- 4/ Before transport by pump or conveyor, a minimum of ten 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 ten percent of total tests required of the Contractor will be performed per mix design and per plant.

SCHEDULE D

IDOT CONCRETE QC/QA 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 (*)
- (f) Method for Obtaining Random Samples for Concrete (*)
- (g) Water/Cement Ratio Worksheet (*)
- (h) Field/Lab Gradations (Form MI 504M)
- (i) Concrete Air, Slump and Quantity (Form MI 654)
- (j) P.C. Concrete Strengths (Form MI 655)
- (k) Aggregate Technician Course Workbook
- (l) Portland Cement Concrete Tester Course Manual
- (m) Portland Cement Concrete Level I Technician Course Manual
- (n) Portland Cement Concrete Level II Technician Course Manual
- (o) Portland Cement Concrete Level III Technician Course Manual
- (p) Manual of Test Procedures for Materials

* Refer to the Manual of Test Procedures for Materials

CHECK SHEET #32

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.

State of Illinois
Department of Transportation

SPECIAL PROVISION
FOR
ASBESTOS WATERPROOFING 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).

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

CHECK SHEET #LRS2

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.”

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.

CHECK SHEET #LRS4

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.”

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 judgement, 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

Prequalification of Bidders. County or Municipality. 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 judgement 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.

- (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.

CHECK SHEET #LRS6

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 judgement 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:

Amount Bid	Proposal Guaranty
Up to \$5,000	\$150
\$5,000	\$300
\$10,000	\$1,000
\$50,000	\$3,000
\$100,000	\$5,000
\$150,000	\$7,500
\$250,000	\$12,500
\$500,000	\$25,000
\$1,000,000	\$50,000
\$1,500,000	\$75,000
\$2,000,000	\$100,000
\$3,000,000	\$150,000
\$5,000,000	\$250,000
\$7,500,000	\$400,000
\$10,000,000	\$500,000
\$15,000,000	\$600,000
\$20,000,000	\$700,000
\$25,000,000	\$800,000
\$30,000,000	\$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

CHECK SHEET #LRS6

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 judgement 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 judgement 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. The Contractor 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 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.

CHECK SHEET #LRS7

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, 2003

Prequalification of Bidders. County or Municipality. 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 judgement 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.

- (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.

CHECK SHEET #LRS7

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 judgement 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:

	<u>Amount Bid</u>	<u>Proposal Guaranty</u>
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

<u>Amount Bid</u>		<u>Proposal Guaranty</u>
\$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. The required value of the proposal guaranty shall be based on the sum of the total bids for each group covered by the individual proposal guaranty.

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.

CHECK SHEET #LRS7

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 judgement 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 judgement 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 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.

CHECK SHEET #LRS8

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
FAILURE TO COMPLETE THE WORK ON TIME

Effective: January 1, 1999

Revise the table of liquidated damages in Article 108.09 of the Standard Specifications to read:

<u>"Original Contract Amount</u>		<u>Daily Charge</u>	
<u>From More Than</u>	<u>To and Including</u>	<u>Calendar Day</u>	<u>Work Day</u>
\$ 0	\$ 25,000	\$ 50	\$ 60
25,000	50,000	100	125
50,000	100,000	200	250
100,000	500,000	370	515
500,000	1,000,000	575	800
1,000,000	2,000,000	735	1,025
2,000,000	3,000,000	895	1,250
3,000,000	5,000,000	1,055	1,475
5,000,000	7,500,000	1,215	1,700
7,500,000	10,000,000	1,425	2,000
10,000,000	15,000,000	1,925	2,700
15,000,000	20,000,000	2,425	3,400
20,000,000	25,000,000	2,925	4,100
25,000,000	30,000,000	3,425	4,800
30,000,000	35,000,000	3,925	5,500
35,000,000	and over	4,425	6,200"

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISIONS
FOR
BITUMINOUS SURFACE TREATMENTS

Effective: January 1, 1999

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 to the satisfaction of the Engineer.”

RESERVED

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.

CHECK SHEET #LRS11

- (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.

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, 2010

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 revised rate as provided by the public body shall apply to this contract and the Contractor will not be allowed additional compensation on account of said revisions.

The Contractor and each subcontractor shall make and keep, for a period of not less than three years, records of all laborers, mechanics, and other workers employed by them on the project; the records shall include each worker's name, address, telephone number when available, social security number, classification or classifications, the hourly wages paid in each period, the number of hours worked each day, and the starting and ending times of work each day.

The Contractor and each subcontractor shall submit monthly, in person, by mail, or electronically a certified payroll to 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 records. The certified payroll shall be accompanied by a statement signed by the Contractor or subcontractor which avers that: (i) 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 B misdemeanor.

Upon two business days' notice, the Contractor and each subcontractor shall make available for inspection the records to the public body in charge of the project, its officers and agents, and to the Director of Labor and his deputies and agents at all reasonable hours at a location within this State. 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.

State of Illinois
Department of Transportation
Bureau of Local Roads and Streets

SPECIAL PROVISION
FOR
SELECTION OF LABOR

Effective: January 1, 1999

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 only 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.

CHECK SHEET #LRS14

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.”