Illinois Department of Transportation
2300 South Dirksen Parkway / Springfield, Illinois / 62764

March 3, 2011

SUBJECT: FAI Route 80 (I-80)
Section 99 (3 & 4) RS-4
Will County
Contract No. 60M65
Item No. 127, March 11, 2011 Letting
Addendum A

NOTICE TO PROSPECTIVE BIDDERS:

Attached is an addendum to the plans or proposal. This addendum involves revised and/or added material.

1. Replaced the Schedule of Prices.
2. Revised the Table of Contents to the Special Provisions.
3. Revised pages 6 & 30 - 39 of the Special Provisions.
4. Added pages 151 - 155 to the Special Provisions.
5. Revised sheet 3 of the Plans.

Prime contractors must utilize the enclosed material when preparing their bid and must include any Schedule of Prices changes in their bidding proposal.

Bidders using computer-generated bids are cautioned to reflect any and all Schedule of Prices changes, if involved, into their computer programs.

Very truly yours,

Scott E. Stitt, P.E.
Acting Engineer of Design and Environment

By: Ted B. Walschleger, P. E.
Engineer of Project Management

cc: Diane O'Keefe, Region 1, District 1; Dave Lippert, Mike Renner; D. Carl Puzey; Estimates

TBW:MS:jc

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULE OF PRICES
CONTRACT NUMBER - 60M65

State Job # - C-91-149-11
PPS NBR - 1-77327-0300
County Name - WILL- -
Code - 197 - -
District - 1 - -
Section Number - 99 (3&4) RS-4

Project Number

Route FAI 80

*** REVISED : MARCH 2, 2011**

Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
K0029614	WEED CONT AQUATIC	GALLON	10.000				
K0029624	WEED CONTROL TEASEL	GALLON	10.000				
K0029629	WEED CONT BROADLF TRF	POUND	5.000				
K0029632	WEED CONT N SEL/N RES	GALLON	4.000				
K0029634	WEED CONTR PRE-EM GRN	POUND	150.000				
K0036120	MULCH PLACEMENT 4	SQ YD	7,000.000				
K1003660	MOWING CYCLES	EACH	2.000				
X0300780	PIEZO ELE SEN CBL CON	FOOT	196.000				
X0323014	EC C CONOGA 30003	FOOT	360.000				
X0323015	PIEZO E AXL SEN CL 2	FOOT	22.000				
X0323016	ECBLC 14-7 XHHWXLP600	FOOT	46.000				
X0323818	CLN & PT EXP RE-BAR	SQ FT	1,044.000				
X0325222	WEED CONT BASAL TRTMT	GALLON	7.000				
X0327075	MOWING SPL	SQ YD	33,880.000				
X0327186	PORT VIDEO TOWER STA	CAL MO	5.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
X2010300	TREE REMOV UNDER 6	UNIT	285.000				
X2503315	INTERSEED CL 4A MOD	ACRE	67.000				
X4063500	PRELIM TEST STRIP	EACH	2.000				
X5017305	PROTEC SHIELD PERM	SQ YD	80.000				
X6030205	FR & GRATES ADJUST SP	EACH	2.000				
X6700410	ENGR FLD OFF A SPL	CAL MO	9.000				
X7010240	TR CONT SURVEILL SPL	CAL DA	150.000				
X7011015	TR C-PROT EXPRESSWAYS	L SUM	1.000				
X7030030	WET REF TEM TAPE T3 4	FOOT	162,638.000				
X7030035	WET REF TEM TAPE T3 5	FOOT	11,154.000				
X7030045	WET REF TEM TAPE T3 8	FOOT	11,476.000				
X7030050	WET REF TEM TPE T3 12	FOOT	1,940.000				
Z0001800	APPROACH SL REP (PD)	SQ YD	3.000				
Z0005876	BOND PREF JT SEAL 4	FOOT	92.000				
Z0010605	CLEAN DRAINAGE SYSTEM	L SUM	1.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
Z0012754	STR REP CON DP = < 5	SQ FT	206.000				
Z0012755	STR REP CON DP OVER 5	SQ FT	42.000				
Z0013798	CONSTRUCTION LAYOUT	L SUM	1.000				
Z0015802	PLUG EX DK DRAINS	EACH	12.000				
Z0016001	DECK SLAB REP (FD-T1)	SQ YD	4.000				
Z0016002	DECK SLAB REP (FD-T2)	SQ YD	25.000				
Z0016200	DECK SLAB REP (PART)	SQ YD	252.000				
Z0021904	SILICONE JT SEAL 1	FOOT	106.000				
Z0021907	SILICONE JT SEAL 1.75	FOOT	128.000				
Z0021914	SILICONE JT SEAL 2.75	FOOT	146.000				
Z0026346	NIGHT WORK ZONE LIGHT	L SUM	1.000				
Z0030250	IMP ATTN TEMP NRD TL3	EACH	4.000				
Z0030280	IMP ATTN TEMP SUN TL3	EACH	1.000				
Z0030350	IMP ATTN REL NRD TL3	EACH	5.000				
Z0030850	TEMP INFO SIGNING	SQ FT	1,511.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
Z0034105	MATL TRANSFER DEVICE	TON	31,642.000				
Z0064800	SELECTIVE CLEARING	UNIT	36.000				
20100110	TREE REMOV 6-15	UNIT	595.000				
20100210	TREE REMOV OVER 15	UNIT	615.000				
20101300	TREE PRUN 1-10	EACH	67.000				
20101350	TREE PRUN OVER 10	EACH	73.000				
20700220	POROUS GRAN EMBANK	CU YD	50.000				
21101605	TOPSOIL F & P 2	SQ YD	2,245.000				
25000210	SEEDING CL 2A	ACRE	8.000				
25000310	SEEDING CL 4	ACRE	38.000				
25000400	NITROGEN FERT NUTR	POUND	2,070.000				
25000500	PHOSPHORUS FERT NUTR	POUND	2,070.000				
25000600	POTASSIUM FERT NUTR	POUND	2,070.000				
25000750	MOWING	ACRE	52.000				
25003210	INTERSEED CL 2A	ACRE	15.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
25100115	MULCH METHOD 2	ACRE	3.000				
25100630	EROSION CONTR BLANKET	SQ YD	425.000				
28000250	TEMP EROS CONTR SEED	POUND	300.000				
40600100	BIT MATLS PR CT	GALLON	36,254.000				
40600300	AGG PR CT	TON	660.000				
40600400	MIX CR JTS FLANGEWYS	TON	28.000				
40600895	CONSTRUC TEST STRIP	EACH	2.000				
40600982	HMA SURF REM BUTT JT	SQ YD	244.000				
40601005	HMA REPL OVER PATCH	TON	99.000				
40603085	HMA BC IL-19.0 N70	TON	5,618.000				
40603148	P HMA BC SMA N80	TON	15,821.000				
40603153	P HMA SC SMA N80	TON	15,821.000				
40603340	HMA SC "D" N70	TON	3,850.000				
44000157	HMA SURF REM 2	SQ YD	4,273.000				
44000165	HMA SURF REM 4	SQ YD	181,268.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
44002216	HMA RM OV PATCH 4	SQ YD	424.000				
44201349	CL C PATCH T1 10	SQ YD	24.000				
44201353	CL C PATCH T2 10	SQ YD	20.000				
44201357	CL C PATCH T3 10	SQ YD	20.000				
44201359	CL C PATCH T4 10	SQ YD	50.000				
44201761	CL D PATCH T1 10	SQ YD	20.000				
44201765	CL D PATCH T2 10	SQ YD	39.000				
44201769	CL D PATCH T3 10	SQ YD	293.000				
44201771	CL D PATCH T4 10	SQ YD	50.000				
50104650	SLOPE WALL REMOV	SQ YD	115.000				
50157300	PROTECTIVE SHIELD	SQ YD	394.000				
51100100	SLOPE WALL 4	SQ YD	115.000				
58700300	CONCRETE SEALER	SQ FT	40,700.000				
64200105	SHOULDER RUMBLE STRIP	FOOT	75,558.000				
67100100	MOBILIZATION	L SUM	1.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
70106800	CHANGEABLE MESSAGE SN	CAL MO	20.000				
70300240	TEMP PVT MK LINE 6	FOOT	10,313.000				
* 70301000	WORK ZONE PAVT MK REM	SQ FT	3,275.000				
70400100	TEMP CONC BARRIER	FOOT	10,313.000				
70400200	REL TEMP CONC BARRIER	FOOT	2,838.000				
72000100	SIGN PANEL T1	SQ FT	365.000				
72000200	SIGN PANEL T2	SQ FT	422.000				
72000300	SIGN PANEL T3	SQ FT	3,197.000				
72400100	REMOV SIN PAN ASSY TA	EACH	11.000				
72400200	REMOV SIN PAN ASSY TB	EACH	20.000				
72400320	REMOV SIGN PANEL T2	SQ FT	158.000				
72400330	REMOV SIGN PANEL T3	SQ FT	3,044.000				
72600100	MILEPOST MKR ASSEMBLY	EACH	17.000				
72900200	METAL POST TY B	FOOT	104.000				
73000100	WOOD SIN SUPPORT	FOOT	1,496.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
73700100	REM GR MT SIN SUPPORT	EACH	50.000				
78000200	THPL PVT MK LINE 4	FOOT	75,757.000				
78000500	THPL PVT MK LINE 8	FOOT	7,461.000				
78000600	THPL PVT MK LINE 12	FOOT	1,733.000				
78004210	PREF PL PM TB INL L4	FOOT	433.000				
78004220	PREF PL PM TB INL L5	FOOT	10,348.000				
78004240	PREF PL PM TB INL L8	FOOT	273.000				
* 78005110	EPOXY PVT MK LINE 4	FOOT	9,800.000				
78008210	POLYUREA PM T1 LN 4	FOOT	8,418.000				
78008220	POLYUREA PM T1 LN 5	FOOT	1,302.000				
78008240	POLYUREA PM T1 LN 8	FOOT	5,982.000				
78008250	POLYUREA PM T1 LN 12	FOOT	773.000				
78100100	RAISED REFL PAVT MKR	EACH	1,054.000				
78100105	RAISED REF PVT MKR BR	EACH	26.000				
78100300	REPLACEMENT REFLECTOR	EACH	111.000				

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Item Number	Pay Item Description	Unit of Measure	Quantity	x	Unit Price	=	Total Price
78200530	BAR WALL MKR TYPE C	EACH	826.000				
78300100	PAVT MARKING REMOVAL	SQ FT	38,469.000				
78300200	RAISED REF PVT MK REM	EACH	1,074.000				
81012400	CON T 1 1/4 PVC	FOOT	36.000				
81012800	CON T 3 PVC	FOOT	20.000				
81021350	CON P 3 PVC	FOOT	21.000				
81900200	TR & BKFIL F ELECT WK	FOOT	36.000				
84200600	REM LT U NO SALV	EACH	6.000				
86300300	CONT CAB TYPE III	EACH	1.000				
87900200	DRILL EX HANDHOLE	EACH	2.000				
88600100	DET LOOP T1	FOOT	160.000				

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LOCATION: I-80 Grundy Co. Line to Center/Meadow

WEEKNIGHT	TYPE OF CLOSURE	ALLOWABLE LANE CLOSURE HOURS					
		INBOUND			OUTBOUND		
Sunday -Thu	1 Lane	8:00 PM	to	5:00 AM	9:00 PM	to	6:00 AM
Friday	1 Lane	8:00 PM (Fri)	to	8:00 AM (Sat)	9:00 PM (Fri)	to	10:00 AM (Sat)
Saturday	1 Lane	8:00 PM (Sat)	to	11:59 AM (Sun)	8:00 PM (Sat)	to	11:59 AM (Sun)

LOCATION: I-80 Center/Meadow to LaGrange

WEEKNIGHT	TYPE OF CLOSURE	ALLOWABLE LANE CLOSURE HOURS		
Sunday -Thursday	1 Lane	9:00 PM	to	5:00 AM
Friday	1 Lane	10:00 PM (Fri)	to	8:00 AM (Sat)
Saturday	1 Lane	9:00 PM (Sat)	to	10:00 AM (Sun)

LOCATION: I-80 @ I-55

One weekend lane closure to reduce I-80 to one lane is allowed starting at 9:00 PM Friday to 6:00 AM Monday. This lane reduction will accommodate the work zone on the westbound I-80 structure at I-55.

Interstate to Interstate ramp closures are only permitted for a maximum of four (4) hours between the hours of

- 11:00 p.m. and 5:00 a.m. on Monday thru Friday
- 12:01 a.m. and 6:00 a.m. on Saturday
- 12:01 a.m. and 7:00 a.m. on Sunday

The Contractor shall furnish and install large (48" x 48") "DETOUR with arrow" signs as directed by the Engineer for all interstate ramp closures (6 signs maximum per closure). The cost of these signs shall be considered incidental to TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).

In addition to the hours noted above, temporary shoulder and partial ramp closures are allowed weekdays between 9:00 A.M. and 3:00 P.M.

Narrow lanes and permanent shoulder closures will not be allowed between Dec. 1st and April 1st.

Full Expressway Closures will only be permitted for a maximum of 15 minutes at a time during the low traffic volume hours of 12:01 A.M. to 5:00 A.M. Monday thru Friday and from 1:00 A.M. to 7:00 A.M. on Sunday. During Full Expressway Closures, the Contractor will be required to close off all lanes except one, using Freeway Standard Closures. Police forces should be notified and requested to close off the remaining lane at which time the work item may be removed or set in place. The District One Traffic Operations Department shall be notified (847-705-4151) at least 3 working days (weekends and holidays DO NOT count into this 72 hours notification) in advance of the proposed road closure and will coordinate the closure operations with police forces.

All stage changes requiring the stopping and/or the pacing of traffic shall take place during the allowable hours for Full Expressway Closures and shall be approved by the Department.

All daily lane closures shall be removed during adverse weather conditions such as rain, snow, and/or fog and as determined by the Engineer.

Revised 03/03/2011

Separation of Polymer Illinois Test Procedure, "Separation of Polymer from Asphalt Binder" Difference in °F (°C) of the softening point between top and bottom portions.	4 (2) max.	4 (2) max.
TEST ON RESIDUE FROM ROLLING THIN FILM OVEN TEST (AASHTO T 240)		
Elastic Recovery ASTM D 6084, Procedure A, 77 °F (25 °C), 100 mm elongation, %	60 min.	70 min.

RECLAIMED ASPHALT PAVEMENT (RAP) (BMPR)
Effective: January 1, 2007 Revised: March 1, 2011

In Article 1030.02(g), delete the last sentence of the first paragraph in (Note 2).

Revise Section 1031 of the Standard Specifications to read:

"**SECTION 1031. RECLAIMED ASPHALT PAVEMENT**

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

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

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

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

(b) Homogeneous. Homogeneous RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures and represent: 1) the same aggregate quality, but shall be at least C quality; 2) the same type of crushed aggregate (either crushed natural aggregate, ACBF slag, or steel slag); 3) similar gradation; and 4) similar asphalt binder content.

Revised 03/03/2011

If approved by the Engineer, combined single pass surface/binder millings may be considered “homogenous” with a quality rating dictated by the lowest coarse aggregate quality present in the mixture.

(c) Conglomerate. Conglomerate RAP stockpiles shall consist of RAP from Class I, Superpave (High ESAL), HMA (High ESAL), or equivalent mixtures. The coarse aggregate in this RAP shall be crushed aggregate and may represent more than one aggregate type and/or quality but shall be at least C quality. This RAP may have an inconsistent gradation and/or asphalt binder content prior to processing. All conglomerate RAP shall be processed prior to testing by crushing to where all RAP shall pass the 5/8 in. (16 mm) or smaller screen. Conglomerate RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

(d) Conglomerate “D” Quality (DQ). Conglomerate DQ RAP stockpiles shall consist of RAP from Class I, Superpave (High or Low ESAL), HMA (High or Low ESAL), or equivalent mixtures. The coarse aggregate in this RAP may be crushed or round but shall be at least D quality. This RAP may have an inconsistent gradation and/or asphalt binder content. Conglomerate DQ RAP stockpiles shall not contain steel slag or other expansive material as determined by the Department.

(e) Non-Quality. RAP stockpiles that do not meet the requirements of the stockpile categories listed above shall be classified as “Non-Quality”.

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

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

For testing during stockpiling, washed extraction samples shall be run at the minimum frequency of one sample per 500 tons (450 metric tons) for the first 2000 tons (1800 metric tons) and one sample per 2000 tons (1800 metric tons) thereafter. A minimum of five tests shall be required for stockpiles less than 4000 tons (3600 metric tons).

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

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

Evaluation of Test Results. All of the extraction results shall be compiled and averaged for asphalt binder content and gradation and, when applicable G_{mm}.

Revised 03/03/2011

Individual extraction test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	FRAP/Homogeneous /Conglomerate	Conglomerate "D" Quality
1 in. (25 mm)		± 5 %
1/2 in. (12.5 mm)	± 8 %	± 15 %
No. 4 (4.75 mm)	± 6 %	± 13 %
No. 8 (2.36 mm)	± 5 %	
No. 16 (1.18 mm)		± 15 %
No. 30 (600 μm)	± 5 %	
No. 200 (75 μm)	± 2.0 %	± 4.0 %
Asphalt Binder	± 0.4 % 1/	± 0.5 %
G_{mm}	± 0.03	

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

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

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

1031.04 Quality Designation of Aggregate in RAP/FRAP.

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

(1) RAP from Class I, Superpave (High ESAL)/HMA (High ESAL), or HMA (Low ESAL) IL-9.5L surface mixtures are designated as containing Class B quality coarse aggregate.

(2) RAP from Superpave (Low ESAL)/HMA (Low ESAL) IL-19.0L binder mixture is designated as Class D quality coarse aggregate.

(3) RAP from Class I, Superpave (High ESAL), or HMA (High ESAL) binder mixtures, bituminous base course mixtures, and bituminous base course widening mixtures are designated as containing Class C quality coarse aggregate.

(4) RAP from bituminous stabilized subbase and BAM shoulders are designated as containing Class D quality coarse aggregate.

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

Revised 03/03/2011

(1) If the Engineer has documentation of the quality of the FRAP aggregate, the Contractor shall use the assigned quality provided by the Engineer. If the quality is not known, the quality shall be determined according to Article 1031.04(b)(2).

(2) Fractionated stockpiles containing plus #4 (4.75 mm) sieve coarse aggregate shall have a maximum tonnage of 5000 tons (4500 metric tons). The Contractor shall obtain a representative sample witnessed by the Engineer. The sample shall be a minimum of 50 lb (25 kg). The sample shall be extracted according to Illinois Modified AASHTO T 164 by a consultant prequalified by the Department for the specified testing. The consultant shall submit the test results along with the recovered aggregate to the District Office. The cost for this testing shall be paid by the Contractor. The District will forward the sample to the BMPR Aggregate Lab for MicroDeval Testing, according to Illinois Modified AASHTO T 327. A maximum loss of 15.0 percent will be applied for all HMA applications."

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

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

Max RAP Percentage

HMA Mixtures [1/, 3/]	Maximum % RAP		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified
30	30	30	10
50	25	15	10
70	15 / 25 [2/]	10 / 15 [2/]	10
90	10	10	10
105	10	10	10

Revised 03/03/2011

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

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

3/ When RAP exceeds 20 percent, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275 °F (135 °C) the high and low virgin asphalt binder grades shall each be reduced by one grade when RAP exceeds 25 percent (i.e. 26 percent RAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28)..

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

(1) Level 1 Max FRAP Percentage

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

1/ For HMA "All Other" (shoulder and stabilized subbase) N30, the amount of FRAP shall not exceed 50 percent of the mixture.

2/ When FRAP exceeds 20 percent for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275°F (135 °C) the high and low virgin asphalt binder grades shall each be reduced by one grade when FRAP exceeds 25 percent (i.e. 26 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

3/ For SMA the maximum FRAP shall be 20 percent. When the FRAP usage in SMA exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

4/ For IL-4.75 mix the amount of minus #4 fine fraction FRAP shall not exceed 20 percent. When the FRAP usage in IL-4.75 exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

Revised 03/03/2011

(2) Level 2 Max FRAP Percentage

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

1/ For HMA "All Other" (shoulder and stabilized subbase) N30, the amount of FRAP shall not exceed 50 percent of the mixture.

2/ When FRAP exceeds 20 percent for all mixes, except for SMA and IL-4.75, the high and low virgin asphalt binder grades shall each be reduced by one grade (i.e. 25 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28). If warm mix asphalt (WMA) technology is utilized, and production temperatures do not exceed 275°F (135 °C) the high and low virgin asphalt binder grades shall each be reduced by one grade when FRAP exceeds 25 percent (i.e. 26 percent FRAP would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

3/ For SMA the maximum FRAP shall be 20 percent. When the FRAP usage in SMA exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

4/ For IL-4.75 mix the amount of minus #4 fine fraction FRAP shall not exceed 30 percent. When the FRAP usage in IL-4.75 exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

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

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

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

Revised 03/03/2011

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

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

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

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

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

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

(a) Dryer Drum Plants.

(1) Date, month, year, and time to the nearest minute for each print.

(2) HMA mix number assigned by the Department.

(3) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).

(4) Accumulated dry weight of RAP/FRAP in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).

(5) Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.

(6) Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.

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

(8) Aggregate and RAP/FRAP moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAP/FRAP are printed in wet condition.)

(b) Batch Plants.

(1) Date, month, year, and time to the nearest minute for each print.

(2) HMA mix number assigned by the Department.

(3) Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).

(4) Mineral filler weight to the nearest pound (kilogram).

(5) RAP/FRAP weight to the nearest pound (kilogram).

(6) Virgin asphalt binder weight to the nearest pound (kilogram).

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

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

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

(a) Stockpiles and Testing. RAP stockpiles may be any of those listed in Article 1031.02, except “Non-Quality” and “FRAP”. The testing requirements of Article 1031.03 shall not apply.

(b) Gradation. One hundred percent of the RAP material shall pass the 1 1/2 in. (37.5 mm) sieve. The RAP material shall be reasonably well graded from coarse to fine. RAP material that is gap-graded or single sized will not be accepted.”

Revised 03/03/2011

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FRAMES AND GRATES TO BE ADJUSTED (SPECIAL)
Effective: August 1, 1995 Revised: August 25, 2010

Add the following to Article 603.03 of the Standard Specifications:

“The contractor shall adjust the structures to the finished pavement elevation no more than 5 calendar days prior to placement of the final lift of surface unless approved by the Engineer.”

Add the following to Article 603.09 of the Standard Specifications:

"Removing frames and grates on drainage and utility structures in the pavement prior to milling, and adjusting to final grade prior to placing the surface course, will be paid for at the contract unit price each for FRAMES AND GRATES TO BE ADJUSTED (SPECIAL).

This work will not be paid for when drainage and utility structures are specified for payment as structure reconstruction.**TEMPERATURE CONTROL FOR CONCRETE PLACEMENT (D-1)**
Effective: May 1, 2007

Delete the second and third sentences of the second paragraph of Article 1020.14(a) of the Standard Specifications.

Revised 03/03/2011

RECLAIMED ASPHALT SHINGLES (RAS) (BMPR)
Effective: March 1, 2011

Description. Reclaimed asphalt shingles (RAS) meeting Type I or Type 2 requirements will be permitted in all HMA mixtures as specified herein for overlay applications only. RAS shall not be used in full depth HMA pavement. RAS shall be a clean and uniform material with a maximum of 0.5 percent unacceptable materials, as defined in Bureau of Materials and Physical Research Policy (BMPR) Memorandom *Reclaimed Asphalt Shingle (RAS) Sources*, by weight of RAS. All RAS used shall come from a BMPR approved processing facility where it shall be ground and processed to 100 percent passing the 3/8 in. sieve and 93 percent passing the #4 sieve based on a dry shake gradation. RAS shall be uniform in gradation and asphalt binder content and shall meet the testing requirements specified herein.

Definitions. RAS shall meet either Type I or Type 2 requirements as specified herein.

(a) Type I. Type I RAS shall be processed, preconsumer asphalt shingles salvaged from the manufacture of residential asphalt roofing shingles.

(b) Type 2. Type 2 RAS shall be processed post-consumer shingles only, salvaged from residential, or four unit or less dwellings not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP).

Stockpiles. Type 1 and Type 2 RAS shall be stockpiled separately and shall not be intermingled. Each stockpile shall be signed indicating what type of RAS is present.

Unless otherwise approved by the Engineer, mechanically blending manufactured sand (FM20 or FM 22) up to an equal weight of RAS with the processed RAS will be permitted to improve workability. The sand shall be “B Quality” or better from an approved Aggregate Gradation Control System source. The sand shall be accounted for in the mix design and during HMA production.

Records identifying the shingle processing facility supplying the RAS, RAS type and lot number shall be maintained by project contract number and kept for a minimum of 3 years.

Testing. RAS shall be sampled and tested during stockpiling.

For testing during stockpiling, washed extraction, and testing for unacceptable materials shall be run at the minimum frequency of one sample per 200 tons (180 metric tons) for the first 1000 tons (900 metric tons) and one sample per 250 tons (225 metric tons) thereafter. A minimum of five tests are required for stockpiles less than 1000 tons (900 metric tons). Once a ≤ 1000 ton, five-test stockpile has been established it shall be sealed. Additional incoming RAS shall be stockpiled in a separate working pile as designated in the Quality Control plan and only added to the sealed stockpile when the test results of the working pile are complete and are found to meet the tolerances specified herein for the original sealed RAS stockpile.

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

Added 03/03/2011

Evaluation of Test Results. All of the test results, with the exception of percent unacceptable materials, shall be compiled and averaged for asphalt binder content, and gradation. Individual test results, when compared to the averages, will be accepted if within the tolerances listed below.

Parameter	RAS
No. 8 (2.36 mm)	± 5 %
No. 16 (1.18 mm)	± 5 %
No. 30 (600 μm)	± 4%
No. 200 (75 μm)	± 2.0 %
Asphalt Binder Content	± 1.5 %

If more than 20 percent of the individual sieves are out of the gradation tolerances, or if more than 20 percent of the asphalt binder content, or if the percent unacceptable materials exceeds 0.5 percent by weight of material retained on the #4 sieve, the RAS shall not be used in Department projects. All test data and acceptance ranges shall be sent to the District for evaluation.

Use of RAS in HMA. Type 1 or Type 2 RAS may be used alone or in conjunction with Reclaimed Asphalt Pavement (RAP) in all HMA mixtures up to a maximum of 5.0 percent by weight of total mix.

Level 1 asphalt binder replacement. The maximum Level 1 RAS or RAS/RAP blend usage will be dictated by the Level 1 - Maximum Asphalt Binder Replacement (MABR) table listed below.

HMA Mixtures [1/, 2/]	Level 1 - Maximum Asphalt Binder Replacement		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified [3/, /4]
30	35	35	10
50	30	25	10
70	25	20	10
90	20	15	10
105	10	10	10

1/ For HMA shoulder and stabilized subbase (HMA “All Other”) N-30, the maximum binder replacement shall be 50 percent.

2/ When the asphalt binder replacement exceeds 20 percent for all mixtures, except for SMA and IL-4.75, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 25 percent asphalt binder replacement would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

3/ For SMA the maximum asphalt binder replacement shall be 20 percent. When the binder replacement exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

Added 03/03/2011

4/ For IL-4.75 mix the maximum asphalt binder replacement shall not exceed 20 percent. When the asphalt binder replacement exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

Level 2 asphalt binder replacement. The maximum Level 2 RAS or RAS/RAP blend usage will be dictated by the Level 2 - MABR table listed below.

HMA Mixtures [1/, 2/]	Level 2 - Maximum Asphalt Binder Replacement		
Ndesign	Binder/Leveling Binder	Surface	Polymer Modified [3/, 4/]
30	40	40	10
50	40	30	10
70	30	20	10
90	30	20	10
105	30	15	10

1/ For HMA shoulder and stabilized subbase (HMA "All Other") N-30, the maximum binder replacement shall be 50 percent.

2/ When the asphalt binder replacement exceeds 20 percent for all mixtures, except for SMA and IL-4.75, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 25 percent asphalt binder replacement would require a virgin asphalt binder grade of PG64-22 to be reduced to a PG58-28).

3/ For SMA the maximum asphalt binder replacement shall be 20 percent. When the binder replacement exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

4/ For IL-4.75 mix the maximum asphalt binder replacement shall not exceed 30 percent. When the asphalt binder replacement exceeds 10 percent, the high and low virgin asphalt binder grade shall each be reduced by one grade (i.e. 15 percent asphalt binder replacement would require a virgin asphalt binder grade of PG76-22 to be reduced to a PG70-28).

HMA Mix Designs. RAS and RAS/RAP designs shall be submitted for volumetric verification. Type 1 and Type 2 RAS are not interchangeable in a mix design. A RAS stone bulk specific gravity (Gsb) of 2.500 shall be used for mix design purposes.

RAS and RAS/RAP mix designs with asphalt binder replacements exceeding the Level 1 – MABR limits specified herein, shall be tested prior to submittal for verification, according to Illinois Modified AASHTO T324 (Hamburg Wheel). RAS and RAS/RAP mixtures exceeding the Level 1 MABR limits shall meet the following requirements:

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

Added 03/03/2011

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

RAS shall be incorporated into the HMA mixture either by a separate weight depletion system or by using the RAP weigh belt. Either feed system shall be interlocked with the aggregate feed or weigh system to maintain correct proportions for all rates of production and batch sizes. The portion of RAS shall be controlled accurately to within ± 0.5 percent of the amount of RAS utilized. When using the weight depletion system, flow indicators or sensing devices shall be provided and interlocked with the plant controls such that mixture production is halted when RAS flow is interrupted.

When producing HMA containing RAS, a positive dust control system shall be utilized.

HMA plants utilizing RAS shall be capable of automatically recording and printing the following information.

(a) Dryer Drum Plants.

(1) Date, month, year, and time to the nearest minute for each print.

(2) HMA mix number assigned by the Department.

(3) Accumulated weight of dry aggregate (combined or individual) in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).

(4) Accumulated dry weight of RAS in tons (metric tons) to the nearest 0.1 ton (0.1 metric ton).

(5) Accumulated mineral filler in revolutions, tons (metric tons), etc. to the nearest 0.1 unit.

(6) Accumulated asphalt binder in gallons (liters), tons (metric tons), etc. to the nearest 0.1 unit.

(7) Residual asphalt binder in the RAS material as a percent of the total mix to the nearest 0.1 percent.

(8) Aggregate and RAS moisture compensators in percent as set on the control panel. (Required when accumulated or individual aggregate and RAS are printed in wet condition.)

(b) Batch Plants.

Added 03/03/2011

(1) Date, month, year, and time to the nearest minute for each print.

(2) HMA mix number assigned by the Department.

(3) Individual virgin aggregate hot bin batch weights to the nearest pound (kilogram).

(4) Mineral filler weight to the nearest pound (kilogram).

(5) RAS weight to the nearest pound (kilogram).

(6) Virgin asphalt binder weight to the nearest pound (kilogram).

(7) Residual asphalt binder in the RAS material as a percent of the total mix to the nearest 0.1 percent.

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

Added 03/03/2011