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

October 27, 2017

SUBJECT: FAI Route 70 (I-70)
Project NHPP-0070(047)
Section (25-1,2)R
Effingham County
Contract No. 74664
Item No. 27, November 17, 2017 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. Revised the Schedule of Prices
2. Revised pages ii and iii of the Table of Contents to the Special Provisions
3. Revised pages 2, 3, 4, 6 and 20-25 of the Special Provisions
4. Revised sheets 5, 6, 9, 11, 25, 37, 110 and 186-190 of the Plans

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

Very truly yours,

Maureen M. Addis, P.E.
Engineer of Design and Environment

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

cc: Jeff South, Region 4, District 7; D. Carl Puzey; Tim Kell; Estimates

CWR/ck

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INTERIM COMPLETION DATES

All work in the westbound lanes including surface course, shoulders, temporary pavement marking, guardrail and permanent seeding shall be completed and the lanes open to traffic by November 26, 2019.

All work in the eastbound lanes including surface course, shoulders, permanent pavement marking, guardrail and permanent seeding shall be completed and the lanes open to traffic by November 24, 2020.

All rubblization, paving operations including surface course and shoulders, permanent guardrail and pavement markings for either eastbound or westbound pavements shall be completed in the same construction season in which they are begun.

TRAFFIC CONTROL PLAN

Traffic Control shall be in accordance with the applicable sections of the Standard Specifications for Road and Bridge Construction, the applicable guidelines contained in the Illinois Manual on Uniform Traffic Control Devices for Streets and Highways, these Special Provisions, and any other special details and Highway Standards contained herein and in the plans.

Special attention is called to Articles 107.09, 107.14, and 107.15 of the Standard Specifications for Road and Bridge Construction, the following Highway Standards and Special Details relating to traffic control, and these Special Provisions.

Highway Standards:

701006 701101 701106 701201 701400 701401 701406 701416 701426 701451 701901

The existing roadway shall be kept open to traffic at all times during the construction of this section. Rubblization operations will be staged using crossovers with all traffic diverted to the eastbound lanes while reconstruction work is performed on the westbound lanes and vice versa.

Both rest areas within the project limits will be closed during the time when temporary concrete barrier is in use for head-to-head traffic.

Lane closures on I-70 using a standard other than 701416 will not be permitted between the hours of 7 A.M. and 7 P.M. except during the replacement of the passing lane shoulders adjacent to the west median crossover. Five calendar days are allowed to complete this work and liquidated damages will apply after that. The east median crossover will be constructed using temporary concrete barrier on the passing lane shoulders.

No lane closures with temporary concrete barrier will be permitted between November 15 and March 1.

No work shall be done in the median within 20 feet of the edge of a lane open to traffic during the time in which Standard 701416 is in use.

Placement and removal of temporary pavement marking lines shown on the traffic control standards will not be measured for payment and shall be included in the bid price for the traffic control standard.

Traffic Control Standards shall be applied as directed by the Engineer. Suggested applications for each standard are as follows:

Standard 701006: Use this standard on IL 128 or at the overhead structures when work is at least 24" away from the edge of pavement.

Standard 701101: This standard shall apply when at any time, any vehicles, equipment, workers or their activities will encroach in the area 15' to 24" from the edge of pavement, except where activities will result in a drop off greater than 3" within 2' of the pavement. Typical applications include seeding operations and sign installation and maintenance.

Standard 701106: This standard shall apply at all times all vehicles, equipment, workers, or their activities are more than 15' from the edge of pavement. Typical applications include tree planting and culvert extension work.

Standard 701201: This standard is used where at any time, any vehicle, equipment, workers or their activities will encroach in the area between the centerline and a line 24 inches outside the edge of pavement. Use this standard for guardrail work along IL 128 and for guardrail work at the overhead structures.

Standard 701400: This standard shall apply when at any time a lane is closed on a freeway / expressway. This standard shall be used in conjunction with other standards for lane closures. Work Zone Speed Limit signs R2-I106-3618 shall read "$375 FINE MINIMUM".

Standard 701401: This standard shall be used for work requiring a lane closure that will remain in place during nighttime hours. A possible application would be pavement patching and construction of HMA Base Course 12".

Standard 701406: This standard shall be used for work requiring a lane closure that will not remain overnight.

Standard 701416: This standard shall be used during stages 2 and 3. Operations include pavement rubblization, resurfacing operations, and pavement replacement. See plans for details not shown on standard. Temporary pavement markings shall be paint.

Standard 701426: This standard shall apply where any vehicle, equipment, workers or their activities will require stationary operations up to one hour or a continuous or intermittent moving operation where the average speed of movement is greater than 1 mph. Use this standard for installing permanent pavement markings on the westbound lanes.

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Standard 701451: This standard shall be used for closure of the ramps at the rest areas and at the ramp at the south tri-level.

The Engineer will determine the required traffic control for any operations not covered above.

AGGREGATE SHOULDERS, TYPE B 12”

This Work consists of the construction of Aggregate Shoulders, Type B, to a nominal depth of 12” in accordance with Section 481 of the Standard Specifications and as directed by the Engineer.

The work shall be paid for at the contract unit price per square yard for AGGREGATE SHOULDERS, TYPE B 12”.

BORROW AREAS, USE AREAS, AND/OR WASTE AREAS
Effective: November, 2009 Revised: October 24, 2016

In addition to the provisions contained in Article 107.22 of the Standard Specifications, any required submittal(s) to the District office shall require two (2) copies sent for processing. All copies of pictures submitted shall be in color.

BREAKAWAY SIGN SUPPORT COUPLER

Description. This work shall consist of furnishing and installing a base and breakaway coupling device for square telescoping steel, round steel or flanged “U channel” metal sign supports for temporary ground mounted signs. The base will be directly imbedded in the concrete pavement for the temporary crossovers for closure of the temporary crossovers at the completion of the project.

The coupler shall perform as to ensure the signpost will release from the base (anchor) upon impact from a motor vehicle. The coupler shall shear or yield at any angle of incidence (360degrees), with a constant amount of force, irrespective of vehicle velocity. The coupler shall function effectively, independent of the sequence in which the fasteners are tightened, with the sole function of the fasteners to be; securing the sign post to the coupler and the coupler to the base. Upon impact, no shard of metal shall be left above grade, and the anchor shall be automatically plugged to prevent any foreign matter or debris from entering. The coupler shall incorporate a wedge locking feature which applies equal and opposite force directly to two opposing side walls of the anchor, by tightening one internally located grade 8 - ½” bolt.

Materials. The base shall be constructed of a 2 “ I.D. - 2 ½ “ O.D. - ¼ “ wall, seamless telescopic square tube with 80,000 PSI yield strength. The base shall have stabilizing wings attached for soil and asphalt applications. The anchor length shall range between 8” and 40”, as needed. The coupler shall be of cast frangible material with an engineered breakaway or shear point equal in strength to 95% of that of the sign support being used. The base anchor tube and coupler shall have an exterior grade (UV protected) coating.

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COMBINATION CONCRETE CURB AND GUTTER, TYPE B-9.24 (SPECIAL)

This work shall consist of constructing combination concrete curb and gutter conforming to the type B-9.24 (special) detail shown on the plans and as directed by the Engineer. All work shall be performed according to Section 606.

This work will be paid for at the contract unit price per foot for COMBINATION CONCRETE CURB AND GUTTER, TYPE B-9.24 (SPECIAL).

CONCRETE HEADWALL REMOVAL SPECIAL

This work consists of removing and disposing of concrete headwalls for pipe drains at the locations designated on the plans and as directed by the Engineer. After the headwalls are removed the voids shall be filled with Porous Granular Material to match the existing slope. All areas disturbed by the removal of the headwall shall be seeded with a mixture conforming to the Class II Seeding mixtures specified in Article 250.07 of the Standard Specifications. Fertilizer nutrients and mulch shall be applied in accordance with Article 250.04 of the Standard Specifications.

This work will be paid for at the contract unit price per each for CONCRETE HEADWALL REMOVAL SPECIAL.

DELINEATOR REMOVAL

This work consists of the removing and disposing of existing delineators. This work shall be paid for at the contract unit price per each for DELINEATOR REMOVAL.

DETOUR SIGNING

This work consists of the furnishing, installation, maintenance, relocation, and removal of temporary detour signing as shown on the plans, as directed by the Engineer, in accordance with Section 701 of the Standard Specifications, and as herein specified.

Detour Signing required under this item is that which will be required to implement temporary detours in the event of an accident which necessitates the closure of FAI-70. Detour signing will also be required for closure of the I-57 NB/I-70 WB ramp at the south tri-level. All detour signing, shall be in place before the stage 2 traffic pattern is implemented. Detour signing shall remain in place until the conclusion of stage 3.

Detour Signing required under this item includes barricades/drums, Type III barricades, and all temporary signing necessary to mark the detours as shown on the plan sheets entitled “Detour Signing.” Changeable message signs will be paid for separately.

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REMOVAL OF EXISTING RAISED REFLECTIVE PAVEMENT MARKERS

The removal of existing raised reflective pavement markers shall be included in the contract unit price per square yard for HOT-MIX ASPHALT SURFACE REMOVAL of the thickness shown on the plans or PAVEMENT REMOVAL.

REMOVE EXISTING FLARED END SECTION

This work consists of the removal of existing flared end sections at locations shown on the plans. Removal shall include entire end section, including buried portions. Work shall be in accordance with Article 440. Disposal shall be in accordance with Article 440.06.

This work shall be paid for at the contract unit price EACH for REMOVE EXISTING FLARED END SECTION, which price shall include removal, disposal of the material, and backfilling as necessary.

REMOVE EXISTING RIPRAP

This work consists of the removal and satisfactory disposal of existing riprap as shown on the plans, as directed by the Engineer, and in accordance with Section 202 of the Standard Specifications.

Riprap to be removed under this item consists of riprap from aggregate ditches and riprap used for slope erosion control as shown on the plans. Removal of existing riprap from aggregate ditches shall also include the removal of any paved ditches which were broken and left in place as riprap.

This work will be paid for at the contract unit price per square yard for REMOVE EXISTING RIPRAP, as herein specified.

REMOVE IMPACT ATTENUATORS, SALVAGE

The work included in this item consists of removing and disposing of the sand barrels used for median pier protection at the overhead structures. The contractor shall retain possession of the removed materials but may deliver intact empty barrels to the IDOT maintenance yard on the west edge of Effingham. This work will be paid for at the contract unit price per each for REMOVE IMPACT ATTENUATORS, SALVAGE.

ROCKFILL – REPLACEMENT
Effective July 2007 Revised May 15, 2017

This work consists of the removal and replacement of unsuitable soils beneath cast-in-place and precast concrete box culverts.

Materials shall meet the requirements of the following Articles of the Standard Specifications:

Item	Article
CA 07	1004.04[a]
Rockfill	1005.01

[a] Except coarse aggregate shall be crushed and quality shall be as directed by the Engineer.

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The gradation of rockfill shall be selected based on the following table:

Rockfill Layer Thickness	Rockfill Gradation	Minimum Cap Thickness
Less than 1 ft	Gradations with a maximum size of 4 inches approved by the Engineer.[b]	4 inches
Greater than 1 ft	Primary Crusher Run	6 inches
Greater than 3 ft	Primary Crusher Run or Shot Rock[c]	6 inches

[b] Gradations with a maximum size of 2 inches or smaller shall have less than 6% passing the No. 200 seive.

[c] Shot rock dimensions shall not exceed 18 inches.

Unsuitable soil shall be excavated according to Article 202.03 of the Standard Specifications. Rockfill shall be placed following the excavation of the unsuitable soil. No compaction of rockfill is required. For cast-in-place concrete box culverts, rockfill shall be capped with CA 07. For precast concrete box culverts, the rockfill shall be capped with the porous granular bedding according to Article 540.06 of the Standard Specifications, except only CA 07 will be allowed.

Cost of material removal and its replacement with rockfill and CA 7 cap will be paid per Art. 109.04 (b) of the Standard Specifications.

RUBBLIZING PCC PAVEMENT
Effective June 1, 2001

Description. This work shall consist of rubblizing the existing portland cement concrete (PCC) pavement.

Materials. Aggregate replacement material, for areas of approximately 1 sq m (10 sq ft) or less, shall be a Class D Quality (or better) crushed stone, crushed slag, crushed concrete, or crushed gravel meeting a CA 6 or CA 10 gradation; according to Section 1004 of the Standard Specifications. Bituminous concrete mixture used for repairs shall be the same as noted in the mixture requirements for mainline binder.

Equipment. Equipment shall be according to the following Articles of Section 1100:

Item	Article/Section
(a) Vibratory Steel Wheel Roller..(Note 1).....	1101.01
(b) Pneumatic Tired Rollers.....(Note 2).....	1101.01

(c) Multi-head Breaker (MHB). The equipment shall consist of a self-contained, self-propelled MHB. Hammer heads shall be mounted laterally in pairs with half the hammers in a forward row, and the remainder diagonally offset in a rear row so there is continuous pavement breaking from side to side. This equipment shall have the capability of rubblizing pavement up to 4 m (13 ft) in width, in a single pass. Hammer drop height shall have the ability to be independently controlled. (Note 3)

(d) Resonant Breaker. The equipment shall consist of a self-contained, self-propelled resonant frequency pavement breaking unit capable of producing low amplitude, 8,880 N (2,000 lb) blows, at a rate of not less than 44 per second.

(e) Z-Pattern Steel Grid Roller. The equipment shall consist of a self-contained, self-propelled vibratory steel wheel roller with a Z-pattern grid cladding bolted transversely to the surface of the drum. The vibratory roller shall have a minimum gross weight of 9 metric tons (10 tons).

Note 1. The vibratory roller shall have a minimum gross weight of 9 metric tons (10 tons).

Note 2. The pneumatic tired rollers shall develop a compression of not less than 50 N/mm (300 lb/in.), nor more than 90 N/mm (500 lb/in.), of width of the tire tread in surface contact.

Note 3. When the MHB is used, a Z-pattern steel grid roller shall be used for additional particle break down as described herein.

CONSTRUCTION REQUIREMENTS

General. If a drainage system is specified on the plans, the system shall be installed and functioning before rubblizing begins. Rubblizing shall commence after removal of any existing bituminous concrete overlay in the area to be rubblized. Any bituminous concrete overlay left on the pavement (after the milling process) shall be removed prior to rubblizing to the satisfaction of the Engineer.

Partial-depth bituminous concrete patches may be left in place and impacted by rubblizing equipment. If breaking is not satisfactory under partial-depth bituminous patches, alternate methods shall be used to break the pavement with approval of the Engineer. Full-depth bituminous patches will be reviewed by the Engineer prior to rubblizing. Unsound patches will be removed and replaced with a Class C or D patch. If the patch is concrete it shall be rubblized. Lane width, full-depth bituminous patches that exceed 3 m (10 ft) in length shall not be impacted by breaking equipment. The Engineer will direct the removal of any unstable material, and method of replacement.

If the unsound patch is greater than 1 sq m (10 sq ft), bituminous concrete binder mixture shall be used. When the road is closed to traffic and the unsound patch is less than or equal to 1 sq m (10 sq ft), the replacement material may be aggregate.

PCC pavement or other PCC appurtenances to remain in place shall be severed from the pavement to be rubblized with a full-depth saw cut. Rubblized pavement less than or equal to 1 sq m (10 sq ft) dislodged by construction traffic shall be repaired with aggregate replacement material and compacted prior to the paving operation. Rubblized pavement greater than 1 sq m (10 sq ft) dislodged by construction traffic shall be repaired with bituminous concrete binder mixture.

The Contractor shall prevent damage to underground utilities and drainage structures during rubblizing. Approved alternate breaking methods shall be used over underground utilities and drainage structures as specified on the plans or directed by the Engineer.

Reinforcement shall be left in place, except that reinforcement projecting from the surface after breaking or compaction shall be cut off below the surface and removed. Any loose joint fillers, expansion material, or other similar items shall also be removed.

Pavement Breaking. Above the reinforcing steel or upper one-half of the pavement, the equipment shall break the pavement such that at least 75 percent of the pieces are a maximum of 75 mm (3 in.). Below the reinforcing steel or in the lower one-half of the pavement, at least 75 percent of the pieces shall be a maximum of 225 mm (9 in.). Concrete to steel bond shall be broken. Uniform breaking shall be maintained through successive passes of the breaking equipment.

Breaking shall be accomplished only by the method(s) specified on the plans and defined as follows:

Method I - This method uses the MHB and Z-pattern steel grid roller to break the pavement, as specified herein.

Method II - This method uses the resonant breaker to break the pavement, as specified herein. This resonant breaker utilizes high flotation tires, which shall be maintained under 415 MPa (60 psi). The breaking shall begin at the centerline and proceed to the edge of the pavement.

Method III - This method uses the resonant breaker to break the pavement, as specified herein, without restriction on tire pressure.

Method IV - This method uses either the MHB with Z-pattern steel grid roller or the resonant breaker to break the pavement, as specified herein.

Prior to the acceptance of the proposed breaking procedure, the Contractor shall complete a strip for evaluation by the Engineer. To ensure the pavement is being broken to the specified dimensions; the Contractor shall excavate a broken area of 1 sq m (10 sq ft), in two separate locations during the first day of breaking, as directed by the Engineer. Modifications to the breaking procedure must be made if the size requirements are not met. These excavations may be repaired with replacement material. If breaking procedures or conditions change, additional excavations to inspect the broken pavement dimensions shall be made, as directed by the Engineer.

Any large concrete pieces that result from inadequate breaking shall be treated as follows:

Size and Location of Pieces	Action
Greater than 225 mm (9 in.) at surface of broken pavement.	Reduce size to under 225 mm (9 in.), or remove and replace.
Greater than 300 mm (12 in.) below steel or lower 1/2 of broken pavement.	Reduce size to under 300 mm (12 in.), or remove and replace.

Unsuitable or unstable material encountered during the breaking process shall be removed and disposed of, according to Article 202.03 of the Standard Specifications. Areas of approximately 1 sq m (10 sq ft) or less may be repaired by use of aggregate replacement material. Larger unstable areas require removal and replacement, as directed by the Engineer. Following subgrade repairs, bituminous concrete binder mixture shall be placed to the depth of the original PCC pavement, and compacted to the satisfaction of the Engineer.

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Compaction. Prior to placing the bituminous overlay, the complete width of the broken pavement shall be compacted by vibratory steel wheel and pneumatic tired rollers in the following sequence:

After breaking:

1. Minimum of four passes with Z-pattern steel grid roller (only with the MHB).
2. Four passes with a vibratory roller.
3. Two passes with a pneumatic-tired roller.

The Contractor shall not trim the broken or rubblized pavement, or otherwise attempt to grade the broken or rubblized pavement to improve grade lines.

Immediately prior to overlay:

Two passes with a vibratory roller.

Any unstable material encountered while compacting or under construction trafficking shall be treated as defined in the section entitled Pavement Breaking. If a large area of unstable material is identified during the rubblizing process, work shall be halted and the Engineer notified. Any depressions greater than 50 mm (2 in.) in depth shall be filled with replacement material and compacted. When specified by the Engineer, replacement material shall be used to reestablish the pavement crown. Water may be used to aid in compaction of the replacement material, when approved by the Engineer.

Opening Roadway to Traffic. Public traffic will not be allowed on the rubblized pavement before the required binder layers are in place, except at crossovers and/or access points. Public traffic will not be allowed on a rubblized crossover or access point for more than 24 hours. Maintenance of crossovers and/or access points shall be as specified by the Engineer. Crossovers and/or access points shall be maintained in the same compacted state as the other areas, until the bituminous concrete overlay is in place. Construction traffic shall be limited to delivery of materials directly ahead of the paver.

Paving Limitations. A tracked paver shall be used to place the first lift of bituminous concrete binder over the prepared rubblized pavement. During stage construction, the overlay width shall be such that it will not interfere with subsequent rubblizing operations. At a given location, the overlay shall be placed within 48 hours of the pavement breaking operation. If rain occurs between rubblizing and paving, the rubblized pavement shall be dry and stable to the satisfaction of the Engineer before the paving operation begins.

If a material transfer device is proposed, the Contractor shall submit equipment specifications with axle loading configurations and proposed paving sequence to the Engineer three weeks prior to paving. The Engineer will provide any equipment restrictions based on device loadings and proposed paving sequence.

Method of Measurement. Rubblizing will be measured for payment in square yards of existing pavement in place.

Basis of Payment. This work will be paid for at the contract unit price per square yards for RUBBLIZING PORTLAND CEMENT CONCRETE PAVEMENT, of the method shown in the plans.

Any required removal of unsuitable or unstable material, subgrade repair, and bituminous concrete placement will be paid for according to Article 109.04 of the Standard Specifications.

Action taken to address any large concrete pieces resulting from inadequate breaking will not be paid for separately.

SEEDING MOBILIZATION

The Contractor shall coordinate the work so no more than 20 acres are disturbed at a time. All work in this area shall be completed and the area seeded before additional areas are disturbed. Under no conditions shall the Contractor prolong final grading and shaping so the entire project can be permanently seeded at one time.

Wherever possible, permanent seeding and the permanent erosion control shall be installed. The ditch bottoms and backslopes shall not be disturbed again unless the seeding hasn't become established. If the foreslopes need to be regraded to the new shoulder, all work shall be confined to the foreslope and any damage to the ditch bottom, backslope, or permanent erosion control shall be repaired at the Contractor's expense.

All permanent seeding, mulch, and the required fertilizer nutrients shall be completed and paid for in accordance with Sections 250 and 251 of the Standard Specifications, except that SEEDING MOBILIZATION will be paid for at the contract unit price per each and shall include the cost of mobilizing all of the equipment needed to fertilize, permanently seed, and mulch to the jobsite. This will be paid each time the Engineer requires the Contractor to bring the equipment to the jobsite. If the equipment is already on the site, this will not be paid for again.

STATUS OF UTILITIES TO BE ADJUSTED

The following utilities are involved in this project. The utility companies have provided the estimated dates.

Name/Address of Utility Compl.	Type	Location	Est. Date of Relocation
Department of Innovation & Technology 120 W. Jefferson St. Springfield IL. 62702 Attn: Jerry Pickett 217-785-7500	Fiber Optic line	along south ROW	not required

The above represents the best information of the Department and is only included for the convenience of the bidder. The applicable provisions of Section 102, and Articles 105.07, 107.20, 107.39, and 108.02 of the Standard Specifications for Road and Bridge Construction shall apply.

TELESCOPING STEEL SIGN SUPPORT

This work shall consist of furnishing and installing 5 foot lengths of telescoping steel sign support in breakaway sign support couplers previously installed in the PCC pavement of the median crossovers.