June 7, 2017

SUBJECT: FAI Route 70 (I-70)

Project NHPP-0070(047)

Section (25-1,2)R Effingham County Contract No. 74664

Item No. 140, June 16, 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 Recurring Special Provisions Check Sheet
- 2. Revised the Table of Contents to the Special Provisions
- 3. Revised pages 2-5, 9-11, 13-14, 19 and 24 of the Special Provisions
- 4. Added page 154 to the Special Provisions
- 5. Revised sheet 2 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,

Maureen M. Addis, P.E.

Engineer of Design and Environment

By: Ted B. Walschleger, P. E.

Ted Jalucklyon A.E.

**Engineer of Project Management** 

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

CWR/cr

## **RECURRING SPECIAL PROVISIONS**

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

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## **INTERIM COMPLETION DATES**

All work to construct the crossovers in the median and the adjacent mainline pavement and shoulders as shown on stage 1 traffic control sheet shall be completed by November 21, 2017.

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 20, 2018.

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 26, 2019.

#### 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
Department of Innovation & Technology
120 W. Jefferson St.
Springfield IL. 62702
Attn: Jerry Pickett
217-785-7500

Type
Location
along south ROW line
along south ROW line
Not required
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.

#### 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 701402 701406 701411 701416 701426 701451 701456 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.

Entrance ramps at IL 128 will be closed while traffic is in the passing lane at the interchange.

Work on the exit ramps at IL 128 requiring full closure will be allowed only between the hours of 8PM and 6AM. The exit ramps may be closed during those hours except during the week of the Effingham County Fair in August.

Work on the structures in one direction at the Altamont interchange shall begin and be finished in the same construction season.

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:

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

<u>Standard 701101:</u> 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.

<u>Standard 701106:</u> 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.

<u>Standard 701201:</u> 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, for guardrail work at the overhead structures, and for paving operations at the intersections of IL 128 and the interstate ramps.

<u>Standard 701400:</u> 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".

<u>Standard 701401:</u> 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".

<u>Standard 701402:</u> This standard shall be used during the construction of the west crossover and coincident work.

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

<u>Standard 701411:</u> This standard shall apply at the exit ramps for the Altamont interchange when the traffic is confined to the passing lane. Instead of the 5 days allowed for application number 3 on standard 701411 the contractor shall have a maximum of 21 calendar days to employ application number 3. Liquidated damages will apply for each day over 21 days.

<u>Standard 701416:</u> This standard shall be used during stages 2 and 3. Operations include pavement rubblization, resurfacing operations, and pavement replacement. Traffic control for the pavement replacement and bridge work west of the west crossover shall be included in this item. See plans for details not shown on standard. Temporary pavement markings shall be paint.

<u>Standard 701426:</u> 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.

<u>Standard 701451:</u> This standard shall be used for closure of the ramps at the Altamont interchange and at the rest areas.

<u>Standard 701456:</u> This standard shall apply where, at any time any vehicle, equipment, workers, or their activities require a partial lane closure on the exit or entrance ramps and supplements other traffic control standards for lane closures. Ramps shall remain open to traffic at all times except where otherwise allowed.

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

## **Bridge Width Restriction Signs**

The contractor shall furnish and install the following signs to advise motorists of the width restriction created by the stage construction bridge work. The signs shall be installed on posts or skids, unless otherwise specified, at the locations listed below:

## **Eastbound**

One each W12-I103, to be installed on Eastbound Exit 76 on-ramp. MAX WIDTH 11' - 0", 6 MILES AHEAD.

Two each W12-I103, to be installed on Eastbound I-70 at approximately  $\frac{1}{2}$  mile west of Exit 68, MAX WIDTH 11' – 0", 14 MILES AHEAD.

One each W12-I103, to be installed on Eastbound Exit 68 on-ramp. MAX WIDTH 11' - 0", 14 MILES AHEAD.

Two each W12-I103, to be installed on Eastbound I-70 at approximately  $\frac{1}{2}$  mile west of Exit 76, MAX WIDTH 11' – 0", 6 MILES AHEAD.

#### Westbound

One each W12-I103, to be installed on both Southbound/Westbound I-57/70 on-ramps at Exit 160. MAX WIDTH 11' – 0", 13 MILES AHEAD. Install a West (M3-4(BL)-3015 and I-70 shield (M1-1-36) sign underneath each.

One each W12-I103, to be installed on Southbound/Westbound I-57/70 on-ramp at Exit 159. MAX WIDTH 11' - 0", 12 MILES AHEAD. Install a West (M3-4(BL)-3015 and I-70 shield (M1-1-36) sign underneath.

Two each W12-I103, to be installed on Westbound I-70 approximately  $\frac{1}{2}$  mile south of Exit 160, MAX WIDTH 11' – 0", 13 MILES AHEAD. Install a West (M3-4(BL)-3015 and I-70 shield (M1-1-36) sign underneath each.

Two each W12-I103, to be installed on Southbound/Westbound I-57/70 approximately  $\frac{1}{2}$  mile south of Exit 159, MAX WIDTH 11' – 0", 12 MILES AHEAD. Install a West (M3-4(BL)-3015 and I-70 shield (M1-1-36) sign underneath each.

#### **BREAKAWAY SIGN SUPPORT COUPLER**

<u>Description</u>. 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.

<u>Installation</u>. For soil or asphalt applications, the base anchor of the appropriate length shall be direct imbedded flush with grade. The signpost shall be attached by use of a corner bolt, straight bolt or set screw, either singularly or in combination.

<u>Method of Measurement</u>. The Breakaway Sign Support Couplers, consisting of anchor, couple and attaching hardware, shall be measured for payment in individual units complete in place.

<u>Basis of Payment</u>. This work shall be paid for at the contract unit price per each for BREAKAWAY SIGN SUPPORT COUPLER.

## **BREAKING PAVED DITCH**

This work consists of breaking the existing paved ditch in place and leaving it in place as riprap. This work shall be completed as shown on the plans, as directed by the Engineer, and in accordance with Section 202 of the Standard Specifications.

This work will be paid for at the contract unit price per foot for BREAKING PAVED DITCH, as herein specified.

## **CHANGEABLE MESSAGE SIGNS**

This work consists of furnishing, installation, maintenance, and removal of Changeable Message Signs in addition to the ones shown on the applicable traffic control standards, as directed by the Engineer, in accordance with Section 701 of the Standard Specifications, and as herein specified.

The Changeable Message Signs to be installed under this item are to be used as advanced notification of the impending work and in the case of an accident on I-70 that impedes traffic flow. The Engineer will determine the messages to be displayed.

Five Changeable Message Signs will be required for this project, four along the I-57/70 corridor in Effingham and one just west of exit 76 as shown on the plan sheets entitled "Detour Signing." The Engineer will determine the exact locations of the Changeable Message Signs.

The Changeable Message Signs shall be in place a minimum of 14 days directly prior to the commencement of work that requires a lane closure and shall remain in place until the end of each construction season.

This work will be paid for at the contract unit price per calendar day for CHANGEABLE MESSAGE SIGNS.

## **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.

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#### **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 entrance ramps at the Altamont interchange and the closure of the I-57 NB/I-70 WB ramp at the south trilevel. All detour signing, except that for closure of the entrance ramps at Altamont shall be in place before the stage 2 traffic pattern is implemented. Detour signing except that for closure of the entrance ramps at Altamont shall remain in place until the conclusion of stages 3 through 3B.

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.

Signing requirements for the temporary detours shall be as shown on the plans. All sign panels including route markers required for the detour signage shall be furnished by the Contractor.

Detour signing as herein specified will be paid for at the contract lump sum price for DETOUR SIGNING.

#### **PROCESSING MODIFIED SOIL 24"**

Areas specified by the Engineer for Processing Modified Soil 24" shall be constructed in two lifts of 12" thickness. Unless otherwise directed by the Engineer, the bottom lift shall cure a minimum of 12 hours before constructing the top lift. The cost of removing, stockpiling and replacing the top lift of soil and for processing the soil in two lifts will not be paid for separately, but shall be included in the contract unit price for Processing Modified Soil 24".

#### **HMA CURB REMOVAL**

Existing HMA curb at various locations along the edge of existing shoulders throughout the project shall be removed. Cost of removal shall be included in the bid prices for other items.

When proposed embankment height is greater than 30 ft, any embankment lift shall provide a minimum Immediate Bearing Value (IBV) of 3.0 when tested by the Engineer according to Illinois Testing Procedure 501 or 502. Any embankment lift not providing the minimum required IBV will be removed and replaced, modified and/or re-processed, to provide an IBV of 3.0. The volume of material covered by this requirement includes the entire cross sectional area of the embankment, greater than 30 ft height, and an additional 250 ft in each direction of the starting and ending station where the embankment height is greater than 30 ft.

Remove and dispose of retaining walls constructed of old guardrail and posts as shown on the plans.

This work will not be paid for separately, but shall be considered included in the unit prices for Earth Excavation, Borrow, and/or Furnished Excavation as included in the project.

#### FILLING EXISTING CULVERTS

<u>Description.</u> This work shall consist of filling existing pipe culverts with Controlled Low-Strength Material according to Section 1019.

<u>Construction Requirements.</u> The Contractor shall force the material into the culvert in such a manner that all voids are completely filled and the culverts are filled at both ends. The end section shall be removed and the ends of the culvert shall be plugged until the material has hardened and then covered with embankment.

<u>Basis of Payment.</u> This work shall be paid for at the contract unit price per CUBIC YARD for FILLING EXISTING CULVERTS.

### FILLING EXISTING RUMBLE STRIP

This work consists of filling existing rumble strips in conjunction with stage construction operations for this project as shown on the plans, as directed by the Engineer, and as herein specified.

The existing rumble strips are those constructed on previous contracts in the concrete and HMA shoulder areas.

The existing rumble strips shall be thoroughly cleaned of any debris or loose material by means of air equipment, mechanical sweeper, or as otherwise directed by the Engineer. The rumble strips shall then be filled with a non-sag concrete mortar repair meeting the approval of the Engineer. The mortar repair shall be installed in accordance with the manufacturer's specifications.

This work will be paid for at the contract unit price per foot for FILLING EXISTING RUMBLE STRIP, measured parallel to the edge of the roadway.

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# FILLING INLETS, SPECIAL

<u>Description</u>. This work shall consist of filling existing shoulder inlets/drainage boxes with Portland Cement Concrete to carry Stage 2A traffic.

<u>Construction Requirements</u>. The Contractor shall remove the existing grates. The entire volume of each inlet box shall be filled with Class SI concrete, flush with the adjacent shoulder.

The Portland Cement Concrete shall meet the requirements of Class SI concrete as listed in Section 1020 of the Standard Specifications.

<u>Basis of Payment</u>. This work will be paid for at the contract unit price per each for FILLING INLETS, SPECIAL.

## **GUARD POSTS**

Effective: March 5, 1997

Revised. September 1, 2006

This work shall consist of furnishing and setting guard posts according to Section 634 of the Standard Specifications except as follows:

The cross section of the posts shall be nominal 4 inches by 4 inches (100 mm by 100 mm.)

The tops of the posts shall not be rounded, but shall be sloped at 30 degrees to the horizontal.

The length of the posts shall be 5 feet (1.5 m).

The embedment of the posts shall be 33 inches (0.84 m.)

For closure of median ditch checks, the nominal spacing of the posts shall be 5 feet (1.5 m.)

#### **GUARD POSTS REMOVAL**

This work consists of the removal of existing guard posts at locations as shown on the plans, as directed by the Engineer and in accordance with the applicable portions of Section 633 of the Standard Specifications.

This work will be paid for at the contract unit price each for GUARD POSTS REMOVAL

# HOT-MIX ASPHALT SHOULDER REMOVAL AND REPLACEMENT (SPECIAL)

This work shall consist of the sawcutting, removal and construction of hot-mix asphalt shoulders as directed by the Engineer. Existing shoulder removal, to a depth of 8 inches (minimum), shall be performed in accordance with Section 440 of the Standard Specifications. Hot-mix asphalt shoulders shall be constructed in accordance with Section 482 of the Standard Specifications and shall be a minimum of 8 inches in depth. Hot-mix asphalt mixture requirements shall be as specified in Article 442.02, Note 2 of the Standard Specifications.

This work will be paid for at the contract unit price per square yard for HOT-MIX ASPHALT SHOULDER REMOVAL AND REPLACEMENT (SPECIAL).

## HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

This work consists of removal of the existing surface of the roadway in order to create transitions between areas to be inlaid and areas to be overlaid as shown in the detail in the plans. This work will be accomplished using a self-propelled milling machine.

The work shall be paid for at the contract unit price per square yard for HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH.

#### LINEAR DELINEATION PANELS

February 15, 2012

<u>Description.</u> This work shall consist of placing linear delineation panels on temporary concrete barrier wall and new or existing concrete parapet wall.

<u>Materials.</u> Each panel shall not be less than 34 inches in length and 6 inches in width. The panels shall be constructed of cube-corner retroreflective material in standard highway colors permanently bonded to an aluminum substrate. The lateral edges of each panel shall be hemmed. The panel assembly shall have a repeating raised lateral ridge every 2.25 inches. Each ridge shall be 0.34 inches high with a 45° profile and a 0.28 inch radius top. Each panel shall be attached according to the manufacturer's specifications and/or recommendations.

Daytime color requirements shall be determined from measurement of the retroreflective sheeting applied to aluminum test panels. Daytime color shall be measured instrumentally using a spectrophotometer employing annular 45/0 (or equivalent 0/45) illuminating and viewing geometry. Measurements shall be made in accordance with ASTM E1164 for ordinary colors or ASTM E2153 for fluorescent colors. Chromaticity coordinates shall be calculated for CIE Illuminant D65 and the CIE 1931 (20) Standard Colorimetric Observer in accordance with ASTM E308 for ordinary colors or ASTM E2152 for fluorescent colors.

<u>Method of Measurement.</u> Partial depth removal of the HMA overlay and upper portion of the Portland cement concrete pavement will be measured for payment in place and the area computed in square yards.

HMA material used for partial depth patching will be measured for payment in tons according article 406.13 of the Standard Specifications.

<u>Basis of Payment.</u> Partial depth removal of the HMA overlay and upper portion of the Portland cement concrete pavement will be paid for at the contract unit price per square yard for PARTIAL DEPTH REMOVAL, of the type and thickness specified.

HMA material used for partial depth patching will be paid for at the contract unit price per ton for PARTIAL DEPTH PATCHING.

#### **PAVEMENT PATCHING STANDARD 442201**

This work shall be done in accordance with Section 442 of the Standard Specifications and as shown on Standard 442201 except that no triangular patches shall be allowed and the minimum dimension on all patches shown shall be 4 feet (1.2 meters).

## **PAVEMENT REMOVAL**

This work consists of the removal and satisfactory disposal of existing pavements as shown on the plans, as directed by the Engineer, and in accordance with Section 440 of the Standard Specifications.

Pavements to be removed under this item consist of mainline and ramp pavements as shown on the plans. The original 10" jointed mainline concrete pavements have been overlaid twice and it has been determined that the thickness of the combined overlays is approximately 6 inches. Existing ramp pavements to be removed consist of bare 9" PCC and 9" PCC overlaid with approximately 4 inches.

This work will be paid for at the contract unit price per square yard for PAVEMENT REMOVAL, as herein specified.

## **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.

#### PROTECTING OR RESETTING SURVEY MARKERS

<u>Description.</u> This work shall consist of protecting or resetting existing survey markers and existing survey marker vaults at the locations shown on the plans and as described in section 105.09 and 107.20 of the standard specifications. Survey markers may consist of property corners, section corners, subsection corners, or existing permanent survey markers.

Construction Requirements. All the existing survey markers listed in the plans or discovered in the field shall be documented and cross-tied by an Illinois Professional Land Surveyor prior to the start of work. Existing survey marker vaults shall be adjusted so the cover is ¼" below the final pavement elevation.

<u>Property Corners, Section Corners, and Subsection Corners.</u> For those to be reset outside the paved surface, a 5/8 inch diameter by minimum 30 inch long reinforcement bar and a 1-7/8 inch minimum diameter cap shall be installed. The cap shall be a corrosion-resistant aluminum survey cap of a design compatible with the reinforcement bar for a solid, tight fit after installation. The cap shall be marked as appropriate and shall also display the license number of the Illinois Professional Land Surveyor.

For those to be reset within the paved surface, a rebar and cap shall be installed in a hole cored into the paved surface. A survey marker vault shall be installed according to District 7 Detail No. Z0070202 and the associated special provision.

As required, a new monument record shall be prepared and filed in the appropriate county court house for all government corners in accordance with Illinois Statutes, Chapter 765 ILCS Section 220 "Land Survey Monuments Act" and a recorded copy sent to the District 7 Chief of Surveys.

<u>Permanent Survey Markers</u>. Permanent survey markers to be reset shall be in accordance with Section 667 of the Standard Specifications and as shown on Highway Standard 667101.

<u>Basis of Payment</u>. The work for protecting or resetting survey markers shall be paid for at the contract unit price per each for PROTECTING OR RESETTING SURVEY MARKERS, which price shall include hiring an Illinois Professional Land Surveyor, and providing the labor and equipment necessary to protect or reset survey markers and to adjust existing vaults.

The work for furnishing and installing new survey marker vaults will be paid for according to the survey marker vault special provision.

Added 6-7-17