



# Illinois Department of Transportation

Division of Aeronautics

1 Langhorne Bond Drive / Capital Airport / Springfield, Illinois / 62707-8415

February 16, 2016

SUBJECT: MidAmerica St. Louis Airport  
Mascoutah, Illinois  
St. Clair County  
Illinois Project Number: BLV-4343  
SBG Project Number: 3-17-SBGP-108  
Contract No. SC068  
Item No. 3A, March 4, 2016 Letting  
Addendum A

## NOTICE TO PROSPECTIVE BIDDERS

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

### Reason for Addendum:

In response to Contractor's questions, and for additional clarification to the specifications, the new airfield guidance signs shall be Style 5 and the replace sign panel work may be substituted for replace sign provided the new signs are LED and paid for under replace sign panel.

### To All Plan Holders:

Revisions to the Construction Plan Sheets: NONE

Revisions to Special Provisions:

REPLACE Article 125-2.11 with the attached Revised Article 125-2.11 on Page 23 of the Special Provisions. The entire Item 125 Special Provision is being provided for page formatting purposes.

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.

Questions on this addendum may be directed to Brian Garkie, P.E. of Crawford, Murphy & Tilly, Inc. at (314) 571-9070.

## **ITEM 125 – INSTALLATION OF AIRPORT LIGHTING SYSTEMS**

### **DESCRIPTION**

#### **125-1.1**

ADD:

Airfield lighting improvements and modifications shall include:

- Removal of existing airfield guidance signs.
- Installation of new airfield guidance signs on new PCC pads (LED and incandescent).
- Replacement of airfield guidance signs with new LED signs on existing PCC pads.
- Replacement of airfield guidance sign panels.
- Installation of new roadway and airfield unlighted signs.

ADD:

#### **125-1.6 INSPECTION AND TEST**

##### **VISUAL EXAMINATION**

The most important of all inspection and test procedures is thorough visual inspections. Visual inspections shall be made frequently during installation, at completion of installation, and before energizing the circuits. A careful visual inspection can reveal defects that can be corrected prior to acceptance tests and energization. Serious damage may occur if defects are subjected to electrical tests or energization. Visual inspections shall include appraisal of:

- (a) Correctness of external connections.
- (b) Good work performance.
- (c) Cleanliness.
- (d) Safety hazards.
- (e) Specific requirements listed herein for individual items. While all equipment manufactured under specifications pass strict factory tests prior to shipment, it shall be inspected for shipping damage immediately upon receipt.

##### **ELECTRICAL TESTS ON SERIES LIGHTING CIRCUITS**

Before modifying any series circuit, verify the performance of the existing circuit by checking the supply voltage to the regulator and measuring the output current from the regulator on all brightness steps under existing load.

- (a) For home run segments that will not be replaced, disconnect at S-1 cutout and at first fixture and verify cable continuity.
- (b) Check cable connections and perform electrical tests on cable as specified in Section 108.

##### **FINAL ACCEPTANCE TESTS**

After components and circuits have been inspected, as specified in the preceding paragraphs, the entire system shall be inspected and tested as follows:

- (a) Operate each switch for the modified lighting circuits from the remote control position (ATCT) so that each switch position is reached at least twice. During this process, all lights and vault

- equipment shall be observed to determine that each switch properly controls the corresponding circuit.
- (b) Repeat the above test using the local control switches on the regulators.
  - (c) Each lighting circuit shall be tested by operating it continuously at maximum brightness for at least 6 hours. Visual inspection shall be made at the beginning and end of this test to determine that the correct numbers of lights are operating at full brightness. Dimming of some or all of the lights in a circuit is an indication of grounded cables.
  - (d) In addition to the above, all equipment shall be subjected to any and all performance tests specified in the manufacturer's instructions.
  - (e) Photometric testing. The Airport may, upon completion of the lighting installation and as part of acceptance testing, perform field photometric testing of each new light fixture to assure the installed runway lights meet the photometric requirements specified by FAA. The test results will be recorded and furnished to the Contractor, with any noted deficiencies. The Contractor is responsible for correcting any deficiencies at no additional cost to the Owner.

### **125-1.7 GUARANTEE**

All equipment furnished and work performed under the Contract Documents shall be guaranteed against defects in materials or workmanship for a period of one (1) year from the date of final acceptance. This guarantee does not replace any responsibility for errors or omissions as set forth in state law. Any long-term warranties issued or offered by manufacturers for items of equipment shall be turned over to the Airport. Initial response time for each warranty claim shall be no longer than three business days for initial diagnosis on normal items and 24 hours for items requiring issuance of a NOTAM due to non-functional equipment.

### **125-1.8**

Any failure of equipment or work due to defects in materials or workmanship shall be corrected by the Contractor at no cost to the Airport.

### **125-1.9**

The Contractor shall ascertain that all lighting system components furnished by him (including FAA approved equipment) are compatible in all respects with each other and the remainder of the new/existing system. Any incompatible components furnished by the Contractor shall be replaced by him at no additional cost to the Airport with a similar unit approved by the Project Engineer (different model or manufacturer) that is compatible with the remainder of the airport lighting system.

### **125-1.10**

The Contractor-installed equipment (including FAA approved) shall not generate any electromagnetic interference in the existing and/or new communications, weather and air traffic control equipment. Any equipment generating such interferences shall be replaced by the Contractor at no additional cost with the equipment meeting applicable specifications and not generating any interference.

## **EQUIPMENT AND MATERIALS**

### **125-2.1 GENERAL**

ADD to the end of the section the following:

In addition to the above requirements, all equipment and materials shall also meet the requirements of Title 49 U.S.C. Section 50101 for Buy American or shall have received a waiver approved by FAA prior to the use of the equipment and materials on the project.

### **125-2.7 ISOLATION TRANSFORMERS**

REPLACE this section with the following:

New L-830-1 isolation transformers for new L-858 airfield guidance signs shall be as recommended by the sign manufacturer.

### **125-2.11 AIRFIELD GUIDANCE SIGNS**

ADD to the end of the section the following:

The proposed taxi guidance signs shall conform to Advisory Circular 150/5345-44 (latest edition) and be FAA-approved for Type L-858 Taxiway and Runway Signs. The lighted taxiway signs shall be Size 3, Style 52, Class 2, Mode 2 for the taxiway circuits with the information on the signs as shown in the plans. The power supply to connect to series circuits shall be as approved by the manufacturer. Signs shall be either LED or incandescent as shown on the plans.

The unlighted airfield signs shall be single face Type L-858, Size 1, Style 4 (unlighted), conforming to the requirements of AC 150/5345-44 (latest edition) and as detailed on the plans.

For the purpose of this specification, a digit shall be defined as a letter, number, space, dot, dash or arrow to be indicated on the sign face.

All signs shall be double faced.

The signs shall read as described on the Construction Plans. The proposed taxi guidance signs shall be Type L 858 Y direction, destination, and boundary signs (black legend on yellow background); Type L 858 R mandatory instruction sign (black outline on outside edge of white legend on red background); and Type L 858 L location sign (yellow legend and border on black background).

All new lighted signs shall include bird spike strips mounted along the entire length of the top of the sign body. The bird spike strips shall be a minimum of 11" high and shall be of sufficient width to cover the entire width of the sign body. If necessary, two (2) strips shall be used. The bird spike strips shall be manufactured out of recycled or virgin polypropylene or other similar material approved by the Engineer and shall be mounted with an adhesive that is recommended by the bird spike strip manufacturer.

Existing airfield guidance signs are "Crouse-Hinds", L-858, Size 3. Existing sign panels to be replaced shall be compatible with the existing signs. The Contractor shall verify compatibility prior to order. No additional compensation will be allowed for new sign panels that are not compatible and have to be re-ordered. In lieu of replacing the sign panels, the Contractor shall have the option of replacing the entire sign with a new LED L-858, Size 3, Style 5, Class 2, Mode 2 sign and providing LED signs in place of the new incandescent signs shown on the plans. It is the intent of the Airport to install LED signs in as many locations as possible. To meet the requirements of FAA AC 150/5340-30H, Chapter 1, Section 1.4, the Airport has retained incandescent signs at locations where existing signs are not being replaced. If the Contractor chooses to replace the signs instead of replacing the sign panels, LED signs will be required for all new signs on this project to meet the Airport's overall goal of converting to a full LED sign system. Payment for any signs replaced that are shown as panel replacements shall be paid for at the contract unit price per each for Replace Sign Panel.

ADD:

### **125-2.19 AIRFIELD GUIDANCE SIGN GROUND RODS**

A ground rod and ground wire shall be installed at all airfield guidance signs as detailed in the plans.

Ground rods shall be 3/4" diameter by 10' long copper clad ground rods unless otherwise specified on the plans.

Ground wire shall be a #6 AWG bare stranded copper wire unless otherwise specified on the plans.

The ground rod shall be driven into the ground adjacent to the new light or sign so that the top is a minimum of 12" below final grade or as shown on the plans.

Connection of the wire to the ground rod shall be by exothermic weld, Cadweld or equivalent. Bolted connections shall not be permitted.

The ground wire shall be connected to the external ground lug on the base can using hardware provided by the manufacturer.

## **CONSTRUCTION METHODS**

### **125-3.1 GENERAL**

ADD:

The Contractor shall exercise caution in the installation and removal of all airfield guidance signs. Any signs to remain in place damaged by the Contractor's operations shall be repaired or replaced to the satisfaction of the Engineer at no additional cost to the contract.

### **125-3.5 AIRFIELD GUIDANCE SIGN REMOVAL**

Existing airfield guidance signs to be removed shall be carefully salvaged and remain property of the Airport. The material shall be packaged into boxing material and delivered to the Airport Maintenance Facility. The existing PCC bases and cans that are not to be reused shall be removed and disposed of off Airport property. The ground shall be graded smooth, seeded and mulched. If soil is needed for filling in the holes, soil may be obtained from the Airport's earthwork disposal area located along old State Route 4 on the southeast corner of the Airport.

### **125-3.7 PHASING AND INTERRUPTIONS**

All existing electrical equipment and lighting systems not included in the phase of work being performed must be kept in operation, unless prior approval of the Owner has been received and as otherwise specified below and on the Drawings. The Contractor may use salvaged materials for temporary construction where required. The permission for temporary work and using salvaged materials shall be obtained from the Owner. Lighting for active runway and taxiway surfaces shall be maintained.

## **METHOD OF MEASUREMENT**

### **125-4.1**

REPLACE this section with the following:

The quantity of airfield guidance signs to be paid for shall be the number of each type installed by the Contractor as completed units in place, ready for operation, and accepted by the Engineer. The number of characters for "Boundary" area signs shall be considered four (4) characters plus any additional characters within the same side of the sign. The number of characters for a "No Entry Sign" shall be considered one (1) character. For double sided signs, the side with the largest number of characters shall determine the number of characters for the entire sign with the characters on the opposite side of the sign not being included in the character count.

The quantity of airfield guidance signs to be removed shall be the number of each removed and turned over to the Airport as shown on the plans and accepted by the Engineer.

The quantity of airfield guidance signs to be replaced shall be the number of each sign removed and turned over to the Airport and new sign installed in its place as shown on the plans and accepted by the Engineer.

The quantity of sign panel replacements shall be the number of sides of each sign that has the panel removed, replaced and accepted by the Engineer. A long sign consisting of multiple sign panel pieces shall be considered one panel. A double sided sign that is to have the panels on both sides replaced shall be considered two panels each.

Any isolation transformer replaced with a new sign shall not be measured separately for payment but shall be considered incidental to the sign installation.

### **BASIS OF PAYMENT**

#### **125-5.1**

REPLACE this section with the following:

Payment will be made at the contract unit price for each complete taxiway light, threshold light, airfield guidance sign and splice can installed in place by the Contractor and accepted by the Engineer. This price shall be full compensation for furnishing all materials including isolation transformers and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made at the contract unit price for each taxiway light, threshold light and airfield guidance sign removed. This price shall be full compensation for furnishing labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

<b>ITEM AR125441</b>	<b>TAXI GUIDANCE SIGN, 1 CHARACTER – PER EACH.</b>
<b>ITEM AR125445</b>	<b>TAXI GUIDANCE SIGN, 5 CHARACTER – PER EACH.</b>
<b>ITEM AR125448</b>	<b>TAXI GUIDANCE SIGN, 8 CHARACTER – PER EACH.</b>
<b>ITEM AR125449</b>	<b>TAXI GUIDANCE SIGN, 9 CHARACTER – PER EACH.</b>
<b>ITEM AR125904</b>	<b>REMOVE TAXI GUIDANCE SIGN – PER EACH.</b>
<b>ITEM AR125924</b>	<b>REPLACE TAXI GUIDANCE SIGN – PER EACH.</b>
<b>ITEM AR125932</b>	<b>REPLACE SIGN PANEL – PER EACH.</b>