



**SPECIAL PROVISIONS
FOR
LIGHT POLE, MATERIAL ONLY**

**Scott County
IMN-74-1(208)5--0E-82**

**Effective Date
January 17, 2018**

THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

150353.01 DESCRIPTION.

A. This item shall consist of furnishing, storing until delivery, and transporting to storage or to a site designated by the Engineer a light pole complete with an arm(s), when specified, and all hardware and accessories required for the intended permanent use of the pole, including the necessary vibration isolation pad, isolation washers, and leveling plate for bridge mounted light poles. Light poles shall be delivered complete and ready for installation. The work includes but is not limited to storing of the materials until ready for shipment, unloading of the shipment, stacking, protecting against damage, all submittals and all appurtenances and hardware required for a complete operating unit. Included in this item is the coordination with each contractor awarded a segment of the bridge and/or roadway construction project.

B. General.

1. Related Documents.

Drawings and general provisions of the Contract and applicable portions of Section 2523 of the Standard Specifications.

2. Work Under Separate Contract.

Light pole installation shall be completed by the Contractor(s) awarded segment(s) of the individual bridge and/or roadway construction project.

3. Definitions.

- a.** Supplier: Supplier of the light pole, and all other components necessary to have a complete, fully operational unit.
- b.** Contract: Supply contract specified herein.

150353.02 MATERIALS.

- A.** Install lighting materials that meet the requirements of Section 4185 of the Standard Specifications, except as modified here.

1. Aluminum Poles.

- a.** The assembled lighting units, consisting of the pole and all attachments including davit arms, luminaires, and pole base, shall be designed for wind pressures according to Article 3.8 of the AASHTO 2013 Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals (AASHTO LTS-6).
- b.** The design wind pressure at each lighting unit location shall correspond to a 90 mph basic wind speed (3 second gust) with appropriate modifications, including those for height and exposure. The height of each lighting unit above normal ground elevation or normal pool elevation (i.e., elevation at which the Mississippi River is maintained behind Lock and Dam No. 15) and Exposure Category C (Minimum Design Loads for Buildings and Other Structures, ASCE/SEI 7-10) shall be used for determining the height and exposure factor in AASHTO LTS-6 Article 3.8.4.
- c.** The bottom of pole elevation of 72.59 shall be used in determining the height of Iowa bridge-mounted lighting units above the normal pool elevation.
- d.** Fabricated from ASTM B 210 6063-T6 aluminum alloy tube.
- e.** Minimum nominal wall thickness of 0.25 inch or 0.312 inch as noted in the plans.
- f.** Shafts tapered approximately 0.14 inch per foot of length.
- g.** All drilling of the pole shall be done at the factory.
- h.** The pole shall have a finish as noted in the plans.
- i.** Handhole shall be 4 inches by 8 inches minimum, unless noted in the plans.
- j.** Base castings of ASTM A 356/A 356M-T6 aluminum alloy meeting the requirements of Article 4187.01 of the Standard Specifications.
- k.** An internal Stockbridge vibration dampener device as recommended by the pole manufacturer and approved by the Engineer shall be included.
- l.** Blocked and paper or plastic wrapped prior to shipment.
- m.** All hardware shall be stainless steel. All stainless steel hardware shall be coated with anti-seize compound.
- n.** Manufacturer Identification. Each pole shall have the manufacturer, lot number, and date of manufacture permanently stamped on the top of the base plate or other location approved by the Engineer.

2. Davit arms and Accessories.

a. Davit Arms.

- 1)** When indicated in the contract documents, furnish a davit arm as a luminaire support.
- 2)** Furnish davit arms meeting the following requirements.
 - Aluminum tube to match the pole with smooth openings into the pole shaft to provide an electrical raceway.
 - Each Davit arm shall have a wall thickness of not less than 0.188 inches. The bend shall be carefully made so that the arm is free of kinks, wrinkles or other defects.
 - The davit arm, shall be designed to slip fit over the pole shaft. The arm shall taper to a horizontal tenon at the luminaire end. The tenon at the end of the arm shall be 2 3/8 inch outside diameter and be 5 to 8 inches long.
 - The slip section shall not be less than 12 inches in length and the joint shall be held in place with two 5/8 inch diameter bolts 90 degrees apart with associated nuts, flat washers and lock washers. Each bolt shall be threaded only at its end to minimize the potential for damage to the pole wire (no threads inside of pole). Submittal information shall include details of the slip joint.
 - The davit arm shall have a centerline bending radius of 10 feet. The bend shall produce a nominal up tilt of the arm not to exceed 5 degrees for an unloaded pole and 1.5 degrees for a loaded pole. The arm shall be coordinated with the

luminaire furnished and produce a level mounting of the luminaire (up tilt not greater than 1.5 degrees) with the luminaire installed. Submittal information shall include confirmation of this requirement.

b. Tenon for C-Shaped Poles.

C-shaped poles shall be furnished with a luminaire arm horizontal tenon. The horizontal tenon shall have an outside diameter of 2.38 inches for slip fit luminaires.

3. Bridge Mounted Pole Accessories.

When mounted on bridges, a vibration isolation mounting pad, isolation washers, and a galvanized steel leveling plate shall be included with the pole. The pad and leveling plate shall have the same shape as the bottom of the pole base with appropriate bolt holes and opening for the center of the pole. Included with the isolation pad shall be four isolation washers. The pad and washers shall be made from a rugged elastomeric material with a minimum thickness of 1/2 in or as recommended by the manufacturer. The ultimate breakdown of the pad and washers under compressive load shall be not less than 10,000 psi for the specified thickness without extrusion or detrimental reduction in thickness. The material shall also have a Shore-A Durometer reading of not less than 85. The isolation washers shall be installed with galvanized steel washers of the same diameter and adequate thickness top and bottom to prevent overstressing of the isolation washer. The leveling plate shall be according to AASHTO M 270 Grade 50 or 50S and shall be galvanized according to AASHTO M 111.

C. Fabrication.

Material shall be fabricated in a timeframe to meet the dates given in the following table. The Supplier shall then store the light poles in a safe and secure manner, protected from damage, until the time in which the materials are requested for shipment to each construction project (see Section D.4 for assignment of Site numbers to bridge and roadway construction projects deliveries).

Site ID	Fabrication Date
02	August 31, 2018
03	April 1, 2019
04	April 1, 2020

Once the light poles are fabricated and secured in storage, the Supplier shall provide photo documentation to the Engineer that the poles are completed. This photo documentation shall include a photo of each shipping label with the construction contract identification number and group number, type of pole, and number of light poles within the Contractor's requested set ready for shipment.

D. Shipment.

The Special Provision for the individual Contracts that will install the supplied materials as described in SP-150353 requires the Contractor to coordinate with the Supplier to establish delivery schedules for light poles within 6 weeks of the individual contract award as tabulated in the schedule below. The Contractor will submit the proposed delivery schedule to the Engineer for approval. Based on the approved delivery schedule, the Supplier will deliver the light poles to a storage facility at a site designated by the Engineer (within 10 miles of the contract limits), or as noted below, at the date given. If the Supplier fails to deliver the light poles at the approved date, he shall be penalized at the same per day rate as missing the intermediate completion date for fabrication per Site number. Appurtenant items required for proper storage shall be included in this item.

1. Delivery should be coordinated to minimize handling and on-site storage requirements. If required, storage at the project site shall be provided by the general contractor(s). The supplier shall transport, unload the shipment, stack, and protect at the storage site or marshalling area. The locations for delivery are:

State	Contract Number	Delivery Location
Illinois	64C08	To Be Provided
Illinois	64E26	To Be Provided
Iowa	BRFIM-074-1(197)5--05-82	To Be Provided
Iowa	BRFIM-074-1(198)5--05-82	To Be Provided
Iowa	BRFIM-074-1(199)5--05-82	6225 North Brady Street, Davenport, IA 52806
Iowa	BRFIM-074-1(200)5--05-82	To Be Provided

2. The light pole, davit arm, vibration isolation pad and any mounting hardware shall be packaged during shipment to protect all surfaces from being scratched, marred, chipped, or damaged in any way. Any major damage to the light pole surface shall be repaired at the supplier's place of business or it shall be replaced. The Engineer will be the sole judge of the extent of any such damage and the adequacy of repair. The Engineer of each construction contract shall be notified 7 days prior to delivery of the light poles and will be on-site for inspection and acceptance, with the Contractor of the construction contract, to sign off on the acceptance of the product.
3. Light pole information submitted for approval shall include any recommendations of the supplier for storage as provided under this contract. If the delivered poles are to be stored outdoors, care shall be taken to insure packaging does not deteriorate due to weather and exposure to the elements.
4. A minimum of 10 poles per delivery is required, or the complete shipment if the contract has less than 10 poles. In the case that more than 10 poles are to be delivered to a contract, the general contractor(s) may elect for multiple shipments to be made. The supplier shall schedule his operations so as to furnish the poles in accordance with the following schedule:

Type IA Light Pole Delivery Schedule					
State	Contract Number	Delivery Time Frame		Total Contract Quantity	Site ID
		No Earlier Than	No Later Than		
Illinois	64C08 (westbound materials)	August 31, 2018	November 23, 2018	12	02
	64C08 (westbound materials)	July 1, 2019	November 26, 2019	5	03
	64C08 (eastbound materials)	July 1, 2020	November 25, 2020	3	04
Illinois	64E26 (westbound materials)	September 1, 2018	November 23, 2018	11	02
Illinois	64E26 (westbound materials)	July 1, 2019	November 26, 2019	13	03
Illinois	64E26 (eastbound materials)	April 1, 2020	November 25, 2020	17	04
Iowa	IM- 074-1(206)5--13-82 (westbound materials)	April 1, 2019	November 26, 2019	10	03
	IM- 074-1(206)5--13-82 (eastbound materials)	April 1, 2020	November 25, 2020	10	04

Type IB Light Pole Delivery Schedule					
State	Contract Number	Delivery Time Frame		Total Contract Quantity	Site ID
		No Earlier Than	No Later Than		
Iowa	BRFIM-074-1(197)5--05-82 (westbound materials)	July 1, 2019	November 26, 2019	12	03
	BRFIM-074-1(197)5--05-82 (eastbound materials)	July 1, 2020	November 25, 2020	9	04
Iowa	BRFIM-074-1(199)5--05-82 (westbound materials)	July 1, 2019	November 26, 2019	11	03
	BRFIM -074-1(200)5--05-82	April 1, 2020	November 25, 2020	8	04
Iowa	IM-074-1(206)5--13-82 (westbound materials)	April 1, 2019	November 26, 2019	1	03
	IM-074-1(206)5--13-82 (eastbound materials)	April 1, 2020	November 25, 2020	2	04

Type IC Light Pole Delivery Schedule					
State	Contract Number	Delivery Time Frame		Total Contract Quantity	Site ID
		No Earlier Than	No Later Than		
Illinois	64C08 (westbound materials)	July 1, 2019	November 26, 2019	6	03
	64C08 (eastbound materials)	July 1, 2020	November 25, 2020	4	04
Illinois	64E26 (westbound materials)	July 1, 2019	November 26, 2019	5	03

Type II Light Pole Delivery Schedule					
State	Contract Number	Delivery Time Frame		Total Contract Quantity	Site ID
		No Earlier Than	No Later Than		
Illinois	64C08 (eastbound materials)	July 1, 2020	November 25, 2020	3	04
Iowa	BRFIM-074-1(197)5--05-82 (eastbound materials)	July 1, 2020	November 25, 2020	3	04
Iowa	BRFIM-074-1(200)5--05-82	April 1, 2020	November 25, 2020	2	04

Type III Light Pole Delivery Schedule					
State	Contract Number	Delivery Time Frame		Total Contract Quantity	Site ID
		No Earlier Than	No Later Than		
Iowa	BRFIM-074-1(197)5--05-82 (eastbound materials)	July 1, 2020	November 25, 2020	13	04
Iowa	BRFIM-074-1(198)5--05-82 (eastbound materials)	July 1, 2020	November 25, 2020	10	04
Iowa	BRFIM-074-1(200)5--05-82	April 1, 2020	November 25, 2020	1	04
Iowa	IM-074-1(206)5--13-82	April 1, 2020	November 25, 2020	3	04

Type IV Light Pole Delivery Schedule					
State	Contract Number	Delivery Time Frame		Total Contract Quantity	Site ID
		No Earlier Than	No Later Than		
Iowa	BRFIM-074-1(198)5--05-82 (westbound materials)	July 1, 2019	November 26, 2019	14	03
	BRFIM-074-1(198)5--05-82 (eastbound materials)	July 1, 2020	November 25, 2020	14	04

Type VA Light Pole Delivery Schedule					
State	Contract Number	Delivery Time Frame		Total Contract Quantity	Site ID
		No Earlier Than	No Later Than		
Illinois	64C08 (westbound materials)	July 1, 2019	November 26, 2019	7	03
	64C08 (eastbound materials)	July 1, 2020	November 25, 2020	4	04
Illinois	64E26 (westbound materials)	September 1, 2018	November 23, 2018	7	02
	64E26 (westbound materials)	July 1, 2019	November 26, 2019	21	03
	64E26 (eastbound materials)	July 1, 2020	November 25, 2020	4	04

Type VB Light Pole Delivery Schedule					
State	Contract Number	Delivery Time Frame		Total Contract Quantity	Site ID
		No Earlier Than	No Later Than		
Iowa	IM-074-1(206)5--13-82	April 1, 2019	November 26, 2019	12	03

Type VI Light Pole Delivery Schedule					
State	Contract Number	Delivery Time Frame		Total Contract Quantity	Site ID
		No Earlier Than	No Later Than		
Illinois	64E26 (westbound materials)	July 1, 2019	November 26, 2019	3	03

150353.03 METHOD OF MEASUREMENT

This work shall be measured by count.

150353.04 BASIS OF PAYMENT

This work shall be paid for at the contract unit price each for Light Pole, Material Only of the type specified which shall be payment in full for furnishing, storing until delivery, delivering, stacking, protecting against damage, and unloading to a location as designated herein a light pole complete as described in these specifications.