



**SPECIAL PROVISIONS
FOR
EXTERIOR LIGHTING**

**Polk County
EDP-PA26(002)--7Y-77**

**Effective Date
October 15, 2024**

THE STANDARD SPECIFICATIONS, SERIES 2023, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

231029.01 DESCRIPTION.

A. Special Provision Includes.

1. Roadway Pole and Luminaire Assembly (L1); complete assembly to include but not be limited to anchor bolts, base plate, base cover, pole, mast arms, luminaires and lamps, connectors, fasteners, etc.
2. Pedestrian Poles and Accessories.
3. Exterior Luminaires and Accessories.

B. References.

- ANSI C78.379 - American National Standard for Electric Lamps -- Reflector Lamps -- Classification of Beam Patterns; 2006.
- IESNA RP-8 - American National Standard Practice for Roadway Lighting; Illuminating Engineering Society of North America; 2000(R2005) (ANSI/IES RP8).
- NECA/IESNA 501 - Recommended Practice for Installing Exterior Lighting Systems; 2006.
- NFPA 70 - National Electrical Code; National Fire Protection Association; 2005.
- UL 1598 - Luminaires; Current Edition, Including All Revisions
- UL 8750 - Light Emitting Diode (Led) Equipment for Use in Lighting Products; Current Edition, Including All Revisions
- IES LM-63 – IESNA Standard File Format for Electronic Transfer of Photometric Data and Related Information; Current Version.
- IES LM79 - Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products; Current Version.
- IES LM-80 - Approved Method: Measuring Luminous Flux and Color Maintenance of Led Packages, Arrays, And Modules; Current Version.

C. Definitions.

1. Light Assembly: A complete lighting unit that includes all materials shown on the plans, listed in lighting fixture schedule and described in this special provision.
2. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

D. Submittals.

1. Manufacturer's standard catalog pages and data sheets including detailed information on luminaire model number, assemblies, and construction clearly marked describing all exterior lighting assembly components.
2. Shop Drawings: Submit legible, dimensioned drawings of exterior lighting assemblies. Upon request, Submit shop drawings for each exterior lighting assembly component in a booklet form organized with a separate sheet for each component and assembled in order of exterior lighting assembly type (L1 – L3) as designated on the plans. Shop drawings shall clearly indicate all proposed accessories on each sheet.
3. Electrical ratings and photometric data with certified results of independent laboratory tests for exterior lighting assemblies and specified lamps upon request.
4. Field test reports indicating and interpreting test results specified in Article SP-231029.03.
5. Maintenance data for exterior lighting assemblies to include in the operation and maintenance manual specified in Standard Specifications.
6. Contractor shall submit a complete "lead time" list demonstrating the anticipated lead time for every exterior lighting assembly type on the project based upon the available data supplied by the manufacturer at the time of submittal. All lead times shall be based on "release for order" and be provided in weeks- assuming normal ground transportation methods or other standard delivery process.
7. Submit manufacturer's standard warranty certificate. Manufacturer's standard warranties for specified products shall be transferred to the City of Des Moines upon acceptance of the project.

E. Substitutions.

1. No substitutions will be accepted after bids are received. The lighting equipment specified herein has been carefully chosen for its ability to meet the luminous performance requirements and predefined aesthetics and maintenance characteristics of this project.
2. Pre-bid substitution submittals for comparable products described herein shall consist of a physical description, dimensioned drawing and complete photometric and electric data of the proposed exterior lighting assembly. As requested by the lighting designer, working samples of exterior lighting assembly substitutions must also be supplied for visual check of finish and operating characteristics. Photometric reports must list the actual candela values for the luminaire's distribution in at least three planes. Candela curves, foot-candle and lumen tables and iso-footcandle contours are not acceptable. Contractor will be responsible for all costs (architecture time, lighting designer time, engineering time, manufacturer's costs, distributor costs, etc.) incurred to replace equipment not approved if substitutions are made

by the distributor, manufacturers representative, or subcontractor. No substitutions will be considered without compliance with this paragraph.

3. No substitutions will be allowed due to delays in receiving exterior light fixture assemblies for the project due to negligence by the Contractor in delaying the release of a full or partial order including all exterior light fixture assembly components. Contractor shall assume all responsibility for "express" shipping or other non-standard shipping means if product is required in order to avoid delays in the project.

F. Quality Assurance.

1. Perform work in accordance with NEC and/ or other applicable local codes enforced upon time of bid.
2. Electrical Component Standard: Provide components that comply with NFPA 70 and that are listed and labeled by UL where available.
3. Listing and Labeling: Provide fixtures, emergency lighting units, and accessory components specified in this special provision that are listed and labeled for their indicated use and installation conditions on project.
4. Special Listing and Labeling: Provide fixtures for use in damp and wet locations that are specifically listed and labeled for such use.
5. The terms "Listed" and "Labeled": As defined in the NEC, Article 100.

G. Delivery, Storage, and Handling.

Protect electrical devices and materials for moisture damage.

H. Coordination.

1. Furnish bolt templates and pole mounting accessories to installer of pole foundations.
2. Verify all measurements in field prior to ordering and installing fixtures.
3. Coordinate fixtures, junction boxes, mounting hardware, and any other items, including work of other trades, required to be mounted on or in concrete. Confirm compatibility of light fixture with the proposed installation prior to ordering all light fixtures.

231029 MATERIALS.

A. Product Selection Procedures.

1. Comply with requirements described in the lighting fixture schedule shown on the plans.
2. Selection Criteria:
 - a. Where specifications name a single product and manufacturer, provide the named product that complies with requirements.
 - b. Basis-of-Design Product: Where specifications name a product, provide the specified product or a comparable product by a comparable manufacturer. Contract documents indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with Article SP-151115.02, A for consideration of an unnamed product by the other named manufacturers.
 - c. When more than one manufacturer is listed for a specific fixture type on the lighting fixture schedule, choose one of the manufacturers listed but no other substitution will be acceptable.

B. Comparable Products.

Engineer will consider requests for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Engineer will return requests without action, except to record noncompliance with these requirements:

1. Evidence that the proposed product does not require revisions to the contract documents, that it is consistent with the contract documents and will produce the indicated results, and that it is compatible with other portions of the work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

231029 CONSTRUCTION.

A. Installation.

1. Install exterior lighting assembly securely, in a neat and workmanlike manner, as specified in NECA 501.
2. Set Exterior Lighting Assembly plumb, square, and level with ceiling and walls, and secure according to manufacturer's written instructions and approved Shop Drawings. Support fixtures independent of conduit serving fixtures.
3. Bond luminaires, metal accessories, and metal poles to branch circuit equipment grounding conductor or structural steel.

B. Field Quality Control.

1. Perform field inspection, testing, and adjusting in accordance with the Standard Specifications.
2. Operate each exterior lighting assembly after installation and connection. Inspect for improper connections and operation.
3. Schedule Engineer for final aiming on site after all fixtures and assemblies have been installed and verified.

C. Cleaning.

1. Clean exterior lighting assembly of dirt and debris upon completion of installation.
2. Inspect each product for damage or defects.

231029.04 METHOD OF MEASUREMENT.

Exterior Lighting is lump sum and shall not be measured.

231029.05 BASIS OF PAYMENT

Contractor shall be paid the lump sum unit price for Exterior Lighting. All work of this section is included in

the lump sum Exterior Lighting bid item.