

**SECTION 1101**

**TRAFFIC SIGNALS AND APPURTENANCES**

**PART 1 GENERAL**

1.4 SUBMITTALS

- E. Submit warranty for all supplied material and workmanship for a period of two years from final acceptance. The warranty must state that the products supplied were free of defects and suitable for the uses set forth in the specifications.

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**SECTION 1102**

**STREET LIGHTING**

**GENERAL INFORMATION**

These specifications are for street lighting that is to be dedicated to the public and maintained by the City of Meridian. Such installations require a street lighting electrical permit to be opened prior to beginning work; street lighting shall not be included in a building general electrical permit. Permits can be pulled online through the City’s Citizen Access Portal. A copy of the stamped approved for construction streetlight plan must accompany the streetlight permit application.

Conduit and foundation reinforcement must be inspected prior to backfill and pouring of concrete. Request inspections through the online Streetlight Permit, 48-hour notice required. The City will not authorize Idaho Power to connect street lighting until the electrical permit is final and any other requirements are met.

**PART 1 GENERAL**

**1.4 SUBMITTALS**

- D. Submit warranty for all supplied materials and workmanship for a period of two years from final acceptance. The warranty must state that the products supplied were free of defects and suitable for the uses set forth in the Specifications.

**1.5 PROJECT RECORD DOCUMENTS**

- A. Provide the following information on an electronic copy of the stamped approved for construction streetlight plan:
  - 1. Accurately and neatly record locations of constructed streetlights, including pole numbers, conduit runs, junction boxes, and service points including electrical meter location and meter number.
  - 2. Record the Model and Wattage of the fixtures installed on the record drawing.
  - 3. Label the available fault current of each service point and each meter.
  - 4. Record drawings must be submitted in pdf/CAD formats.
- B. Upload a copy of the primary project permit, a cover sheet with vicinity map, and the streetlight plan with the above field notes to the streetlight permit on the City’s Citizen Portal prior to requesting final acceptance.
- C. Final project acceptance will not be given until field verification of functioning system including photocell operation is confirmed by the City.

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**PART 2 MATERIALS**

2.2 JUNCTION BOXES

- A. Junction boxes located in sidewalks or areas subject to vehicular traffic shall be high density reinforced precast concrete or Fibrelyte type FL09 or approved equal with reinforced concrete bolt-down lid marked “ELECTRICAL” or “STREET LIGHTING.”

2.4 CONDUCTOR

- C. Overhead connection of streetlights is not allowed except in unusual circumstances approved by the City Engineer.

2.5 CONDUIT

- A. Above ground conduit runs are not allowed.

2.6 PHOTOCELLS

- C. Photocells used for LED fixtures have a design life of 20 years and a 10-year manufacture warranty. If a fixture is to be controlled by a central photocell in a meter pedestal install a shorting cap in the fixture photocell receptacle. Photocell must be appropriate for the environmental/lighting conditions at that location.

2.8 MAST ARMS FOR WOOD POLES

- A. Wood poles are not allowed.

2.9 WOOD POLES

- A. Wood poles are not allowed.

2.10 METAL POLES

- B. Poles for Type 1 streetlights shall be high strength low alloy steel meeting ASTM 572 Grade 50 or higher. Unless otherwise specified, exterior surfaces are to be coated with a Polyester Powder to a minimum dry thickness of 2.0 mils. The pole and mast arm manufacturer shall guarantee exterior surface color coating adhesion for a minimum of 5 years. Color of finish topcoat will be semi-gloss black. Galvanized pole coatings shall meet ASTM A-123.

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Poles shall conform to City of Meridian Standard Drawing T1. In cases of conflict with overhead wiring, a davit style version of Type 1 streetlight poles may be approved as shown in City of Meridian Standard Drawing T4. Written approval from the Transportation and Utility Coordinator (TUC) is required for davit poles not conforming to Standard Drawing T4. Poles shall be supplied with a two-piece steel full base cover.

1. Approved Type 1 Pole Manufacturers:  
Northwest Signal Supply, KW, Valmont, Nova Pole or approved equal
2. Approved Davit Pole Manufacturers:  
Valmont, KW or approved equal

Poles for Type 2 streetlights shall be 4 inches square, non-tapered, with 11-gauge steel and coated with dark bronze corrosion resistant polyester powder coating. Mounting holes for fixture shall be pre-drilled for any unused holes plugged. Mounting height shall be 25 feet. Poles shall be supplied with a two-piece steel full base cover painted to match pole. See City of Meridian Standard Drawing T2 for additional details.

1. Approved Type 2 Pole Manufacturers:  
KW, Lithonia Lighting, US Architectural, Valmont or approved equal

- C. Pole installation to be with concrete base per paragraph 2.14 and City of Meridian Standard Drawing T2.
- F. Poles shall be labeled with assigned pole numbers shown on the plans. Labels shall have 2" tall white numbers/letters on black background. Labels shall be affixed to poles approximately 5-6' above grade, on the street side of the pole, with the labels placed vertically so that the first number of the pole ID is at the top.

## 2.12 HISTORICAL POLES (Decorative)

- A. Historical (Decorative) poles used in specified City of areas shall be heavy wall, cast aluminum produced from certified ASTM 356.1 ingot per ASTM B179-95a or ASTM B26-95. The castings shall be formed true to the pattern with complete detail. All hardware shall be tamper-resistant stainless steel. Anchor bolts to be completely hot dipped galvanized. Poles shall be:
  1. Black in color

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2. Model Holophane CP12F5/18-CA/BK or approved equal, see City of Meridian Standard Drawing T7.
  3. Designed to accept Holophane head, model ARU-70-4K-AS-G3-B-S or approved equal
  4. Installed with Holophane cast aluminum banner arms BA24H/1/BO or BA24H/1.5/BO, or approved equal, at the request of City of Meridian
  5. Installed with Holophane weatherproof receptacle with GFCI, part no. FG-SXXH, or approved equal, at request of City. Receptacle cover shall meet the requirements of the NEC for outdoor and “in-use” type.
- B. Pole installation to be with concrete base per paragraph 2.14 and per City of Meridian Standard Drawing T2.

#### 2.13 CONCRETE POLE BASES

- D. Base dimensions and construction shall conform to City of Meridian Standard Drawing T2.
- E. All streetlight foundations shall be located such that no existing conduit, pipe or other underground utility facility conflicts with the entire volume of the pole foundation. If a conflict with an existing streetlight conduit or an existing traffic signal conduit exists, the Contractor shall relocate the existing conduit out of the area of conflict. If a potential conflict with any underground utility facility other than streetlight or traffic signal conduit exists, the Contractor shall bring the potential conflict to the attention of the Transportation & Utility Coordinator. Conformance with these provisions as required to complete the Work, including relocation of existing streetlight and/or traffic signal conduits, shall be considered incidental to and included in the payment for streetlight installation and no additional compensation will be made.

#### 2.14 PREFABRICATED BASES

- A. Prefabricated bases are not allowed.

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## 2.15 SERVICE PEDESTAL

- A. External construction shall be 1/8" thick steel and hot dipped galvanized per ASTM A312. Internal parts shall be constructed of 14 gauge cold rolled steel. Construction shall be fully welded. All fasteners, latches and hardware shall be stainless steel with no exposed nuts, bolts, screws, or other fasteners exposed on the exterior. Cabinets have 2,000 lb street-rated padlock hasps welded to the cabinet and door. Outer doors have closed-cell Neoprene flange. See City of Meridian Standard Drawing T5.
- B. Provide and install one Master-lock padlock on each padlock hasp – model shall be 3KA; contact Meridian Public Works for the master key number. All keys must be given to the Meridian Public Works Department electrical inspector before the electrical permit will be finalized.
- C. All service pedestals shall be equipped with photo control with a viewing window – as a result, any lighting connected to a service pedestal shall have shorting caps and not individual photo controls located on the luminaires.

## 2.16 LIGHT FIXTURES

- A. Light fixtures shall be LED fixtures as described in the City of Meridian Approved Fixture List.
- B. Display a sticker with the LED fixture wattage on the underside of the fixture clearly visible from the road below.

Delete Paragraphs B, C, D, E, F, and G.

## 2.17 SPLICE BOXES

- A. When a splice is required use SEC Model 0791-0 Splice Kit, Polaris SSB 2/0, or approved equal – wire nuts shall not be used on the hot or neutral wires.

## **PART 3 WORKMANSHIP**

### 3.1 EXAMINATIONS

- A. Verify the pole excavation location and depth matches the approved plans and specifications, prior to installation of the pole. See Standard Drawings T2 and T8.

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- B. The contractor is required to have a copy of City of Meridian Supplemental Specification section 1100 and stamped 'Approved for Construction' plans on site at the time of any and all inspections.

### 3.2 JUNCTION BOX INSTALLATION

- A. Install as required by City of Meridian Standard Drawing T3 and to locations as shown on the plans. Junction box spacing shall never exceed 400 feet along straight conduit runs, and shall be installed at any sharp bends, wire splices, or where conduit junctions occur.
- D. Junction boxes shall not be installed in driveways or roadways except in unusual circumstances approved by the City Engineer.

### 3.3 WIRE OR CONDUCTORS

- A. See section 2.18 for approved splice connectors.
- E. Overhead connection of streetlights is not allowed.
- F. See City of Meridian Standard Drawing T3 for wiring details and allowed system voltages.

### 3.6 DISCONNECT BOXES

- A. Disconnect boxes are not allowed.

### 3.7 GROUNDING

- A. Attach pole ground to rebar cage by means of NEC code approved grounding connector. See City of Meridian Standard Drawing T3.

### 3.8 CONCRETE POLE BASES

- A. Base installation and dimensions shall conform to City of Meridian Standard Drawing T2.

### 3.9 POLE INSTALLATION

- B. Pole installations shall conform to City of Meridian Standard Drawing T2 and T3.
- C. Historical poles to be installed in accordance with City of Meridian Standard Drawings T2 and T3.

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D. All poles shall be installed under the power company required clearances shown on Standard Drawing SD-1122 and under the requirements of the City of Meridian Standard Drawing T8.

G. Direct burial poles are not allowed.

### 3.11 SERVICE PEDESTAL

A. Due to the metering requirements of Idaho Power, metered service pedestals are required for all Type 1 (including Davit pole) street lighting systems. Service pedestals and associated wiring shall be installed per City of Meridian Standard Drawings T5 and T6.

●● END OF SECTION ●●