

DIVISION 400

LIGHTING, SIGNS, TRAFFIC SIGNALS & TRAFFIC CONTROL

401.00 LIGHTING CHECKLIST

SSHC References:

	Section 400 - Lighting, Signs, Traffic Signals & Traffic Control
	Section 203 - Removal of Structures and Obstructions

Other References: NDR Materials Sampling Guide
National Electric Code
National Electric Safety Code

Inspection Equipment:

- Volt Meter
- Light Meter (Photometer)
- Flashlight
- Hex Wrenches
- Adjustable Wrenches

Construction Requirements:

CONDUITS:

1. Conduit sizes and types installed must agree with those detailed in the plans.
2. All conduit ends must have bell ends or bushings.
3. Conduit must be minimum of 750 mm (30 inches) below grade.
4. Spare conduit bend must be capped or plugged with standard fittings.

CONDUCTORS:

1. Conductors must be of the size, type, and number as detailed in the Plans. Conductors which have properties exceeding the minimum requirements, may be furnished at the contractor's option with the Project Manager's approval. No adjustment in contract price will be allowed.
2. Conductors shall be individually tagged when the conduit in which they are housed is inaccessible and cannot itself be tagged. *(SSHC Subsection 402.03)*

3. Conductors shall be color coded for safety and to facilitate maintenance of the lighting system. (SSHC Subsection 402.02)

PULL BOXES:

1. All pull boxes with a cast iron ring and cover must be grounded with all grounding connections securely made. (SSHC Subsection 406.01)
2. Check all wire sizes in pull box.
3. All conduit entrance bends must be tagged with a permanent tag indicating direction of the conduit run.
4. All cable connections in pull boxes must be made using approved URD submersible connectors. Check for proper cable insertion into connector; that all connections are tight and that all openings are covered or plugged.

POLES:

1. New light poles should not be placed directly under other overhead distribution systems.
2. All poles must have handhole covers securely fastened.
3. Power foundations are to be flush with grade. Concrete foundations are allowed a 25 mm (1 inch) chamfer.
4. All settlement of soil around pole base and along conduit runs must be backfilled and compacted to 95 percent of maximum density as determined by NDR T 99 (SSHC Subsection 407.03).
5. Check for minimum of 300 mm (1 foot) cover over the grounding rod and for proper connection to the grounding rod. Contractor must use connectors detailed in the plans.
6. Check for proper grounding to pole (anchor type) or to transformer base (breakaway type). Contractor must use connectors detailed in the plans.

7. Check for spare bend on last pole of each run.
 8. Check for proper mechanical cable connections in base of each pole. (Taps and taping not allowed).
 9. Check for heavy flat washer between top of pole base and anchor bolt nut.
 10. Check for correct "hold-down" and "connecting-washers" on pole installations using breakaway transformer bases. It is very important that the washers supplied with the base be used as instructed by the manufacturer.
 11. On installations where three or more conduit bends enter the pole or transformer base, each conduit bend should be tagged. Tags to be embossed or stamped with the direction of the conduit run. On anchor base installations where the conduit entrance bends are inaccessible, each run of feeder cable should be tagged.
- LIGHTING CONTROL CENTER:
1. Installation of conduit, controls, and grounding to be as detailed in plans. Verify that disconnect or relay installed is of the size and type that has been approved for use on the project.
 2. Conduit or conductors should be properly tagged indicating direction of run. Conductors should be color coded.
- JUNCTION BOX IN BRIDGE CURB:
1. Bushings are required on all conduits entering the junction box.
 2. Junction box should be grounded.
 3. Lid of junction box should be gasketed.
 4. Junction boxes with more than two conduits entering the box shall have the conduits tagged to indicate the direction of the conduit run.
 5. Conductors should be color coded.

TESTS ON THE COMPLETED SYSTEM:

Circuit Continuity
Voltage Drop
Ground Resistance

INSPECTOR'S RECORDS & FORMS:

Field Book
Material Certifications

POINT OF CONTACT:

Lighting Engineer, 479-4695