

SECTION 416 -- TEMPORARY LIGHTING SYSTEMS

416.01 -- Description

1. Temporary lighting systems are used to provide illumination on temporary traffic ways such as detours, fly-by lanes, and traffic crossover lanes through and/or around zones of construction.
2. The Contractor shall install the temporary lighting systems as prescribed in the plans. The plans shall indicate whether poles, luminaires, lamps, photo controls, power foundations, and breakaway bases are to be Department or Contractor-furnished.
3. The Contractor shall operate and maintain the lights daily from dusk to dawn throughout the construction period. The Contractor will be responsible for the proper operation and maintenance of the temporary lighting system. Any failure or malfunction of the system shall be promptly corrected by dusk of the following day.

416.02 -- Material Requirements

1.
 - a. The poles, luminaires, lamps, photo control, power foundations, and breakaway bases will be furnished by the Department or the Contractor as indicated in the plans.
 - b. All other lighting materials such as replacement lamps, connector cables, fittings, and splice kits are to be furnished by the Contractor.
 - c. The Contractor shall obtain the State-furnished materials from the NDR's storage area at Lincoln, Nebraska. The Contractor will be responsible for transporting the material from the NDR storage area to the job site.
2. Contractor-furnished lighting units and all other items required for a complete system shall conform to the requirements in the plans and specifications.
3. On Contractor-furnished systems, additional poles, luminaires, and breakaway devices shall be retained in the Contractor's stock for replacement purposes. Upon completion of the project, the Department will, if the Contractor desires, accept the surplus lighting units (up to 3 each poles, luminaires, and breakaway devices) as prescribed in Subsection 109.06.
4. In the event of damage to or failure of a lighting unit on a Department-furnished system, the Department will provide additional lighting units for replacement by the Contractor.
5.
 - a. When the temporary lighting units are no longer required, the Contractor will carefully dismantle, clean, and return the salvaged material to the Department's storage area indicated in the plans. All components not ordered salvaged will become the property of the Contractor and removed from the project.
 - b. The Contractor shall notify the NDR storage area superintendent 2 days before delivery of the materials to the storage area. Upon delivery, the materials shall be placed in the storage area at the location(s) designated by the storage area supervisor.

6. When the units are returned:

a. All luminaires are to have the photo control removed and the photo control receptacle and the luminaire mounting hole covered with duct tape. Photo controls will become the property of the Contractor.

b. All poles shall have handhold covers fastened securely in place.

c. Power foundations and transformer bases shall have all associated bolts, nuts, and washers attached. Breakaway support couplings are to be bundled in sets of 4 held together with duct tape with all bolts, nuts, and washers fastened in place on the couplings.

7. a. The plans shall indicate whether the Contractor or the Department arranges and pays for electrical power.

b. If the Contractor is required to arrange and pay for the electrical power to the temporary lighting system, the source of power may be an electric utility serving the area, if such a source is available, or it may be an engine-generator furnished, operated, and maintained by the Contractor. The power source must be a dependable, well regulated source of power adequate for the requirements of the lighting system.

c. Where power to the temporary lighting system is arranged for by the Department, the Contractor will not be responsible for the cost of the electrical energy required for the operation of the temporary lighting.

416.03 -- Construction Methods

1. The Contractor shall install, test, and operate the temporary lighting system before traffic is routed through the construction zone. The Contractor shall also maintain and operate the system until the project is complete.

2. The Contractor shall be responsible for providing the electrical power and connecting it to the lighting system.

3. It will be the Contractor's responsibility to protect the poles, luminaires, and the foundations from damage during installation, removal, salvage, storage, and transportation to and from the storage area. All items must be accounted for and in good working condition. Missing or damaged components must be replaced by the Contractor at no additional cost to the Department.

416.04 -- Method of Measurement

1. a. Installation of Contractor and Department-furnished temporary lighting systems shall be measured by the each.

b. When the bid proposal's Schedule of Items contains the pay item "Temporary Lighting System, Type _____", then the Contractor is required to furnish the temporary lighting system.

c. When the bid proposal's Schedule of Items contains the pay item "Install Temporary Lighting System, Type _____", the temporary lighting system components are provided by the Department.

2. Operation and maintenance of the temporary lighting systems shall be measured by the number of calendar days each temporary lighting system is in operation.

416.05 -- Basis of Payment

<u>1. Pay Item</u>	<u>Pay Unit</u>
Temporary Lighting System, Type _____	Each (ea)
Install Temporary Lighting System, Type _____	Each (ea)
Operation and Maintenance of Temporary Lighting System, Type _____	Day (d)

2. Payment shall be made according to the following schedule: Two-thirds of the contract unit price will be paid when the system is installed, in place, and approved by the Engineer; one-third of the contract unit price will be paid when the system is removed, delivered to the Department, and accepted by the Engineer.

3. Payment is full compensation for all work prescribed in this Section.