



Ministry of
Transportation
and Infrastructure

ELECTRICAL AND TRAFFIC ENGINEERING MANUAL

Appendix 800.1

Generic Electrical Special Provisions

PROJECT NO.

TITLE

LOCATION

Note to Writer - Where the contract is a standalone electrical contract then obtain latest general special provisions from:

<https://www2.gov.bc.ca/gov/content/transportation/transportation-infrastructure/contracting-to-transportation/tender-contract-documentation>

and add these electrical special provisions as required

PART 1 - GENERAL

1.01 SCOPE OF ELECTRICAL AND SIGNING WORK

The work generally involves, but is not limited to the following:

EXAMPLE - Writer to select and modify

- a) Installation of roadway lighting;
- b) Installation of traffic signals;
- c) Installation of signing;
- d) Removal of existing electrical and signing equipment;

1.02 STANDARD SPECIFICATIONS

The **most recent** Edition of the Standard Specifications for Highway Construction applies to this contract.

1.03 MATERIALS SUPPLIED BY THE CONTRACTOR

The Contractor shall supply all materials with the exception of items listed in Section 1.04.

The Contractor shall supply all signs. Signs shall be purchased from a Ministry accepted sign manufacturer. Accepted manufacturers are listed on the Ministry "Recognized Products List":

(Note to the Writer: Refer to Section 200 for standards related to signs. Contact the Ministry Project Manager with respect to the procurement of signs.)

All applicable materials shall conform to the current Ministry *Electrical and Signing Material Standards* and must be listed on the current version of the Ministry's "Recognized Product List". The Recognized Products List can be downloaded at:

<https://www2.gov.bc.ca/gov/content/transportation/transportation-infrastructure/engineering-standards-guidelines/recognized-products-list>

All materials of a similar type must be from a single manufacturer.

All materials must be new.

Payment for electrical and signing materials will be included in the applicable pay items of work involved in the contract. No separate payment will be made for materials.

1.04 MATERIAL SUPPLIED BY THE MINISTRY

The Ministry will supply the following materials:

1. Traffic Controller Assemblies
2. LED Luminaires
3. Data modems
4. Network switches

Section 190.09 of the Standard Specifications for Highway Construction shall be replaced with the following:

Materials listed above will be shipped to an address provided by the Contractor, with the exception of the Traffic Control Assembly.

The approximate value of these materials is \$ **(Writer to Select)**.

The Contractor shall provide suitable storage and protection for these materials until they are installed. All materials, with the exception of poles and junction boxes, shall be stored under cover.

Upon receipt of materials the Contractor shall check the quantities and verify correctness of materials supplied. Any discrepancies or shortages should be reported immediately to the Ministry Representative.

The Contractor shall give the Ministry Representative at least **(Writer to Select Time)** working days' notice prior to requiring all materials. Where applicable, costs for loading, transporting and off-loading materials shall be borne by the Contractor. Any standby charges incurred by the shipping company shall be borne by the Contractor.

1.05 RECORD DRAWINGS

The Contractor shall record on a current set of plans, in a neat manner, all changes, additions and deletions to reflect the "as constructed" installation. This shall include the location of equipment as installed. This set of plans shall

be returned to the Ministry Representative at the completion of the installation and prior to the issuance of a Completion Certificate in accordance with Article 26.00 of the Construction Agreement.

All costs related to record drawings will be included in the various pay items of work involved in the contract. No additional compensation will be made.

1.06 COORDINATION OF WORK

The Contractor shall co-ordinate electrical work with the Ministry Representative to ensure there is no interruption of existing traffic signals or lighting.

The Contractor shall contact the local Road and Bridge Maintenance Contractor and Electrical Maintenance Contractor to ensure no conflicts exist in each other's work schedule.

The Contractor shall obtain permission from the Ministry Manager, Electrical Services **(Writer to add address and phone number)** and the Ministry Representative prior to turning off or removing any existing electrical equipment.

All costs related to co-ordination of work will be included in the various pay items of work involved in the contract. No additional compensation will be made.

1.07 MODIFICATIONS TO EXISTING LIGHTING AND TRAFFIC SIGNALS

The Contractor shall maintain the operation of the existing traffic signals and lighting at the intersection until the new traffic signals are operational.

Any proposed construction related modifications to the existing traffic signals and lighting must be submitted in writing and be reviewed by the Ministry Representative and the Ministry Regional Traffic Operations Engineer and meet their approval prior to the modifications being made.

Any materials used for temporary relocation or modification to the signal and lighting system must be approved by the Ministry Representative prior to installation.

The Ministry will perform all required work related to the Traffic Controller Assembly. The Contractor shall give the Ministry Representative 5 business days' notice prior to requiring this work.

Payment for modifications to existing traffic signals and lighting is considered incidental. No separate payment will be made for any temporary modifications through construction.

1.08 REMOVAL OF ASPHALT AND PATCHING

The Contractor shall remove all asphalt required to accommodate the installation of the concrete bases and conduits. This shall be above and beyond the asphalt removed as part of the general pavement removal.

Payment for the removal of pavement to accommodate the installation of conduits and bases will be made at the applicable Unit Price.

All temporary patching shall be considered incidental. No separate payment will be made.

Payment for any permanent patching will be paid under the roadworks units for asphalt.

1.09 REMOVAL OF EXISTING UNDERGROUND EQUIPMENT

The Contractor shall remove existing underground equipment as shown on the Plans or as directed by the Ministry Representative.

The Contractor must obtain permission from the Ministry Representative prior to removing any underground equipment.

Removal of existing underground equipment shall include:

EXAMPLES - Writer to Select & Modify

- a) Removal of the existing concrete bases, their disposal off site and the supply and installation of 25mm Well Graded Base Course Aggregate material to fill the resulting holes. Where existing bases and foundations cannot be removed without undermining or damaging the existing asphalt, the Contractor may jackhammer off the top of the concrete base or foundation to 600mm below the finished grade. This shall only apply where specifically indicated on the Plans. The excavation and backfill shall meet the requirements but not the payment provisions of Subsection 635.07.01.
- b) Removal of the existing junction boxes, their disposal off site and the supply and installation of 25mm Well Graded Base Course Aggregate to fill the resulting holes. The excavation and backfill shall meet the requirements but not the payment provisions of Subsection 635.07.01.

Payment for the removal of existing underground equipment will be made at the contract lump sum price bid listed under Schedule Item (X).

1.10 REMOVAL OF EXISTING ELECTRICAL EQUIPMENT

The Contractor shall remove existing electrical equipment as shown on the Plans, or as directed by the Ministry Representative.

The Contractor must obtain permission from the Ministry Representative prior to removing any electrical equipment.

Removal of existing electrical equipment shall include:

EXAMPLES - Writer to Select & Modify

- a) The removal, disassembly, pick-up, delivery and off-loading of any luminaire, signal, sign poles, service equipment, post mounted flashers, traffic controllers, wiring and any electrical devices (as noted on the plans) to **(Writer to select location and address)**.

All existing wiring removed shall be disposed off site by the Contractor.

Prior to construction the Contractor shall provide the Ministry Representative with an itemised spreadsheet of all items removed and returned to the designated Works Yard. Prior to returning any equipment the Contractor shall confirm the exact quantity of each item being returned.

Payment for the removal of existing electrical equipment will be made at the contract lump sum price bid listed under Schedule Item **(X)**.