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Local Government District of Pinawa

P.O. Box 100
Pinawa, MB R0E 1L0

PH: 204-753-5100
FX: 204-753-2770

G. Smith
Resident Administrator
204-753-5105

B.C. Skinner
Mayor
204-753-2199

**REQUEST FOR QUOTATION #2017-003
FOR ELECTRICAL INFRASTRUCTURE INSTALLATION FOR FIBRE OPTIC CABLE
AT THE W. B. LEWIS BUSINESS CENTRE
LOCATED AT 24 ABERDEEN AVENUE IN PINAWA, MANITOBA**

The Local Government District of Pinawa requires formal written quotations from certified electricians to supply and install necessary infrastructure for fibre optic cables at the W. B. Lewis Business Centre. Below are the specifications:

PURPOSE

The purpose of this request is an invitation to certified electricians to submit a Request for Quotation for the installation of the infrastructure required for the MTS Fibre Optic Cable Project at the W. B. Lewis Business Centre. All work is to be completed in compliance with the Manitoba Electrical Code.

DETAILED REQUIREMENTS

1. Entrance Conduit

Supply and install for exclusive MTS use, one 3-inch (76mm) rigid entrance conduit complete with pull wire from backboard in the electrical room to the property line. All buried conduits can be rigid PVC and must be placed a minimum of 3 feet (1 meter) below final grade. (Trenching will be provided by LGD of Pinawa Public Works Staff.) All conduits inside the building must be E.M.T. and/or R.G.S. if passing through a grade beam or foundation wall. This conduit must be continuous, have no more than two 90 degree bends between pull points, and be free of "L" type fittings. If more than two 90 degree bends are required, provide a 12 inch x 12 inch long pull box. Pull boxes are to be placed on straight conduit runs and are to be fully accessible. Entrance conduit must slope away from the building as per Attachment 32, #32A and #44.

2. Telephone Backboard

Supply and install a 4 foot x 4 foot (1220mm x 1220mm) by ¾ inch (20mm) to 4 foot x 8 foot, (1220mm x 2400mm) by ¾ inch (20mm), 48 inches telephone backboard above the finished door. The backboard size will be determined by the building size and requirements. The area is to be readily accessible, clean, dry, and well-lit with 40 inches (1016mm) of clear working space in front and separated from electrical panels by 3.3 feet (1000mm). See attached #51 and Details for Specifications.

3. Grounding

At the left hand side of the telephone backboard, provide a 3 foot (762mm) coil of #6 AWG green insulated copper ground wire with one end connected to the main building ground.

We support age friendly



REQUIRED COMPLETION DATE

The required completion date shall be: 30 Calendar days from the date the Contract is executed by all parties.

QUOTATION PRICES

Quotations shall cover all costs of labour, materials, equipment, overheads, profits and all associated costs for performing the works and shall include all taxes. The whole cost of performing the works shall be included in the items stated and the cost of any incidental works shall be deemed to be included in the prices quoted. The Quotation price shall not be subject to variation or adjustment.

CLOSING DATE

Quotations must be submitted no later than close of business day, 4:30 pm on May 19, 2017. Bids must be submitted by email or in hard copy and be addressed to the Local Government District of Pinawa. Any inquiries prior to the closing date shall be directed to the Assistant Resident Administrator, Crystal Stanley, Phone 204-753-5100, email stanleyc@pinawa.com.

BASIS OF AWARD

The LGD of Pinawa reserves the right to accept or reject any or all quotations should it be deemed in the best interest of the Town. Should only one quotation be received, the Town reserves the right to reject it at its sole and absolute discretion. Lowest or any tender not necessarily accepted.

The Town may, at its sole discretion, conduct due diligence in order to review the certainty, reasonableness and comprehensiveness of a bid and may seek clarification or supplemental information from a bidder. Failure to provide the requested clarification or supplemental information may be considered sufficient grounds for rejecting a bid.

ENTRANCE & DISTRIBUTION CONDUITS

Attachment #32

Entrance/Service or House Cable Conduit

- a) Install in lengths not exceeding 30.48 meters (100 feet) and/or two 90 degree bends between pull points.
- b) Have radius bends 10 times interior diameter of conduit.
- c) Terminate conduit adjacent to proposed entrance termination location.
- d) Recommend pull box sizes will be furnished on request. (See **NOTE 3**)
- e) Conduit should be used for entrance purposes. (See **NOTE 1**)
- f) 19 mm (3/4") conduit or a #6 AWG green insulated copper ground wire from street side of water meter or other proper grid electrode required for main distribution panel.
- g) Place pull cord in all conduits installed.

N.B. "L" Type Fittings are not acceptable.

Distribution Conduit

- a) Install lengths not exceeding 30.48 meters (100 feet) and/or two 90 degree bends between pull points. (See **NOTE 3**)
- b) Have radius bends 10 times interior diameter of conduit or standard manufactured radius bends.
- c) Metallic conduit should be used for distribution purposes. (See **NOTE 1**)

Recommended Distribution Conduit Sizes for 4 Pair Telephone Set Wire

19mm (3/4 inch)	conduit - to service up to 4 regular telephone sets
25mm (1 inch)	conduit - to service up to 7 regular telephone sets
32mm (1 1/4 inch)	conduit - to service up to 11 regular telephone sets
40mm (1 1/2 inch)	conduit - to service up to 16 regular telephone sets
50mm (2 inch)	conduit - to service up to 26 regular telephone sets

Recommended Distribution Conduit sizes and other requirements for Key Type Telephone Sets, Switchboard and Equipment rooms are available on request.

NOTE 1: Entrance conduit into a building must be rigid steel or E.M.T. Where an entrance conduit(s) is extended outwards below grade from a building foundation wall, the conduit must be rigid steel and should be extended to a minimum of 900mm (three feet) out from the building's exterior wall to avoid any damage by shearing forces. EMT conduit can be used for an above ground entrance but not as a mast. In the case of connection to a MTS Communications underground duct structure, the conduit(s) should be compatible in design to that of MTS Communications Inc.

NOTE 2: Rigid P.V.C. conduit may be used for distribution purposes in areas that do not conflict with the Canadian Electrical Code. For example, its use is restricted when passing through fire separations, in fire resistance buildings and in suspended ceilings - See C.E.C. Sections 12-1202 and 60-310 & 312.

NOTE 3: Pull boxes should not be placed at conduit bends, but should be installed in straight sections of conduit.

GROUNDING

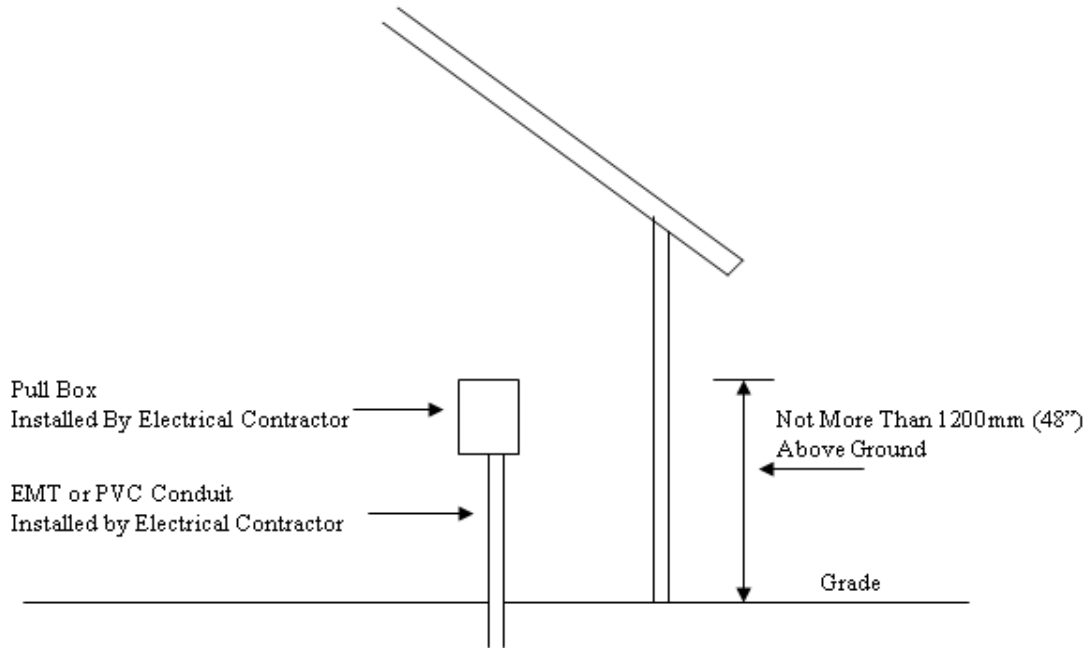
All entrances shall be grounded as close to the building entrance as possible. The building owner is responsible for providing a 20mm (3/4") metallic conduit or suitable ground conductor from an accessible ground electrode (cold water pipe) to the entrance terminal location. The grounding electrode and the electrode connection must be in accordance with C.S.A. Standards.

There should be early consultation with your Building Industry Consulting Service to identify a suitable grounding arrangement.

Attachment #32

M.T.S. BURIED SERVICE REQUIREMENTS

ATTACHMENT 32A



Attachment #32A Detail
Not to Scale



DIRECT BURIED SERVICE

Attachment #44

In certain situations the telecommunications company servicing your building may place direct buried cable from the property line into the building. Depending on your specific area, the conditions for this type of service could vary and could include all of the following:

1. The length of the buried cable section meets the company's Tariff Regulations.
2. The terrain is considered suitable for direct burial.
3. Permission is received from the property owner(s).
4. The building owner provides the necessary sleeves through the foundation wall.
5. The building owner provides conduit under all roads and areas accessible to Vehicular traffic.
6. The building owner or occupant provides for trenching and backfilling.

Direct buried cable is normally placed with a minimum cover of 900mm (three feet) on private property or as required in C.S.A. Standards.

In place of mechanical protection, ground cover (minimum 900mm) may be considered in areas subject to vehicular traffic.

GROUNDING

All entrances shall be grounded as close to the building entrance as possible. The building owner is responsible for providing a 20mm (3/4") metallic conduit or suitable ground conductor from an accessible ground electrode (cold water pipe) to the entrance terminal location. The grounding electrode and the electrode connection must be in accordance with C.S.A. Standards.

There should be early consultation with your Building Industry Consulting Service to identify a suitable grounding arrangement.

**EXCERPT FROM
MTS – PRACTICE**

ATTACHMENT 51

1. **EXPOSED COMMUNICATION TERMINALS**

Communication equipment and terminals may NOT be placed exposed in a building unless located in a locked room accessible only to authorized telephone personnel. Exposed communication equipment and terminals may also be placed in a locked Joint-use Telephone/Electrical Room provided that there is a minimum separation of 3.3'(1000mm) from electrical equipment requiring maintenance or adjustment. Except that a separation of more than 3.3'(1000mm) may be required depending upon the type, positioning and voltage of the electrical equipment. See PART ONE of the Canadian Electrical Code - Rule #2-308 and paragraph #2 below.

2. **SEPARATION BETWEEN COMMUNICATION AND ELECTRICAL EQUIPMENT**

Communication equipment and terminals must maintain a minimum separation of 3.3'(1000mm) or greater, perpendicular to the nearest plane/side of the electrical equipment which may require adjustment or maintenance while danger of electrical shock is present. Non-exposed/enclosed communication equipment and terminals may be located to within 6"(150mm) perpendicular to the nearest plane/side of the electrical equipment NOT requiring servicing or adjustment.

NOTES:

- A. A considerable number of Key System installations fall under the category of exposed equipment/terminations. Therefore, in these cases, the full 3.3' (1000mm) separation would be a requirement.
- B. PART ONE of the Canadian Electrical Code - Section #60-404 covers exposed communication equipment and/or terminations.