

GUIDELINE FOR INSTALLATION OF ROADSIDE ELECTRICAL SERVICES AND THE SELECTION OF SUITABLE SITE LOCATIONS

To provide guidance to installers and Manitoba Hydro staff in the Province, the following items should be considered when selecting new or upgrading existing points of delivery and service locations.

This checklist is not meant to be a complete list of all requirements, or to amend or supersede anything referenced specifically in the Manitoba Electrical Code.

All equipment must have the necessary approvals and possess the required markings; and all installations and wiring methods must adhere to the requirements of the Manitoba Electrical Code.

Failure to adhere to these installation requirements may result in extra costs and delays in energizing your electrical service.

If you require additional information related to requirements of the Manitoba Electrical Code, please contact your local Commercial Electrical Inspector.

REQUIREMENTS:

Site Conditions: The following geographical and environmental conditions must be considered when proposing or selecting points of delivery and service locations:

- **Level and flat ground:** Sloping ditches and hills should be avoided where slippery, wet or other uncontrollable environmental conditions prevent ready access without risk of injury. This includes wide steep sloping grades immediately adjacent to service equipment.
- **Secure footing:** the site must have secure footing. If landscaping is required to provide secure footing $\frac{3}{4}$ inch limestone or other durable materials not subject to erosion or moisture damage should be used (avoid sand or loose materials).
- **Dry locations:** Electrical service equipment should not be installed in locations subject to accumulations of standing or flowing water. When the location presents a potential threat to the equipment or maintenance personnel from standing water or undue seasonal moisture leading to safety risks, an alternate location should be selected. Note: Workplace Safety requires GFCI protection in such cases where it is impracticable to relocate equipment.
- **Prevent erosion:** Install landscape ties or other substantial structures to prevent erosion of footing material as well as to prevent collapse of the service equipment and structure due to inadequate drainage or accumulation of water.
- **Free of vegetation or physical barriers:** Vegetation should be controlled by clearing and maintaining access paths. Avoid proximity to fencing or other obstacles preventing ready access or limiting the required minimum working space.

Installation Requirements: The following must be considered when installing service equipment:

- **Be Code Compliant:** All installations must meet the requirements of the current edition of the Manitoba Electrical Code
- **Provide safe working space:** Maintain a minimum of 1 meter working space surrounding electrical service and distribution equipment with secure footing, avoiding undue hazards related to vegetation, physical barriers or heights created by raised landscaping (i.e. fall hazards).
- **Maintain appropriate equipment heights:** Service equipment should not be installed at heights greater than 2 meters from grade. Meter sockets shall be installed not less than 1.2m and not more than 1.8 meters above finished grade to the center of the meter socket as per the Manitoba Hydro Customer Metering Standards.
- **Use or construction of appropriate structures:** structures should be of solid treated posts (minimum of 6" x 6") or metal properly secured to a depth sufficient to maintain stability of the electrical equipment to prevent undue strain on wiring and terminations. Keeping in mind overhead services must terminate on a pole.
- **Equipment must have appropriate marking:** All electrical service and distribution equipment shall be clearly marked as per CEC 6-214 to indicate the portion of the installation or equipment that it controls. Operating voltages and maximum fuse size should be indicated on all service and distribution equipment (particularly where installed conductor size is less than the switch maximum rating).