

# Specification For Removal, Supply and Installation of Signs - 6030

| Section | Topic        |
|---------|--------------|
| 1       | Description  |
| 2       | Materials    |
| 3       | Construction |
| 4       | Warranty     |
| 5       | Measurement  |
| 6       | Payment      |

## 1 DESCRIPTION

- 1.1 The Work shall consist of the removal and disposal of existing posts and signs; and the supply and installation of new posts and signs, including regulatory traffic control signs, guide signs, information signs and warning signs in accordance with the Plans or at locations as directed by the Engineer.

## 2 MATERIALS

- 2.1 The Contractor shall supply all materials required for the installation of permanent signs including signs and identification decals, backing and bracing, all fasteners, and wooden posts or steel breakaway posts as applicable.

2.1.1 All materials shall be new.

2.1.2 All sign materials shall be in accordance with the Saskatchewan Traffic Control Devices Manual (TCDM) 200 For Sign Face.

2.1.2.1 Sign substrate and sheeting shall be in accordance with the TCDM 201, 202 and 203.

2.1.2.1.1 Retroreflective sheeting for regulatory, warning, and information signs shall meet or exceed the minimum ASTM Type specified in TCDM 401 For Regulatory Signs, 501 For Warning Signs, and 800-01 For Information Signs.

- 2.1.2.1.2 Retroreflective sheeting for guide signs shall meet or exceed the minimum requirements as specified in ASTM D4956 For Type IV High Intensity Retroreflective Sheeting Material.
  - 2.1.2.2 The Contractor shall supply the Engineer with certification from the supplier that the signs conform with the specifications in accordance with the TCDM and meet or exceed the minimum retroreflectivity requirements specified in ASTM D4956 Standard Specification For Retroreflective Sheeting For Traffic Control.
- 2.1.3 All post materials and the number of posts shall be in accordance with TCDM 300 For Sign Posts & Installation.
  - 2.1.3.1 In addition to TCDM 303 For Posts & Foundations, posts shall be Spruce, Pine or Fir that are pressure treated with a chromated copper arsenate solution in accordance with the requirements of the most recent edition of CSA Standard 080.
  - 2.1.3.2 Contrary to TCDM 303 For Posts & Foundations, if approved by the Engineer, the material and breakaway requirements for sign posts on urban cross-sections may be selected to match adjacent existing urban sign post materials, provided that the material selected for all sign posts is the same.
- 2.1.4 All backing, bracing, and fasteners shall be in accordance with TCDM 301 For Backing, Bracing & Fasteners.
- 2.1.5 Materials for crossroad delineators shall be in accordance with the Design Manual Part 2, section 2966-1 and TCDM 201 For Sign Sheeting.

### **3 CONSTRUCTION**

- 3.1 Existing posts and signs designated for removal and disposal shall become the property of the Contractor.
- 3.2 The Contractor has the option to remove existing signs with the entire post or cut the posts off at ground elevation. When a post is removed and replacement is not required, the Contractor shall backfill the hole in thin compacted lifts to ensure no future settlement to the approval of the Engineer.

- 3.3 Critical signs necessary for the protection of traffic such as railroad crossing signs or stop signs shall be maintained at all times.
- 3.4 The Contractor shall repair, at no expense to the Ministry, any damage to the Roadway structure, surface, and side slopes resulting from the Work associated with the removal or installation of the sign(s).
- 3.5 The Contractor shall be responsible to have all sign locations checked for utilities prior to installation.
- 3.6 Signs shall be installed in accordance with the Sign Plan and TCDM 300 For Sign Posts & Installation. Any adjustments to the location, alignment, offset and height of signs shall be subject to the approval of the Engineer.
  - 3.6.1 In addition to TCDM 301 For Backing, Bracing & Fasteners, signs shall be backed or braced with fasteners prior to being secured to the post or structure.
  - 3.6.2 In addition to TCDM 301 For Backing, Bracing & Fasteners, holes for lag bolts shall be pre-drilled in the post prior to lag bolt installation.
  - 3.6.3 The Contractor shall establish the offset and height of the sign to install in accordance with TCDM 304 For Sign Installations, unless otherwise directed by the Engineer.
  - 3.6.4 The Contractor shall establish the orientation angle in accordance with TCDM For 306 For Orientation Angle.
  - 3.6.5 The Contractor shall establish the placement distance between signs in accordance with TCDM 307 For Placement Distance.
  - 3.6.6 Signs on utility posts shall be mounted in accordance with TCDM 304.
  - 3.6.7 Installed signs shall be clean and not bent or twisted, and the reflectorized surface shall be free of scratches and marks.
- 3.7 Posts shall be installed and conform to the alignment requirements in accordance with TCDM 304 For Sign Installations.
  - 3.7.1 Where site conditions prevent achieving the minimum embedment depth of 1.5 m, the Contractor shall propose an alternative installation method providing equivalent stability and performance, which shall be subject to the approval of the Engineer.

- 3.7.2 In addition to TCDM 304, the Type 33 base course backfill material shall be placed in lifts not exceeding 150 mm, with each lift firmly tamped in place.
  - 3.7.2.1 Excavated materials shall not be used as backfill and shall be spread evenly on the surrounding ground surface. Stockpiling of excavated material in piles or mounds within the right-of-way is not permitted.
- 3.8 The Contractor shall install identification decals on all signs identifying the installation date.
- 3.9 Crossroad delineators shall be installed on all stop and yield signs in accordance with TCDM 1002 For Crossroad Delineators on Stop and Yield Signs.
- 3.10 Signs needing to be installed due to seasonal shutdown shall be installed and removed at no additional cost to the Ministry.

#### **4 WARRANTY**

- 4.1 The Contractor warrants to the Ministry that the Work, including materials and workmanship, is free of deficiencies, including those arising from errors and omissions for a warranty period of one year following the Substantial Completion Date (the Warranty Period).
  - 4.1.1 The Contractor shall, upon receipt of notification by the Ministry, promptly and diligently, and in any event by the time stated in the notification, remedy any deficiencies identified during the Warranty Period (the Remedial Work). The time stated in the notification shall be reasonable taking into consideration seasonal limitations and complexity of the warranty work required.
  - 4.1.2 Any leaning sign will be considered a deficiency. The Contractor shall remove and reinstall any leaning sign in accordance with the requirements outlined in Section 3.0 of this specification.
  - 4.1.3 All Remedial Work shall be completed at the Contractor's expense.
    - 4.1.3.1 If the Contractor fails to do the Remedial Work promptly or to the satisfaction of the Engineer, the Engineer may arrange to have the Remedial Work done by others, the cost of which shall be paid by the Contractor to the Ministry.

## **5 MEASUREMENT**

- 5.1 Measurement for installing posts and signs of various sizes will be made per sign installed.

## **6 PAYMENT**

- 6.1 Payment for the removal and disposal of existing signs will not be paid for directly but will be considered as a subsidiary obligation of the Contractor under this Contract.
- 6.2 Payment for supplying and installing posts and signs of various sizes will be at the contract unit price bid per sign. The applicable contract unit price will be full compensation for all labour, material, equipment, tools and incidentals necessary to complete the Work.
- 6.3 Installation of crossroad delineators on stop and yield signs and identification decals will be considered as a subsidiary obligation of the Contractor under this Contract.