

Infrastructure, Planning & Growth Management Traffic and Parking Services

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Sign and Post Installation Standard Specifications and Standard Drawings

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CP 4000.00 Supply and Install New Traffic Signs and Posts

The unit price identified in the schedule of unit prices shall be full compensation for all labour, equipment, and material necessary to supply and install new traffic signs and posts as shown on the contract drawings.

All signs shall be supplied in accordance with the Ontario Traffic Manuals and CP4000.00. Posts shall be heavy duty, galvanized U-channel posts, except when placed in asphalt or concrete, where posts shall be Unistrut Telepar galvanized posts with sleeve.

U-Channel posts are to be direct driven into the ground. Dug holes with backfill material will not be accepted. Before the installation of Unistrut Telepar posts in concrete or asphalt, the City's Traffic Department shall be notified to meet contractor on site, to ensure the proper installation process is adhered to.

City of Peterborough, Engineering and Construction Inspectors, are to ensure that all signposts meet required specifications before installation. **Proceeding without prior approval by the Contract Administrator** may result in non-payment of the associated item(s) and possible additional set-off amount as determined by the Contract Administrator.

All signs and posts shall be installed in accordance with City of Peterborough Standard Specifications and Drawings. The typical location of posts in boulevards shall be 1.0 m behind the curb and the sign shall be installed at a minimum height of 2.1 m to the bottom of the sign.

All U-Channels and Wooden Posts must be installed as a single uniform post with 6"x6" posts drilled to ensure breakaway as per OPSD 985.110.

Post/Pole and Hardware Specifications:

- 1. 6"x6" (150 mm x 150 mm) Wooden Pressure Treated Post
 - Width (5 ¹/₂") or (150 mm)
 - Thickness (5 ¹/₂") or (150 mm)
 - Length varies
- 2. 4"x4" (100 mm x 100 mm) Wooden Pressure Treated Post
 - Width (3 ¹/₂") or (100 mm)
 - Thickness (3 ¹/₂") or (100 mm)
 - Length varies

3. Unistrut Telepar Galvanized Posts

- Galvanized Steel
- 4 sided perforated

- 14 Gauges
- Main Post 1 ³/₄"x1 ³/₄" (Cut to length)
- Anchor Post 2"x2"x3'

4. U-Channel Post

- U-Channel 'flanged' rolled and formed
- Hot dip galvanized per ASTM 123
- Minimum yield strength 80,000 psi
- Minimum tensile strength 117,000 psi
- Minimum weight 2.47 lbs/ft
- Holes punched 50 mm on centre
- Tapered drive point

5. Mounting Hardware Kit for Steel Posts

- All Hardware to be minimum Grade 5
- 2 3/8" x 16 x 2" –Galvanized Steel bolts
- $2 \frac{3}{8}$ " Galvanized Steel washers
- $2 \frac{3}{8}$ " Galvanized Steel lock washers
- $2 \frac{3}{8}$ " x 1" Nylon washers
- 2 1" x ³/₄" Cast aluminium Post Filler Block
- 2 3/8"-16 Galvanized Steel Hex Nuts

6. Banding Materials for Poles

- 1/2" x 0.030 Stainless Steel Banding/Strapping. 1425 lbs. Tensile Strength.
- 1/2" Stainless Steel Banding Buckles.
- Flared Leg Stainless Steel Bracket

7. Additional Hardware for Street Name Signs

- Criss-Cross for Two ¼" Extruded Signs (4)-Set Screw 5/16" 18-½"
- Post Cap ¹/₈" Flat Sign 2 ³/₈" O.D. (6)-Set Screw 5/16" 18-¹/₂"
- Circular Support Post Cap Adapter 2 ¹/₄" O.D.

Sign Specifications:

Signs are to be manufactured in accordance with MUTCD and OTM Standards. All signs are to be manufactured using **3M High Intensity Grade Reflective Sheeting**, with the following exceptions:

- All "Parking" related signs are to be manufactured using 3M Engineering Grade Prismatic Reflective Sheeting.
- All School Crossing and School Area signs (Wc-1, Wc-2, Wc-2t, Wc-2A and Wc-2At) are to be manufactured using 3M Diamond Grade Yellow/Green Reflective sheeting.
- Street Name Signs are to be manufactured as detailed in CP4000.00 below, and oversized Street Name Signs are to be manufactured as per CP4000.02.

Traffic Signs to be 16-gauge galvanized steel unless specified under Special Provisions of the contract documents.

Street Name Sign blades shall be 6 ¹/₄" high in a dog bone shaped profile, constructed of 0.125 extruded aluminum with Engineering Grade Sheeting 3290 Reflective White lettering on 3437 3M Prismatic Green background, 4" upper/lower case CG Triumvirate Bold. No border or holes are required. Each sign will be double sided and have the corresponding Ave., St., Blvd., etc. as per Table 1 below:

Full Street Name	Abbreviation	Comments
Avenue	Ave	
Boulevard	Blvd	
Circle	Cir	
Close	Close	
Court	Crt	
Crescent	Cres	
Drive	Dr	
Gardens	Gdns	
Gate	Gate	
Grove	Grove	
Heights	Hts	
Highway	Hwy	
Lane	Lane	
Lee	Lee	
Line	Line	
Parkway	Pkwy	as in North Monaghan Pkwy – not to be used for "The Parkway"
Place	PI	
Ridge	Ridge	
Road	Rd	

 Table 1: Street Name Abbreviations

Street	St	
Terrace	Terr	
Trail	Trail	
Vista	Vista	
Way	Way	

Non-standard signs shall be detailed under the Special Provisions of the contract documents.

Reference:

- IPSTR 5000.01 Typical Sign Installation/Location Detail for Hazard Marker/Keep Right Signs
- IPSTR 5000.02 Typical Bicycle Lane Detail
- IPSTR 5000.03 Typical Parking Signage Installation/Location Detail
- IPSTR 5000.04 Typical School Crossing Signs in Vicinity of Sidewalks Location/Installation Detail
- IPSTR 5000.05 Typical School Crossing Ahead and School Area Installation/Location Detail
- IPSTR 5000.06 Typical Sign Installation/Location Detail
- IPSTR 5000.07 Typical Regulatory and Street Name Signs Installation/Location Detail
- IPSTR 5000.08 Typical (100 mm x 100 mm) Pressure Treated Post Installation/Location Detail
- IPSTR 5000.09 Typical Oversized Street Name Sign Mounting Detail
- IPSTR 5000.10 Typical Sign Installation/Location Detail for Traffic Signal Ahead and 'NEW' Sign for Signal Control
- IPSTR 5000.11 Typical "911" Address Sign Installation/Location Detail
- IPSTR 5000.12 Typical Reflective Delineator Sign Installation/Location Detail
- IPSTR 5000.13 Transit Sign Installation/Location Detail

CP 4000.01 Remove and Salvage Existing Traffic Signs and Posts

The unit price identified in the schedule of unit prices shall be full compensation for all labour and equipment to remove and salvage all traffic signs, posts and hardware as shown on the contract drawings.

All signs, posts, and hardware removed to be delivered to 791 Webber Ave. on the same day as removal. Materials are to be removed in such that no damage occurs during the removal process.

Any traffic signs where their removal could result in a safety hazard to the public (i.e. Warning and Regulatory Signs) must be replaced with temporary signs for the duration of the project. The Contractor is responsible to maintain these signs until permanent signs are installed.

CP 4000.02 Supply and Install Oversized Street Name Signs

The unit price identified in the schedule of unit prices shall be full compensation to supply and install oversize street name signs as shown on the Contract Drawings in accordance with IPSTR-5000.09. Unit price bid shall include but not limited to all brackets, hangers and fasteners necessary to install signs on overhead traffic signal arms.

Mounting hardware shall be the Sentinel Versa-Brac Sign Assembly. The extrusion is to be 1.2 m (Part #VSMB-C-48) to 1.8 m long (Part #VSMB-C-72) depending on the length of the sign. Signs greater than 2.1 m in length require a 1.8 m extrusion.

The sign blade shall be single sided and 16" high constructed of 0.125 aluminum with Engineering Grade Sheeting 3290 Reflective White lettering on 3437 3M Prismatic Green background, 10" upper/lower case CG Triumvirate Bold with 5" lettering for street abbreviation. No border or holes are required.

Examples:



Reference:

• IPSTR-5000.09 - Typical Oversized Street Name Sign Mounting Detail



Standard Drawing 1: IPSTR-5000.01 Typical Sign Installation/Location Detail for Hazard Markers and Keep Right Signs



Standard Drawing 2: IPSTR-5000.02 Typical Bicycle Lane Signage



Standard Drawing 3: IPSTR-5000.003 Typical Parking Signage Installation/Location Detail



Standard Drawing 4: IPSTR-5000.04 Typical School Crossing Signs in Vicinity of Sidewalks Location/Installation Detail



Standard Drawing 5: IPSTR-5000.05 Typical School Crossing Ahead and School Area Location/Installation Detail



Standard Drawing 6: IPSTR-5000.06 Typical Sign Installation/Location Detail



Standard Drawing 7: IPSTR-5000.07 Typical Regulatory and Street Name Signs Installation/Location Detail



Standard Drawing 8: IPSTR-5000.08 Typical Pressure Treated Post Installation/Location Detail



Standard Drawing 9: IPSTR-5000.09 Typical Oversized Street Name Sign Mounting Detail



Standard Drawing 10: IPSTR-5000.10 Typical Sign Installation/Location Detail for Traffic Signal Ahead and New Sign for Signal Control



Standard Drawing 11: IPSTR-5000.11 Typical "911" Address Sign Installation/Location Detail



Standard Drawing 12: IPSTR-5000-12 Typical Reflective Delineator Sign Installation/Location Detail



Standard Drawing 13: IPSTR-5000.13 Transit Sign Installation/Location Detail