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Sign & Post Installation – Standard Specifications and Standard Drawings

February 2022 Edition

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CP4000.00 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 & 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.

City of Peterborough, Engineering and Construction Inspectors, are to ensure that all sign posts 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" x 6" posts drilled to ensure breakaway as per OPSD 985.110.

Post/Pole and Hardware Specifications:

1. 6" x 6" (150 mm x 150 mm) Wooden Pressure Treated Post

- Width (5 ½") or (150 mm)
- Thickness (5 ½") or (150 mm)
- Length varies

2. 4" x 4" (100 mm x 100 mm) Wooden Pressure Treated Post

- Width (3 ½") or (100 mm)
- Thickness (3 ½") or (100 mm)
- Length varies

3. Unistrut Telepar Galvanized Posts

- Galvanized Steel
- 4 sided perforated
- 14 Gauges
- Main Post 1 ¾" x 1 ¾" (Cut to length)
- Anchor Post 2" x 2" x 3'

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 – $\frac{3}{8}$ " 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 $\frac{3}{4}$ " Cast aluminium Post Filler Block
- 2 – $\frac{3}{8}$ "-16 Galvanized Steel Hex Nuts

6. Banding Materials for Poles

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

7. Additional Hardware for Street Name Signs

- Criss-Cross for Two $\frac{1}{4}$ " Extruded Signs (4)-Set Screw 5/16" – 18- $\frac{1}{2}$ "
- Post Cap $\frac{1}{8}$ " Flat Sign 2 $\frac{3}{8}$ " O.D. (6)-Set Screw 5/16" – 18- $\frac{1}{2}$ "
- Circular Support Post Cap Adapter 2 $\frac{1}{4}$ " 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) which 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 $\frac{1}{4}$ " 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:

Table 1: Street Name Abbreviations

Full Street Name	Abbreviation	Comments
Avenue	Ave	
Boulevard	Blvd	
Circle	Cir	
Close	Close	
Court	Crt	
Crescent	Cres	
Drive	Cr	
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	Pl	
Ridge	Ridge	
Road	Rd	
Street	St	
Terrace	Terr	
Trail	Trail	
Vista	Vista	
Way	Way	

Non-standard signs shall be detailed under 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 & '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

CP4000.01 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 a manner in which no damage will occur during the removal process.

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

CP4000.02 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 oversized 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.

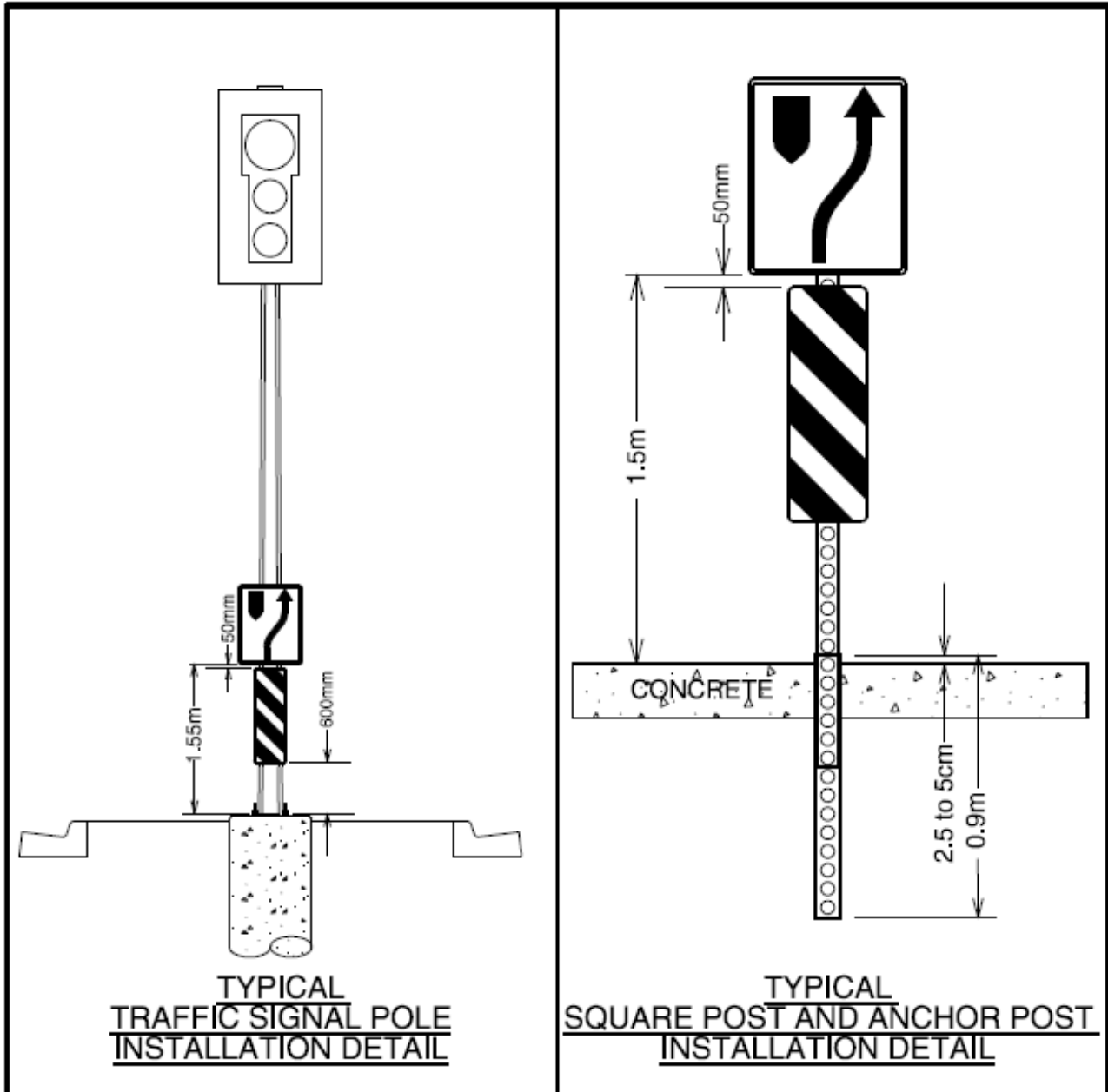
The sign blade shall be single sided and 16" high constructed of 0.125 aluminum with Engineering Grade Sheeting 3290 Reflective White lettering on 3437 3M Prismatic Green background, 10" upper/lower case CG Triumvirate Bold with 5" lettering for street abbreviation. No border or holes are required.

Examples:

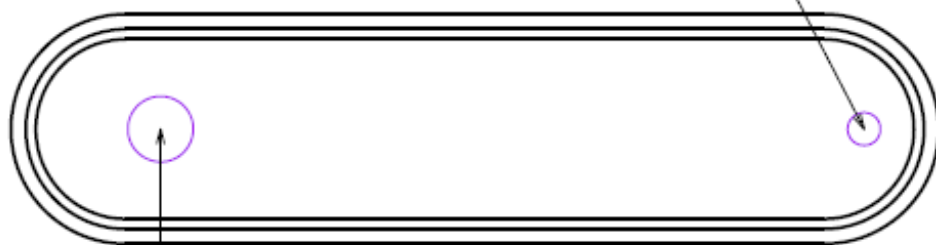


Reference:

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

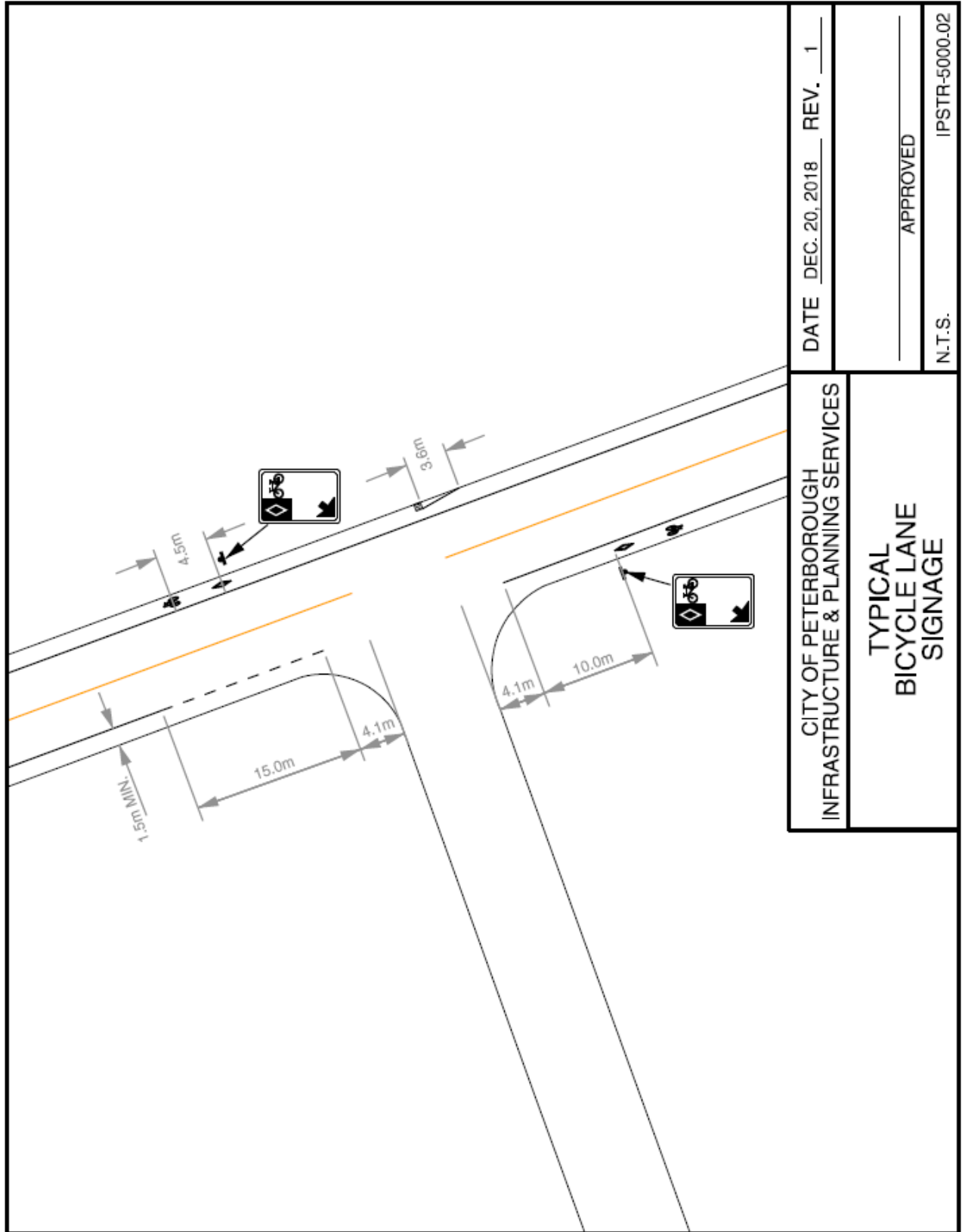


SQUARE POST TO BE INSTALLED 1.5m FROM BULLNOSE AND CENTERED ON ISLAND



TYPICAL SETBACK FOR A TRAFFIC SIGNAL POLE ON AN ISLAND IS 3.0m
 SIGNS TO BE BANDED ON TRAFFIC SIGNAL POLE
 TRAFFIC SIGNAL POLE TO BE USED IF PRESENT

NOTES: 1. Post shall be trimmed to top of sign.	CITY OF PETERBOROUGH INFRASTRUCTURE & PLANNING SERVICES	DATE <u>DEC. 20, 2018</u> REV. <u>1</u>
	TYPICAL SIGN INSTALLATION / LOCATION DETAIL FOR HAZARD MARKER & KEEP RIGHT SIGNS	_____ APPROVED N.T.S.



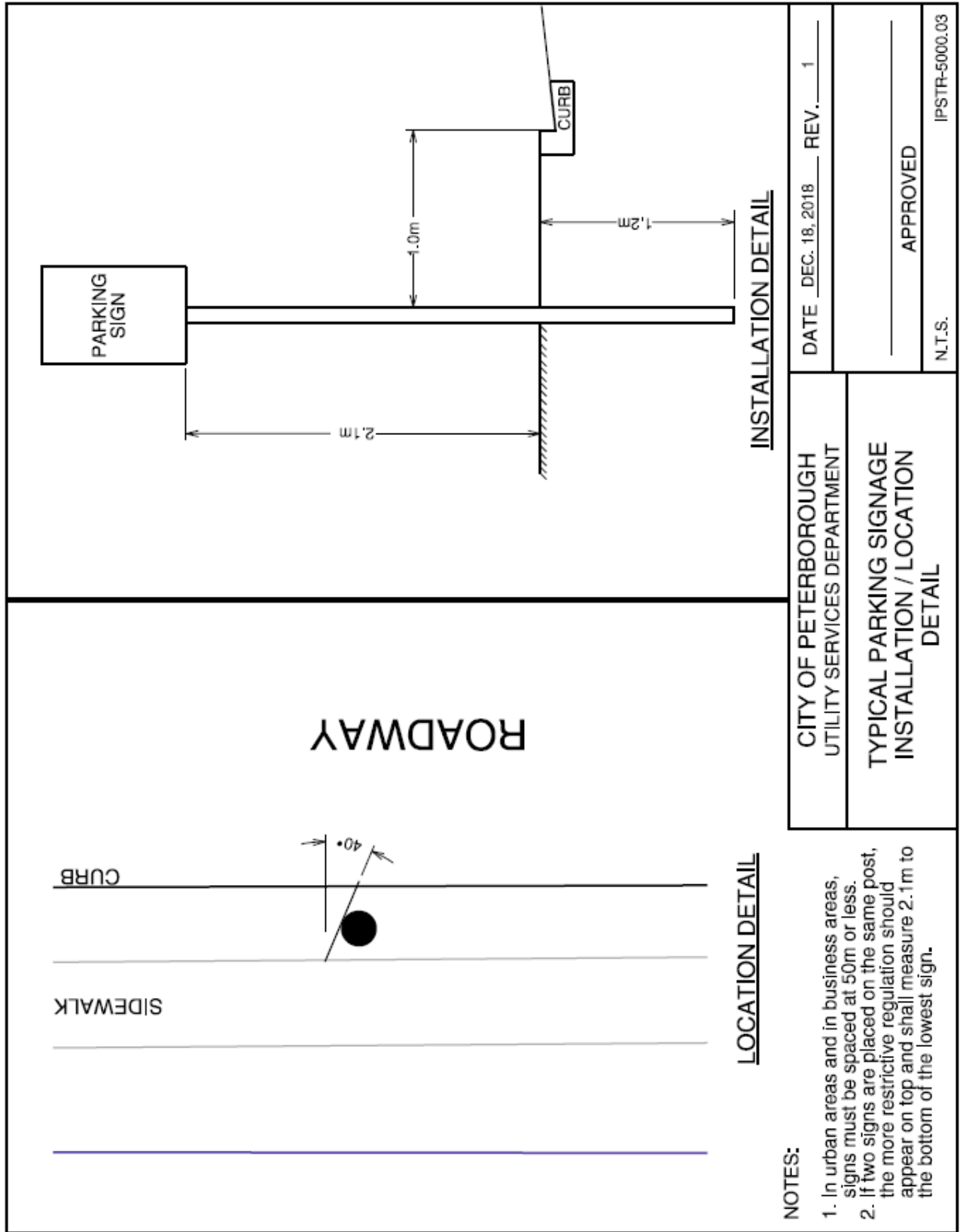
DATE DEC. 20, 2018 REV. 1

APPROVED

N.T.S. IPSTR-5000.02

CITY OF PETERBOROUGH
INFRASTRUCTURE & PLANNING SERVICES

TYPICAL
BICYCLE LANE
SIGNAGE



NOTES:

1. In urban areas and in business areas, signs must be spaced at 50m or less.
2. If two signs are placed on the same post, the more restrictive regulation should appear on top and shall measure 2.1m to the bottom of the lowest sign.

CITY OF PETERBOROUGH
UTILITY SERVICES DEPARTMENT

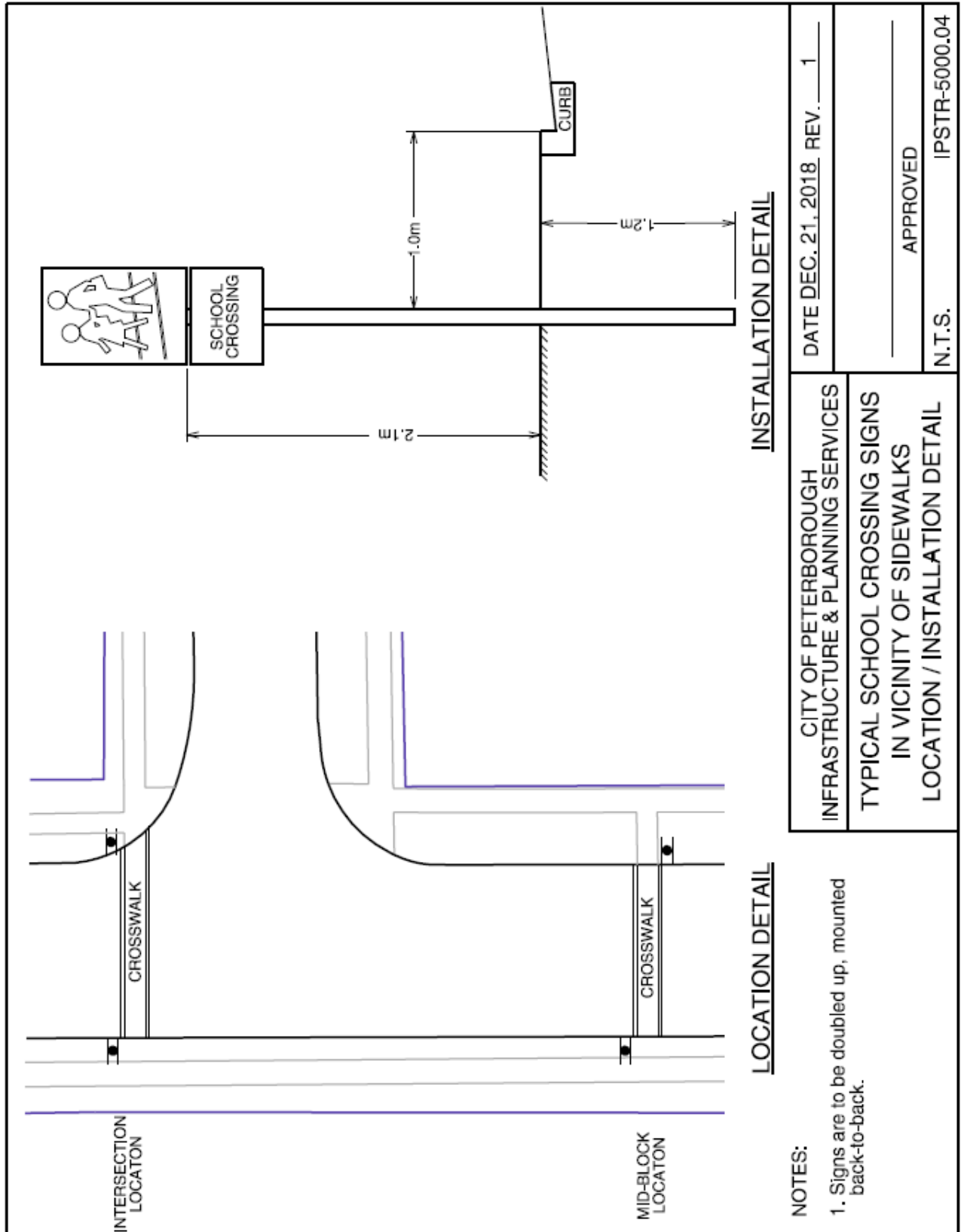
TYPICAL PARKING SIGNAGE
INSTALLATION / LOCATION
DETAIL

DATE DEC. 18, 2018 REV. 1

APPROVED

N.T.S.

IPSTR-5000.03



INSTALLATION DETAIL

LOCATION DETAIL

NOTES:

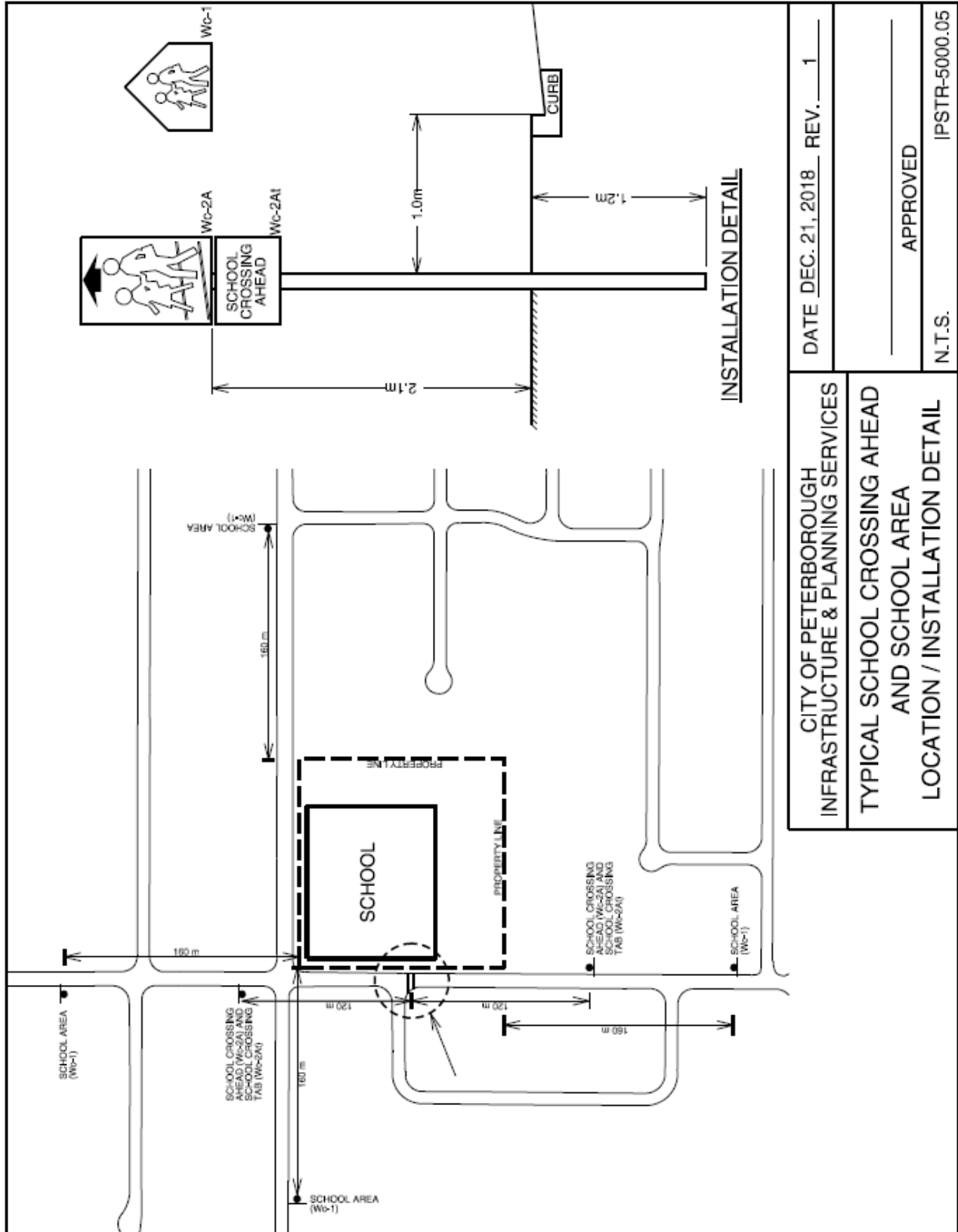
- 1. Signs are to be doubled up, mounted back-to-back.

CITY OF PETERBOROUGH
 INFRASTRUCTURE & PLANNING SERVICES
 TYPICAL SCHOOL CROSSING SIGNS
 IN VICINITY OF SIDEWALKS
 LOCATION / INSTALLATION DETAIL

DATE DEC. 21, 2018 REV. 1

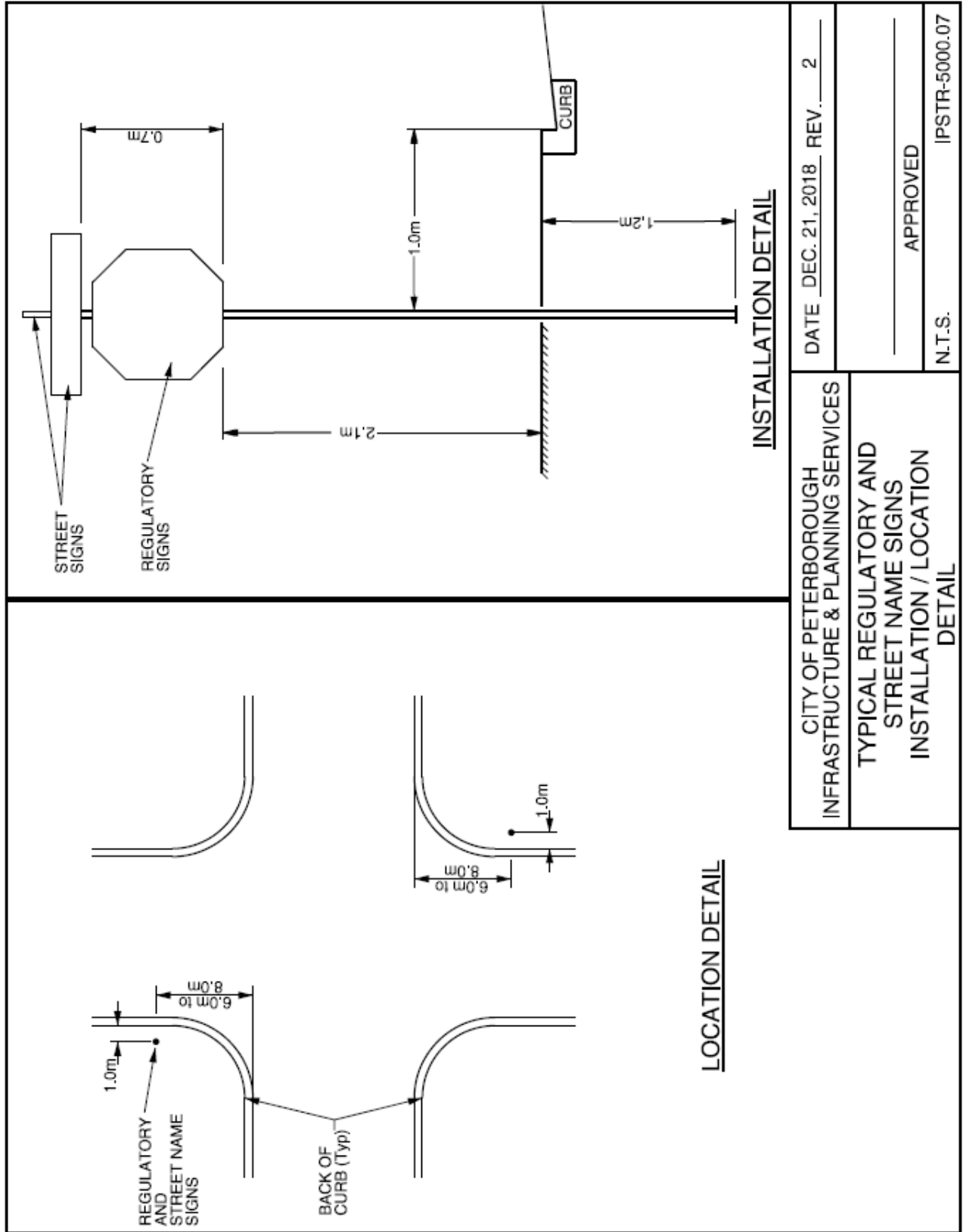
APPROVED

N.T.S. IPSTR-5000.04



CITY OF PETERBOROUGH INFRASTRUCTURE & PLANNING SERVICES		DATE DEC. 21, 2018 REV. 1
TYPICAL SCHOOL CROSSING AHEAD AND SCHOOL AREA LOCATION / INSTALLATION DETAIL		APPROVED
N.T.S.		IPSTR-5000.05

<p style="text-align: center;">U-CHANNEL INSTALLATION DETAIL</p>	<p style="text-align: center;">SQUARE POST AND ANCHOR POST INSTALLATION DETAIL</p>
<p>NOTES:</p> <ol style="list-style-type: none"> 1. Post shall be trimmed to top of sign. 2. If two or more signs are on post, measurement to the bottom of the lowest sign shall be 2.1m 	<p style="text-align: center;">TYPICAL SIGN INSTALLATION / LOCATION DETAIL</p>
<p style="text-align: center;">CITY OF PETERBOROUGH UTILITY SERVICES DEPARTMENT</p>	
<p style="text-align: center;">DATE DEC. 21, 2018 REV. 1</p>	
<p style="text-align: center;">APPROVED</p> <p style="text-align: right;">N.T.S. IPSTR-5000.06</p>	



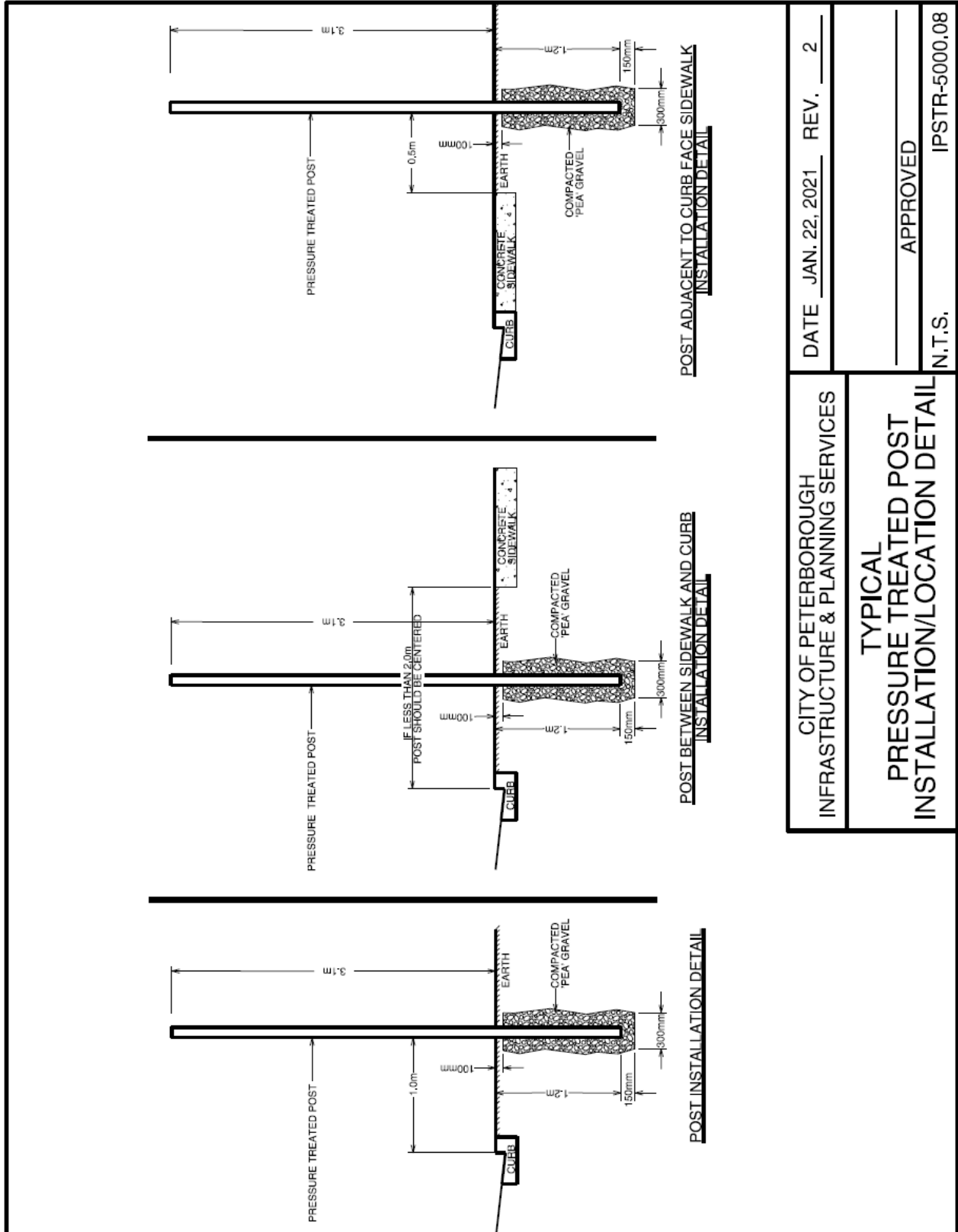
CITY OF PETERBOROUGH
INFRASTRUCTURE & PLANNING SERVICES

DATE DEC. 21, 2018 REV. 2

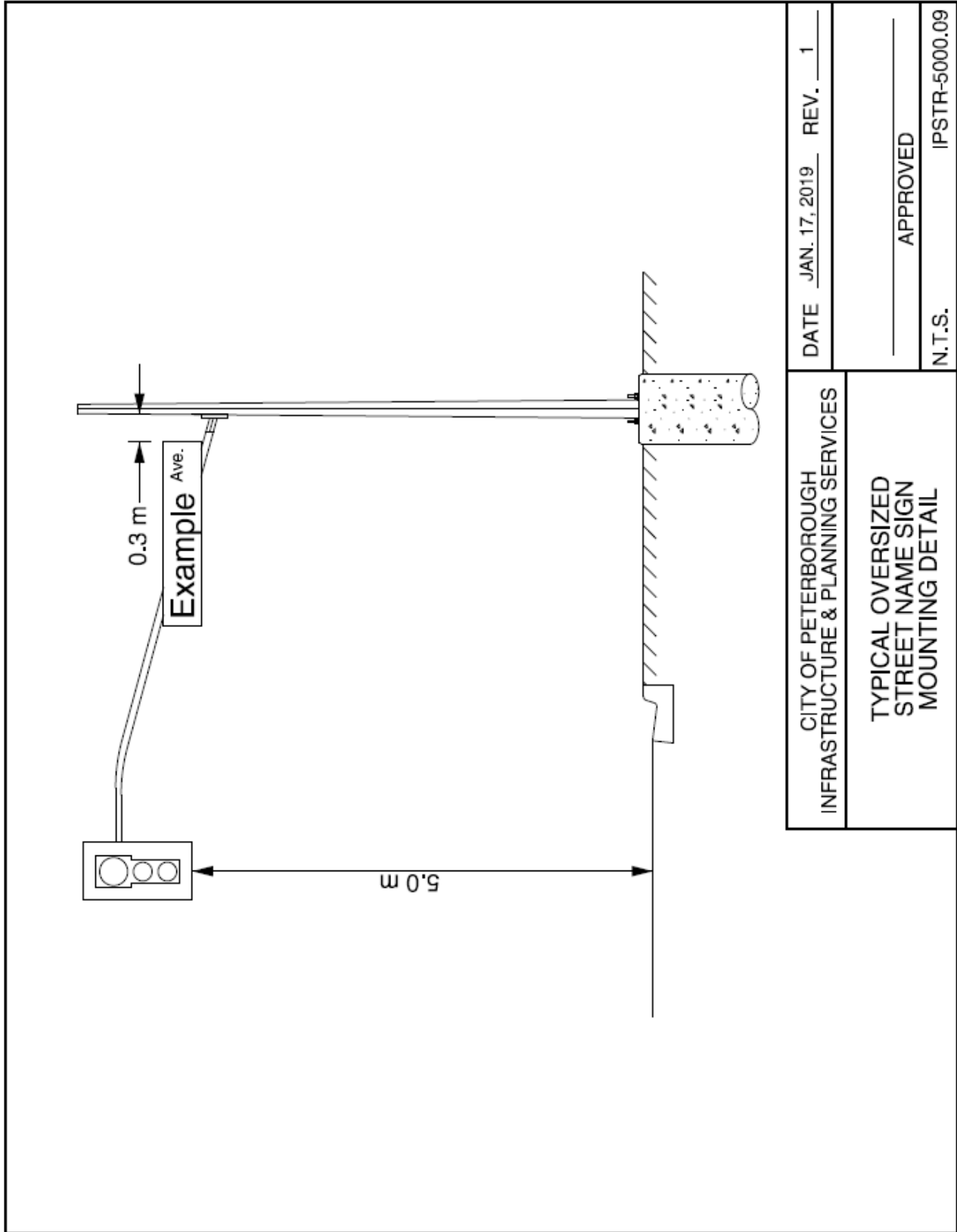
TYPICAL REGULATORY AND
STREET NAME SIGNS
INSTALLATION / LOCATION
DETAIL

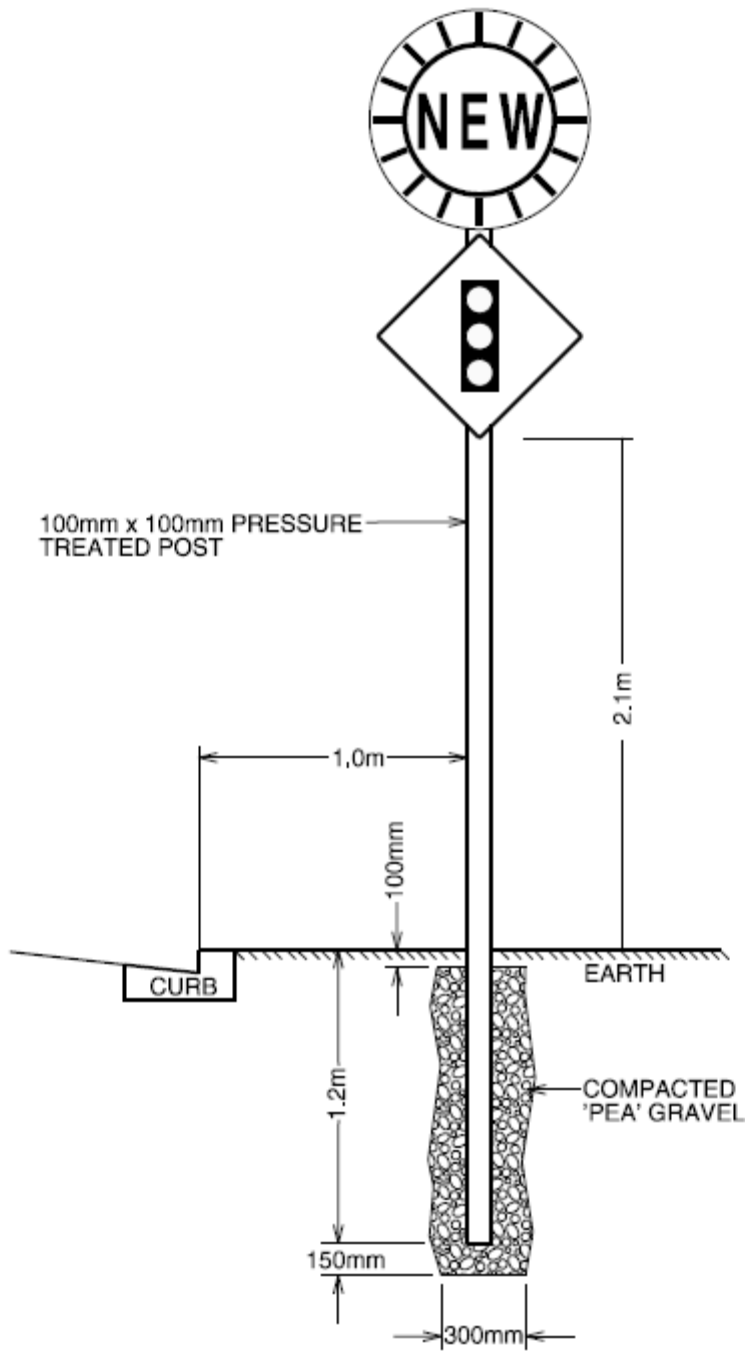
APPROVED

N.T.S. IPSTR-5000.07





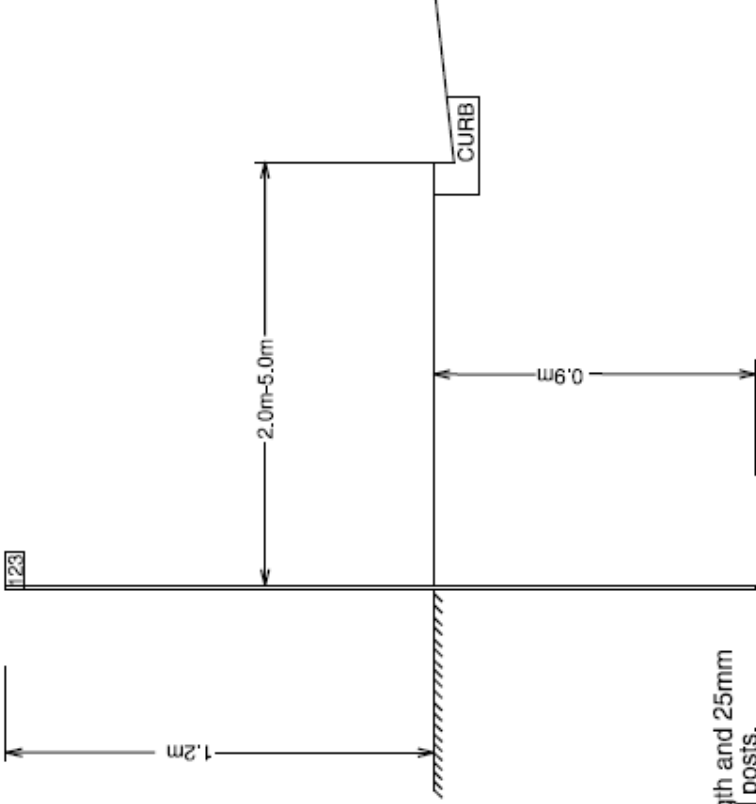
CITY OF PETERBOROUGH INFRASTRUCTURE & PLANNING SERVICES	DATE JAN. 22, 2021 REV. 2
	APPROVED
TYPICAL PRESSURE TREATED POST INSTALLATION/LOCATION DETAIL	
N.T.S. IPSTR-5000.08	

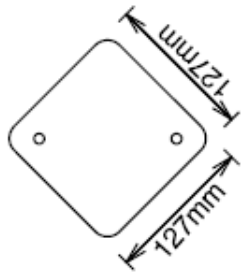
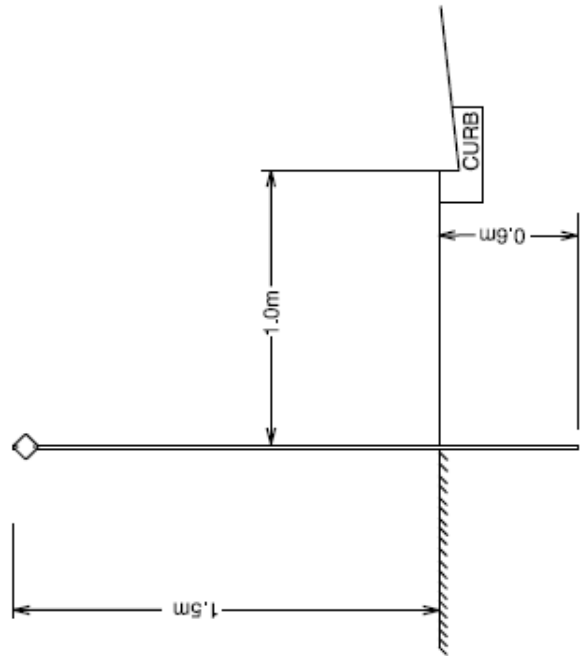


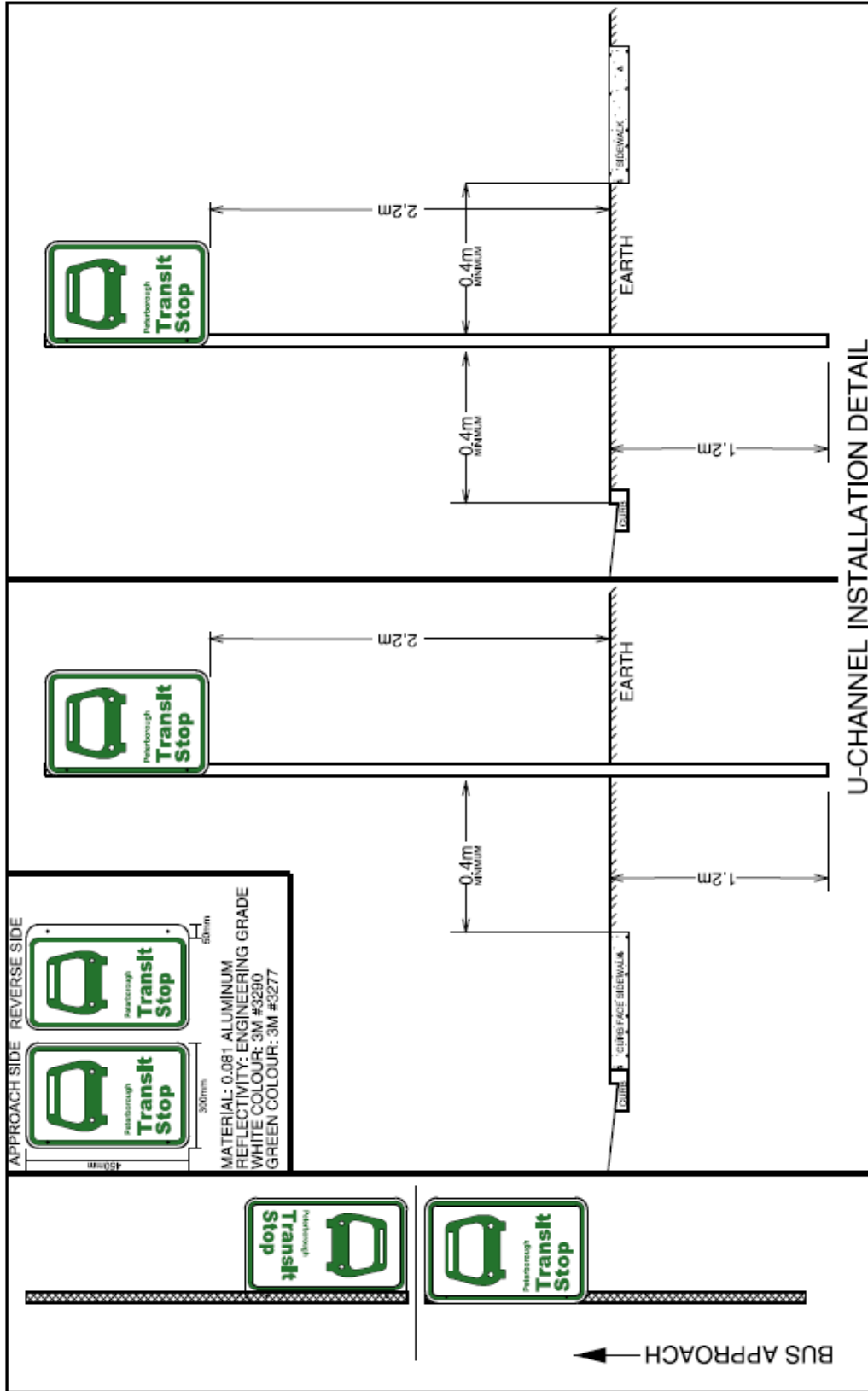


POST INSTALLATION DETAIL

<p>NOTES:</p> <p>1. Post shall be trimmed to top of sign.</p>	<p>CITY OF PETERBOROUGH INFRASTRUCTURE & PLANNING SERVICES</p>	<p>DATE <u>JAN. 17, 2019</u> REV. <u>1</u></p>
	<p>TYPICAL SIGN INSTALLATION/LOCATION DETAIL FOR TRAFFIC SIGNAL AHEAD & NEW SIGN for SIGNAL CONTROL</p>	<p>APPROVED</p>
	<p>N.T.S.</p>	<p>IPSTR 5000.10</p>

 <p>125mm</p> <p>250mm</p>	 <p>125mm</p> <p>300mm</p>	<p>NOTES:</p> <ol style="list-style-type: none"> 1. Signs with 1, 2, & 3 digit numbers are to be 125mm x 250mm. 2. Signs with 4 & 5 digit numbers are to be 125mm x 300mm. 3. Signs are 16 gauge thick aluminum with green reflective coating and 100mm white reflective numbers. (ASTM Type 1 - Engineer Grade Prismatic) 	<p>DATE JAN. 17, 2019 REV. 1</p> <p>APPROVED</p> <p>N.T.S. IPSTR 5000.11</p>
		<p>CITY OF PETERBOROUGH INFRASTRUCTURE & PLANNING SERVICES</p> <p>TYPICAL "911" ADDRESS SIGN INSTALLATION / LOCATION DETAIL</p>	
<p>NOTES:</p> <ol style="list-style-type: none"> 1. Sign post is 2.1m in length and 25mm square, galvanized steel posts. 2. Sign post has predrilled holes to match holes in sign blade. 3. Mounting Hardware Kit (All Hardware to be minimum Grade 5) 2 - 5/16" x 16x2" Stainless Steel bolts 2 - 5/16" Stainless Steel washers 2 - 5/16" Stainless Steel lock washers 2 - 5/16" x 1" Nylon washers 2 - 5/16" x 16 Stainless Steel Hex Nuts 4. Location of Post 2.0m - 5.0m from curb face or edge of pavement. 1.0m - 2.0m from left edge of driveway. 			

	<p>NOTES:</p> <ol style="list-style-type: none"> 1. Signs are to be 127mm x 127mm. 2. Signs are 16 guage thick aluminum with High Intensity white silver reflective coating. <p>DATE <u>JAN. 17, 2019</u> REV. <u>1</u></p> <p>APPROVED _____</p> <p>N.T.S. _____ IPSTR 5000.12</p>
	<p>NOTES:</p> <ol style="list-style-type: none"> 1. Sign post is 2.1m in length and 25mm square, galvanized steel. 2. Sign post has predrilled holes to match holes in sign blade. 3. Mounting Hardware Kit (All Hardware to be minimum Grade 5) 2 - 5/16"x16x2" Stainless Steel bolts 2 - 5/16" Stainless Steel washers 2 - 5/16" Stainless Steel lock washers 2 - 5/16"x1" Nylon washers 2 - 5/16"x16 Stainless Steel Hex Nuts 4. Location of Post 1.0m from curb face or 2.0m from painted edge line. <p>CITY OF PETERBOROUGH INFRASTRUCTURE & PLANNING SERVICES</p> <p>TYPICAL REFLECTIVE DELINEATOR SIGN INSTALLATION / LOCATION DETAIL</p>



NOTES:

- 1. Post shall be trimmed to top of sign.
- 2. If two or more signs are on post, measurement to the bottom of the lowest sign shall be 2.1 m.
- 3. Where posts are installed in concrete, square box post and anchor posts are to be installed.
- 4. If boulevard is less than 0.8m place post and sign behind sidewalk.

CITY OF PETERBOROUGH
INFRASTRUCTURE & PLANNING SERVICES

DATE JAN. 17, 2019 REV. 1

TRANSIT SIGN
INSTALLATION / LOCATION
DETAIL

APPROVED

N.T.S. IPSTR 5000.13