PART 1 - GENERAL

PAYMENT PROCEDURES
.

1.1 PRICE AND

.1 Measurement and Payment:
.1 Measurement for supply installation and of sign and, sign supports will be based on each complete sign installation.

1.2 REFERENCES

.1 American Association of State Highway and Transportation Officials (AASHTO)
.1 Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, (5th Edition).

.2 ASTM International
.1 ASTM A 276-08a, Standard Specification for Stainless Steel Bars and Shapes.
.2 ASTM B 209M-07, Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate Metric.
.3 ASTM B210M-05, Standard Specification for Aluminum-Alloy Drawn Seamless Tubes Metric.
.4 ASTM B211M-03, Standard Specification for Aluminum and Aluminum-Alloy Bar, Rod and Wire Metric.

.3 CSA International
.1 CSA G40.21-04(R2009), General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
.2 CAN/CSA G164-M92(R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.
.3 CSA W47.2-M1987(R2008), Certification of Companies for Fusion Welding of Aluminum.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

.2 Shop Drawings:
.1 Submit drawings stamped and signed by professional engineer registered or licensed in Territory of Nunavut, Canada.

1.4 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.

## PART 2 - PRODUCTS

2.1 DESIGN CRITERIA

.1 Sign supports to be capable of withstanding the combination of following Wind and Ice loads at site and dead loads.

.2 Structural deflections and vibration in accordance with American Association of State Highway and Transportation Officials (AASHTO), "Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals".

2.2 MATERIALS

.1 Sign supports:
.1 Steel posts: to CSA G40.21, and to standard drawings. Hot dipped galvanized: to CAN/CSA-G164.

.2 Signboards:
.1 Aluminum sheet: to ASTM B209M, precut to required dimensions.
.1 Thickness for signboards up to 750 mm wide: 1.6 mm minimum.
.2 Thickness for signboards 750-1200 mm wide: 2.1 mm minimum.
.3 Thickness for refurbishing existing sign panels: 1.0 mm minimum.
.2 Connecting straps and brackets: to ASTM B 209M.
.3 Aluminum materials: to ASTM B209M.
.4 Primer for aluminum: to MPI # 8 , VOC limit of 250 g/L to GSES GS-11.
.5 Silk screen ink:
.1 Transparent or opaque colours: selected by Departmental Representative.
.6 Reflective sheeting and tape: to CGSB 62-GP-11M. Adhesive, class of reflectivity and colour as indicated.
.7 Transparent tape: flexible, smooth-surfaced, moisture resistant tape with pressure sensitive adhesive.
.8 Clear varnish protective coat: MPI-EXT 6.4H VOC limit of 350 g/L to SCAQMD Rule 1113.

2.3 FABRICATION

.1 Supports:

.1 Connect aluminum support members by welding in accordance with CSA W47.2. or as indicated. Work to be performed by Canadian Welding Bureau qualified members only. Flame cutting of members not permitted.

.2 Welds to be of same strength as adjacent member or casting.

.3 Reinforce in area of electrical hand holes to equal strength of full section member.

.4 Remove sharp edges and burrs.

.2 Signboards:

.1 Aluminum blanks:

.1 Degrease, etch and bonderize with chemical conversion coating.

.2 Clean surfaces with xylene thinner. Dry.

.3 For non-reflective signs, spray face with one coat vinyl pretreatment coating and two finish coats of required colour.

.4 For aluminum signboards that are to be painted before installation, spray and bake face of signboards with two coats of enamel in accordance with MPI-EXT 5.4A.

.2 Reflective background sheeting and lettering:

.1 Cut and apply in accordance with manufacturer's instructions.

.2 Apply adhesive coated material with heat lamp vacuum applicator or by squeeze roll application method. Apply pressure sensitive material with roller or squeegee.

.3 Edge wrap sheeting on each extrusion prior to bolting extrusions. Match pieces of sheeting from different rolls for each signboard to ensure uniform appearance and brilliance by day and night.

.4 Reflective signboard faces may be prepared using silk screen transparent ink.

.3 Clean signboards completely and apply transparent tape over top edge and extending 25 mm minimum down back and front of signboard.

.4 Protect finished signboard faces with one coat of clear varnish with maximum VOC limit of 350 g/L to SCAQMD Rule 1113.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

.1 Sign support:
.1 Erect supports as indicated. Permissible tolerance: 50 mm maximum departure from vertical for direct buried supports.
.2 Close open aluminum tubes and posts with aluminum cap. Cut oblong holes in shoe bases to drain condensation. Install aluminum bolt cover on each base plate restraining nut.
.3 Erect posts plumb and square to details as indicated.
.4 Single channel steel posts:

.2 Signboard:
.1 Fasten signboards to supporting posts and brackets as indicated.

### 3.2 PROTECTION

.1 Protect installed products and components from damage during construction.

.2 Repair damage to adjacent materials caused by traffic signage installation and salvage operations.

END