

## SPECIAL PROVISIONS

called for, therefore any labour, material, equipment, tool or incidental item not specifically mentioned, but necessary for a complete job will be considered incidental to the Work, and no separate or additional payment will be made.

**4.25.2 Bridge Structure Alternatives**

Each of the two bridge structures is provided with two alternatives (Steel and Concrete). Full set of Plans for both alternatives are provided with this tender.

The Contractor has the option of constructing either the steel alternative structure or the concrete alternative structure. The Contractor is required to use the same structure alternative for both bridges either steel or concrete.

**4.25.3 Corrosion Resistant Reinforcing Steel Alternatives**

The Contractor has the option to bid two alternatives of corrosion resistant reinforcing steel:

- MMFX2 Reinforcing Steel supply
- Stainless Reinforcing Steel supply

In addition to the requirements of Specifications for Bridge Construction, Section 5, Reinforcing Steel, the following requirements shall apply.

**4.25.3.1 General**

The corrosion resistant reinforcing steel is intended to replace the Epoxy Coated reinforcing steel in deck, roof slab, approach slab, MUT (multi use trail), median, barrier and curb. The Contractor shall follow the application details described in the following:

Alternative 1: MMFX2 Reinforcing Steel: both top and bottom mats in deck, roof slab, approach slab. All reinforcing steel in MUT, median, barrier and curb are to be MMFX2 reinforcing steel.

Alternative 2: Stainless Reinforcing Steel: top mat with stainless steel and bottom mat with plain reinforcing steel in deck, roof slab, approach slab. All reinforcing steel in MUT, median, barrier and curb are to be stainless steel.

All reinforcing bars projecting from the web of precast concrete girders into bridge decks shall be either MMFX2 Reinforcing Steel or Stainless Reinforcing Steel.

At other locations, corrosion resistant reinforcing steel specified in the Plans shall be either MMFX2 Reinforcing Steel or Stainless Reinforcing Steel.

**4.25.3.2 Materials and Fabrication****Stainless Reinforcing Steel**

Stainless Reinforcing Steel shall be solid stainless steel reinforcing bar conforming to the requirements of ASTM A276 and ASTM A955M, Deformed and Plain Stainless Steel Bars for Concrete Reinforcement, and shall be deformed stainless steel meeting the material requirements of AISI Grade 316LN, 2205, 2101, 2304 or UNS-S24100 (XM28), UNS S32304. The minimum yield strength shall be 400 MPa. All hooks and bends shall be bent using the pin diameters and dimensions as recommended in the Reinforcing Steel Institute of Canada (RSIC), Manual of Standard Practice, unless specified otherwise. Reinforcing bars shall conform accurately to the dimensions shown on the Plans and within the fabricating tolerance

## SPECIAL PROVISIONS

as shown in the RSIC, Manual of Standard Practice.

Fabrication of the solid stainless steel reinforcing bars shall be such that the bar surfaces are not contaminated with deposits of iron and non-stainless steels. Solid stainless steel reinforcing bars shall be stored separately from carbon steel reinforcing bars.

All chairs or bar supports shall be non-metallic. Tie-wire shall be Grade 316L stainless.

MMFX2 Reinforcing Steel

MMFX2 Reinforcing Steel shall be Type ASTM A1035 reinforcing bar, the minimum yield strength shall be 690 MPa. All hooks and bends shall be bent using the pin diameters and dimensions as recommended in the Reinforcing Steel Institute of Canada (RSIC), Manual of Standard Practice, unless specified otherwise. Reinforcing bars shall conform accurately to the dimensions shown on the Plans and within the fabricating tolerance as shown in the RSIC, Manual of Standard Practice.

## 4.25.3.3 Measurement and Payment

MMFX2 Reinforcing Steel or Stainless Reinforcing Steel incorporated in the concrete will be measured in kilograms, based on the total computed mass for the size and length of bars as shown on the Plans or authorized by the Consultant.

The mass of bars will be calculated as follows:

MMFX2 Bar Designation	#3	#4	#5	#6	#7	#8	#9	#10
Mass (kg/m)	0.560	0.994	1.552	2.235	3.042	3.973	5.060	6.404
Stainless Bar Designation	#3	#4	#5	#6	#7	#8	#9	#10
Mass (kg/m)	0.556	1.011	1.559	2.225	3.032	3.995	5.053	6.416

Payment for "MMFX2 Reinforcing Steel - Supply" or "Stainless Reinforcing Steel - Supply" will be made on the basis of the unit price bid per kilogram acceptably supplied and delivered to the site. When the materials are delivered to the site, payments for "MMFX2 Reinforcing Steel - Supply" or "Stainless Reinforcing Steel - Supply" will be made to a maximum of 90% of the cost of the materials based upon the unit price bid. Payment for the remainder of the price bid for supply will be made as the materials are acceptably installed. Payment for the placing of reinforcing steel (including the placing of MMFX2 Reinforcing Steel or the placing of Stainless Reinforcing Steel will be made on the basis of the unit price bid per kilogram for "Reinforcing Steel - Place" acceptably placed and remain in the work, which price shall include full compensation for the cost of furnishing all labour, equipment, tools and incidentals necessary to complete the Work.

## 4.25.4 Traffic Accommodation

The work shall follow Alberta Transportation "Traffic Accommodation in Work Zone Manual", 1st Edition, 2008. It is available on Alberta Transportation Website or by calling (780) 415-1068.

The Contractor shall supply, install and maintain throughout the construction period all advance notification signs, traffic signs, barricade, barriers, temporary diversions and other traffic control devices as necessary during the construction of the Works. The requirements of the current