

## APPENDIX "C"

### REACTION AND AERIAL FERRY MAINTENANCE

#### Usk

#### 1. OBJECTIVE

To ensure the safety of the Highway Users and to maximize the functional life of the Reaction and Aerial Ferry.

#### 2. GENERAL PERFORMANCE SPECIFICATIONS

##### 2.1 Routine Maintenance Services

All services for this Local Area Specification are Routine.

##### 2.2 Quantified Maintenance Services

Not applicable to this Local Area Specification.

#### 3. DETAILED PERFORMANCE SPECIFICATIONS

##### 3.1 Routine Maintenance Services

The Contractor must:

- a) maintain and repair the Reaction and Aerial Ferry and associated components in accordance with Section B1 of the Introduction to the Maintenance Specifications and the Ferry Maintenance and Operations Manuals;
- b) schedule maintenance activities to minimize delays to the public; where the work cannot be scheduled outside of normal operating hours and will result in a service interruption, the Contractor must notify the public two days in advance of the scheduled work;
- c) maintain, repair and/or replace all electronic, electrical, mechanical and hydraulic systems and associated components, emergency lighting, luminaires on towers and electric bells;
- d) maintain, repair or replace all electronic surveillance equipment;
- e) maintain, repair and replace safety boat, outboard engines and associated components;

- f) maintain and supply safety equipment to meet the requirements of the Ferry Maintenance and Operations Manuals;
- g) maintain ferry Decks and aprons in accordance with the Maintenance Specification for *Bridge Deck Maintenance* (subject to section 3.1.1 g), with credit for such work under the Maintenance Specification for *Bridge Deck Maintenance*;
- h) maintain ferry railings and fence systems in accordance with the Maintenance Specification for *Bride Railing Maintenance*;
- i) maintain painted components on the ferry in accordance with the Maintenance Specification for *Minor Painting of Bridge Structures*, with credit for such work under the Maintenance Specification for *Minor Painting of Bridge Structures*;
- j) maintain Bailey and Acrow components in accordance with the Maintenance Specification for *Bailey and Acrow Bridge Maintenance*;
- k) inspect, clean, lubricate, non-destructive test, repair and replace Reaction and Aerial Ferry wire ropes (including Main Span Wire Rope), sheaves and associated components, in accordance with Ferry Maintenance and Operations Manuals and established maintenance schedules. All inspection, testing and cleaning of counterweight and main span wire ropes will be conducted by an independent third party and certified by an engineer;
- l) provide written inspection reports of Reaction and Aerial Ferry and associated components to the Province;
- m) remove the Reaction Ferry from the water at the end of the operating season and return the ferry to service at the start of the operating season;
- n) protect the Reaction Ferry from potential hazards and extreme conditions; if conditions warrant, remove the Reaction Ferry from the water and return the ferry to service when conditions permit, or as directed in writing by the Province;
- o) maintain all fire extinguisher and fire suppression equipment on the Reaction Ferry and safety boat;
- p) respond to any damage that threatens the structural stability or integrity of the Reaction Ferry, associated components and safety boat in accordance with the Maintenance Specification for *Structural Damage Response*;

- p) complete Initial and Final Condition Surveys of the Reaction and Aerial Ferries and associated components by a qualified survey or as approved in writing by the Province;
- q) return the Reaction and Aerial Ferries and associated components to the Province at the end of the Term in substantially the same condition as at the Commencement Date, as documented in the Initial Condition survey.

Note: If it is estimated by the Contractor and confirmed by the Province that, at any particular time, the cost to maintain the Reaction or Aerial Ferry exceeds \$35,000, refer to Section G of the Introduction to the Maintenance Specifications.

### **3.1.1 Performance Time Frames**

The Contractor must:

- a) immediately respond to situations that are unsafe or have the potential to become unsafe for Highway Users or when the Reaction or Aerial Ferry cannot function as intended;
- b) immediately maintain and repair electrical, mechanical and hydraulic systems and associated components that are necessary for the safe and efficient operation of the Reaction and Aerial Ferry and safety boat;
- c) immediately notify the Province of any deficiencies detected on the counterweight and main span wire rope;
- d) during the operational season, complete Routine Maintenance Services within the times shown on the table below:

<b>Maintenance Activity</b>		<b>Maximum Response Time</b>
i)	repair or replace steering paddles	4 h
ii)	maintain and repair electrical, electronic, mechanical and hydraulic systems and associated components on Reaction and Aerial Ferries, towers and safety boat other than 3.1.1b);	1 d
iii)	replace steering or apron cables	1 d
iv)	maintain and repair ferry Deck and apron	1 d
v)	maintain and repair railings and fencing	7 d
vi)	maintain, repair or replace Reaction and Aerial Ferry tower components, including but not limited to anchors counterweights, wind line, sheaves, winches counterweight and Main Span Wire Rope	7 d
vii)	maintain, repair or replace all other components	7 d

**Legend**

h - hours

d – days

- e) in the spring, prior to the Reaction Ferry being put into service, perform annual inspections, maintenance and repair of the Reaction Ferry and ferry components in accordance with the Ferry Maintenance and Operations Manuals;
- f) perform all other inspections in accordance with the frequencies established in the Ferry Maintenance and Operations Manuals unless the Province directs the Contractor to perform more frequent inspections;
- g) comply with the Performance Time Frames in this Local Area Specification which will take precedence over Performance Time Frames in other applicable Maintenance Specifications; and
- h) complete the Initial Condition Survey of the Reaction and Aerial Ferries within 30 days of the Commencement Date of the Contract and the Final Condition Survey 30 days prior to the end of the Term.

### **3.2 Quantified Maintenance Services**

Not applicable to this Local Area Specification.

#### **3.2.1 Performance Time Frames**

Not applicable to this Local Area Specification.

### **3.3 Materials**

The Contractor must:

- a) refer to section B1 of the Introduction to the Maintenance Specifications;
- b) supply and use recommended lubricants, oils and grease materials;
- c) ensure that timber paddle material will be of Number 1 grade, S1S2E Heart-Side surfaced 100mm x 300 mm (4 x 12 inches), or as specified by the Province, cut to the same length as the existing paddle;
- d) ensure that steering cable material will be 16 mm (5/8 inch), 6 X 19 IWRC IP Langs lay. Apron cable will be 10 mm (3/8 inch), 6 X 19 1WRC IP or the same type and quality as existing material, and all other cables are to be replaced with material the same size and at least equal in quality as existing;
- e) supply mechanical, electrical, electronic and hydraulic systems and related component materials; and
- f) supply safety equipment and associated component material.

## **4. WARRANTY**

Not applicable to this Local Area Specification.