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**Part 1            GENERAL**

**1.1            Description of Work**

- .1    This section specifies requirements for the following items:
  - .1      Mooring Holdfasts.
  - .2      Ladder Holdfasts.

**1.2            Reference Standards**

- .1    ASTM A307-21, Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60,000 psi Tensile Strength.
- .2    CSA G40.21-13 (R2018), Structural Quality Steel.
- .3    ASTM A123/A123M-17, Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- .4    CSA W59-18, Welded Steel Construction (Metal Arc Welding).
- .5    CSA W47.2-11 (R2020) – Certification of Companies for Fusion Welding of Aluminum.

**1.3            Related Work**

- .1    Refer to other Specification Sections for related information.
- .2    Refer to Section 01 33 00 for Submission and Shop Drawing requirements.
- .3    Section 05 50 00 – Metal Fabrications.

**1.4            Submissions**

- .1    Shop Drawings:
    - .1      Clearly indicate the following items:
      - .1          General arrangements, dimensions, clearance locations and directions of assemblies as installed on structures.
      - .2          Locations, sizes and installation tolerances of anchor bolts, eye bolts and embedded parts.
      - .3          Types of materials used, finishes and core thickness.
      - .4          All other pertinent details and accessories.
  - .2    Product Data/Samples:
    - .1      Provide product data and manufacturers brochures for the mooring holdfasts and ladder holdfasts.
  - .3    Test Results:
    - .1      Provide test results for the galvanized items.
  - .4    Submissions
    - .1      Provide submissions in accordance with Section 01 33 00 – Submissions and Shop Drawings.
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**Part 2 PRODUCTS**

**2.1 Materials**

- .1 Hardware and miscellaneous items must meet the following specifications:
  - .1 Machine bolts, lag bolts, drift bolts, anchor bolts, nuts, washers to ASTM A307.
  - .2 Do not use items manufactured or fabricated from scrap steel of unknown chemical composition or physical properties.
  - .3 Hot dip galvanize bolts, anchor bolts, nuts, washers, pip sleeves, steel plates, rungs, holdfasts, U-bolts and any other miscellaneous steel to ASTM A123/A123M with minimum zinc coating of 610 g/m<sup>2</sup>. All sharp corners, edges and weld splatter to be ground smooth prior to galvanizing.
  - .4 The material requirements for installation of light poles are provided in the electrical sections/drawings.
  - .5 Weld quality and workmanship shall comply with CSA standard W47.1 and W59. Welders to be certified by Canadian Welding Bureau.

**Part 3 EXECUTION**

**3.1 Mooring Holdfasts**

- .1 Install mooring holdfasts as shown on drawings.
- .2 Do not make alternations to any components without written permission of *Departmental Representative*.

**3.2 Ladder Holdfasts**

- .1 Install ladder holdfasts as shown on drawings.
- .2 Do not make alternations to any components without written permission of *Departmental Representative*.

**3.3 Installation General**

- .1 Contain all debris and leachates (films on water surface) within the area of the work by using containment facilities such as floating booms or screens.

**END OF SECTION**

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