Hydro Extrusion USA, LLC, (REDD Team)

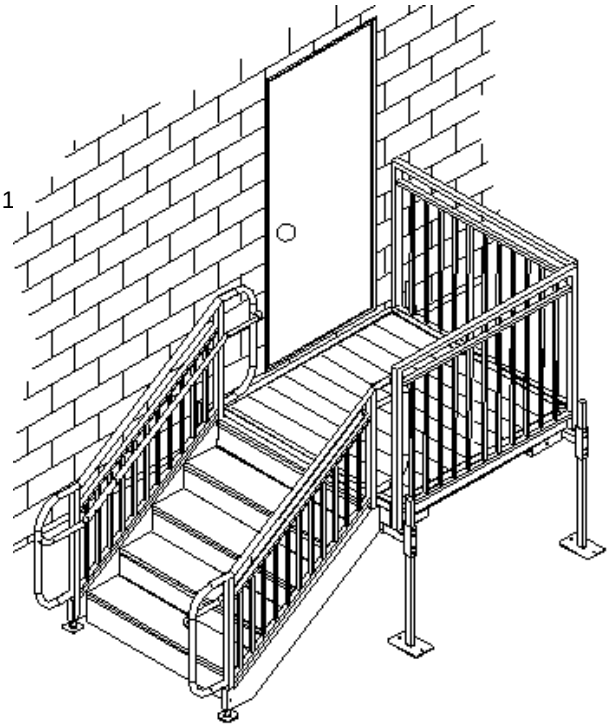
PREFABRICATED MODULAR ALUMINUM STAIR SYSTEM SPECIFICATIONS

(PLACE AN "X" IN THE BOX ☐ NEXT TO ALL APPLICABLE ITEMS)

SCOPE OF WORK: PROVIDE PREFABRICATED MODULAR ALUMINUM STAIR SYSTEMS

☐ 3, 4, 5, 6, 7, 8, 9 Riser Series 1007 Stairway

☐ 3, 4, 5, 6, 8, 9 Riser Series 1006 Stairway



PART 1 - SUBMITTALS

1.1 Product literature with bid.

1.2 Warranty information with bid.

1.3 Shop drawings (if requested) upon receipt of purchase order.

1.4 Engineering: Provide sealed professional engineered drawings upon request.

PART 2 - QUALITY ASSURANCE

2.1 Manufacturer: Hydro Extrusion USA LLC (REDD Team), 1 Superior Drive Delhi, LA 71232. Call toll free: 1-800-648-3696. Fax 1-866-840-4566. Find our web site at **http://www.reddteam.com or e-mail us at AAR-ReddTeamCustomerService@hydro.com.** Any alternate manufacturer must be approved prior to bid opening.

2.2 All components shall be universal so that a stair system can be relocated and assembled into different configurations.

2.3 Design of the aluminum members shall conform to the current edition of the Aluminum Association Specifications and Guidelines for Aluminum Structures.

2.4 Aluminum welding shall be in accordance with the ANSI/AWS D1.2-97 GMAW process and shall be performed by experienced operators.

2.5 All exposed surfaces shall be smooth and free of sharp or jagged edges.

2.6 Warranty: Hydro Extrusion USA LLC (REDD Team), warrants its products to be free from defects in material and workmanship for a period of (1) one year beginning at date of delivery of product. This warranty excludes any defects resulting from abnormal use in installation or service, accidental or intentional damage or any occurrences beyond the manufacturer's control.

PART 3 - PRODUCTS

3.1 **STAIRWAYS** (Always check local ordinances and building codes)

3.1.1 Engineering

a. Stair treads and stringers shall be designed for a uniform live load of 100 pounds per square foot and a concentrated vertical load of 300 pounds over an area of 4 square inches.

3.1.2 Materials

a. Stair treads, stringers, and risers shall be constructed using 6000 series aluminum alloy with 6061-T6 for primary structural components.

3.1.3 Design

a. Stair treads shall be prefabricated in typical 4'-2" width. Custom widths can be fabricated as requested. All treads have ADA compliant nosing.

☐ b. Series 1006 stairways shall be prefabricated to match a threshold height of:
☐ 18" ☐ 24" ☐ 30" ☐ 36" ☐ 48" ☐ 54"

☐ c. Series 1007 stairways shall be prefabricated to match a threshold height of:
☐ 21" ☐ 28" ☐ 35" ☐ 42" ☐ 49" ☐ 56"

Minimum walking surface coefficient of friction shall be 0.93 as determined by an independent testing facility.

3.2 **LANDINGS**

3.2.1 Engineering

a. Landings shall be designed for a uniform live load of 100 pounds per square foot and a concentrated vertical load of 300 pounds distributed uniformly over an area of 1 square foot.

3.2.2 Materials

a. Landings shall be constructed using 6000 series aluminum alloy with 6061-T6 for primary structural components.

3.2.3 Design

☐ a. Landings shall be prefabricated in typical 5'-0" X 5'-0" sections.

☐ b. Landings shall be _____ X _____ sections as indicated on drawings supplied by customer. (Customer shall be responsible for compliance with his or her local ordinances and building codes.)

c. Landings will be designed for variable heights.

d. The walking surface of the landing shall be continuous, without gaps, and shall be 1 1/2 inch X 6 inch and/or 1 1/2 inch x 8 inch self-mating aluminum deck with extruded slip resistant surface. Minimum walking surface coefficient of friction shall be 0.93 as determined by an independent testing facility.

3.3 **LEGS**

3.3.1 Engineering

a. The legs shall be designed to support the stair and landing sections. (See Uniform Live Load Specification 3.1.1.a & 3.2.1.a)

3.3.2 Materials

a. Legs shall be constructed using 6061-T6 aluminum alloy.

b. All bolt hardware shall be stainless steel grade 304.

3.3.3 Design

a. The legs shall telescope to allow for various height adjustments.

b. All legs shall be thru bolted using stainless steel bolts grade 304.

c. All legs shall have 1/4" X 6" X 10" pads.

3.4 **LANDING RAILS AND STAIR RAILS**

3.4.1 Engineering

a. Handrails shall be designed to resist a concentrated load of 200 pounds applied at any point and in any direction at the top of the rail.

b. Handrails shall be designed to resist a simultaneous load of 50 pounds per linear foot applied horizontally and 100 pounds per linear foot applied vertically downward at the top of the rail.

c. Guardrail systems shall be designed to resist a 200 pound concentrated horizontal load applied evenly over a one foot square area at any point in the system. (Note: Loads given in section "a", "b", and "c" shall not be applied simultaneously in any combination.)

3.4.2 Materials

a. All landing rails and stair rails shall be aluminum construction alloy 6061-T6 & 6063-T5.

3.4.3 Design

a. Stair rail gripping surface shall be smooth and continuous.

b. Stair hand rail shall be 34" high from the nose of the tread to top of the rail (measured perpendicularly from the tread nose).

c. Stair top rail shall be 1 1/4" Sch. 40 aluminum pipe with a barrier system of:

☐ 4 inch spaced vertical pickets.

☐ Two-line pipe (34" high handrail). This option will be quoted on a per-project basis.

d. Landing rails shall form a 42" high protective barrier such that a 4" sphere cannot pass through any opening in the landing rail.

3.5 FINISHING

3.5.1 Landing rails and stair rails shall be:

☐ a. Mill finish

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