

SECTION 05530

ALUMINUM HANDRAILS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Aluminum mechanical sub-assembled guardrails and fittings.
- B. Guardrail extension at new walkover.

1.02 REFERENCES

- A. ASTM 6061-T6 and/or ASTM 6063-T6.

1.03 DESIGN REQUIREMENTS

- A. Railing assembly and attachments to resist a concentrated load of 200 pounds applied in any direction at any point and a uniform load of 50 pounds per lineal foot applied to the horizontal rails in any direction. The loads shall not be applied simultaneously.
- B. Space support posts 6 feet on center, maximum.
- C. Guard Rail Extension - Space support posts 3 feet on center.

1.04 SUBMITTALS

- A. Submit under provisions of all provisions and sections of these specifications.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.

PART 2 PRODUCTS

2.01 RAILING SYSTEM

- A. Railings shall be constructed 1-1/2 inch diameter aluminum pipe schedule 40 with anodized satin finish. Finish to be clear anodized (0.7 mil). All fittings shall be extruded aluminum pre-engineered for railing application.
- B. All railing shall be mounted to the side of concrete walkway surfaces using 1/2 inch diameter stainless steel expansion anchors.
- C. All hardware used on the railing system shall be stainless steel.

- D. All railing surfaces in contact with concrete or dissimilar metals shall receive one coat of zinc chromate.
- E. All fittings shall be secured to the post and railing with #17 x 1" stainless steel set screws.
- F. Railings shall be provided with two horizontal rails. A 4-inch high toe board is required only where there is a walk space below railing.
- G. Toe boards shall be 4 inch extruded aluminum "Z" shape. Toe boards shall be connected to each railing post with a minimum of two fasteners in horizontal slotted holes. Splices shall be located and detailed to allow for thermal expansion and contraction.
- H. Openings in rail shall be provided for access to gates and valves. Provide double strand 3/16 inch diameter stainless steel chain.
- I. Provide expansion joints at maximum 24 ft centers using splice sleeves.
- J. Manufacturer: 5 years minimum experience with references if requested.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.
- B. Beginning of installation means erector accepts existing conditions.

3.02 INSTALLATION

- A. Install components plumb and level, accurately fitted, free from distortion or defects.
- B. Provide anchors and sockets required for connecting railings to concrete.

END OF SECTION