

SECTION 11480 – Bleachers

PART 1 – GENERAL

1.1 SUMMARY

- A. Scope of work includes labor and materials required for installation of bleachers.

1.2 SUBMITTALS

- A. Submit properly identified manufacturer's literature
- B. Submit a full scale shop drawing with foundation design and calculations to wind loading requirements per FBC (latest edition) signed and sealed by engineer for review by Architect of record.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Design of the bleacher shall conform in all respects to the requirements as set forth in these specifications. Due to maintenance and weight consideration, galvanized frames are not acceptable for this project. The description of the bleacher is as follows:
- B. Two types shall be provided as shown on plans:
 - 1. Bleacher B1
Number of rows: 5
Overall length: 26'-0"
 - 2. Bleacher B2
Number of rows: 5
Overall length: 50'-9"
- C. Design of the bleacher shall conform in all respects to the requirements as set forth in these specifications. Due to maintenance and weight consideration, galvanized frames are not acceptable for this project. The description of the bleacher is as follows:
- D. Must meet 1997 UBC & IBC 2000 latest edition.

2.2 DESIGN

A. PERFORMANCE

- 1. The bleacher shall be designed to support, in addition to its own weight, a uniformly distributed live load of not less than 100 pounds per square foot of gross horizontal projection of the bleacher. All seat and foot plank members shall be designed to support not less than 120 pounds per lineal foot. The bleacher shall be designed to resist, with or without live load, a horizontal wind load appropriate for local conditions. It shall also be designed to resist, in addition to the live load, sway forces applied to the seats in a direction parallel to the length of the seat planks 24 pounds per lineal foot; and, in a direction perpendicular, stresses in aluminum members and connections shall not exceed those specified for Building Type Structures by the Aluminum Association.

B. UNDERSTRUCTURE

1. The understructure of the bleacher shall consist of a series of welded aluminum angle frames spaced at intervals of no more than 6'0" and joined by means of aluminum sway braces, alloy 6061-T6, mill finish. Sway braces made of channel or flat bar may not offer the same long term rigidity and therefore will not be acceptable. Each frame shall consist of vertical members, adequate diagonal braces, and horizontal members welded to form an 8" rise and a 24" back to back spacing between seat rows. The 1st row seat height shall be 17" from grade. All welded connections shall be by certified aluminum welders and all mating parts shall be welded on all sides to assure adequate strength

C. SEATS AND DECKING

1. Seats shall be 2"x10" nominal extruded (1.75"x9.5" actual) aluminum, alloy 6063-T6, wall thickness .078" (+/- .006" industry tolerance) with a raised fluted surface to provide a non-skid surface. Seats shall be anodized clear (204RI), conforming to the Aluminum Association Architectural Standard AA-C22A31. Seat planks shall have one internal support leg, and shall be designed to rest on a seat support with a minimum-bearing surface of 8-1/2" to provide adequate resistance to torsion stress. Footboards shall consist of two (2) 2"x10" nominal extruded (1.75"x9.5" actual) aluminum, alloy 6063-T6, wall thickness .078" (+/- .006" industry tolerance) with a raised fluted surface to provide a non-skid surface. Footboards shall have a mill finish. End caps provided for footboards shall match in both color and finish, shall be full-length single piece, and shall attach by means of aluminum rivets or tek screws on the underside of the plank.
2. End caps shall be of a heavy-duty clamping, channel design, and shall match in both color and finish the plank to which they will attach. End caps shall be fastened to the underside by means of two aluminum rivets or tek screws.
3. Seats and footboards shall be connected to the supporting structure so as to transmit all live and sway loads to the understructure members, so placed to resist those loads specified in the design section. The connecting hardware (bolt clips) shall be of extruded aluminum, mill finish. Clips shall be so designed as to provide adjustability in four directions. The clips shall be flat, not square as to mold into the permanent locked position for durability.

D. RISER

1. A 1"x 6" nominal extruded aluminum, alloy 6063-T6, mill finish plank shall be attached under the seat board on rows 2 and above and for under the last row, one 2"x10" nominal extruded aluminum, alloy 6063-T6, mill finish plank shall be attached under the seat board. This plank shall be the same design as the footboards that are described in the above paragraph. The 1" x 6" riser will have angled corners on top and bottom to create a smooth appearance and fit cleanly next to the footboards.

E. GUARDRAIL

1. All railing shall consist of 1-1/4" schedule 40 aluminum pipe with an anodized clear finish. All plugs and fittings shall be of cast aluminum. Rail pipe shall be secured to the aluminum channel supports by means of galvanized tensions bands. The top rail shall be 42" above the nearest seat on the sides and rear and shall be provided with aluminized chain link fence on the rear and sides to row 3.
2. Railing posts shall be aluminum channel to maintain strength and longevity. Galvanized posts will not be acceptable. Post must be 1 piece, all aluminum design.

F. AISLES

1. There shall be one vertical aisle located within the bleacher. Aisle extension plank shall be provided to close the horizontal opening in the aisle. Aisle shall be provided with a handrail, in accordance with requirements of UBC 1997 and IBC 2000 latest Edition.

G. HANDICAP SEATING

1. There shall be "cut-outs" along the length of the first row of seats. These locations will be set into the first row and will accommodate required wheelchairs as per spec and drawings, with companion seating allowed on each side.

H. HARDWARE

1. All structural hardware shall be 7/16" diameter, grade 5 machine bolts, complete with hex nuts and "spring type" lockwashers. All hardware connecting plank to understructure shall be 5/16" diameter carriage bolts, complete with hex nuts and "spring type" lockwashers. The finish of all hardware shall be either hot-dipped galvanized to prohibit deterioration from electrolysis. No other hardware finish will be considered as an alternate.

3.0 MANUFACTURER

- A. Seating Solutions or approved equal
60 Austin Boulevard
Commack, NY 11725
(631) 845-0449

B. WARRANTY

1. All aluminum bleachers shall carry, after proper erection, and under normal use for this type of structure, a one (1) year warranty against all defects in materials and workmanship. Acts of vandalism or abuse shall render the condition of this warranty null and void.

C. INSTALLATION

1. Installation shall be performed by personnel thoroughly trained and experienced in bleacher installation to keep the warranty in full force and effect.

D. INSURANCE

1. "Certificate of Insurance must include language that indicates bidder is insured for **installation and repair**. A copy of certificate is required with bid package. Insurance carrier to be A rated or better."

END OF SECTION