

SPECIFICATIONS:

We understand that most grandstands are custom in nature and require a design team that considers all owner requirements, site conditions, means of egress and compliance with building code. Steel Stadiums is committed to our role as a member of the design team to assure the specification is consistent with the requirements set forth in the programming stage of the project. We will work with owners, architects and engineers in developing the most efficient and cost effective project using the current International Building Code as a basis for compliance. Please contact us to provide a custom design drawing and specification for your stadium project.

GENERIC SPECIFICATION SECTION 13125

1.01 SYSTEM DESCRIPTION

- A. Permanent Grandstand
- B. Leg Truss Grandstand
- C. Frame Type Bleacher
- D. Press Box
- E. Concrete Foundation
- F. Team Benches

1.02 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturers must have ten years of experience in the manufacture of bleachers and grandstands; welders must be AWS certified; manufacturing capability according to various code compliances.
- B. Installer Qualifications: Experienced in the proper installation of grandstands.
- C. Source Quality Control: Mill Test Certification

1.03 SUBMITTALS

- A. Manufacturer's Product Data: Submit manufacturer's descriptive product data for project.
- B. Shop Drawings: Manufacturer to submit shop drawings sealed by a registered professional engineer and schedules for type, location, quantity, and details of steel and aluminum components required for project.
- C. Certificates:
 - 1. Insurance Certificate, if required.
 - 2. Bid Bond, if required.
- D. Product Sample: Submit one 18-inch seat sample, if requested.
- E. Color Sample: If applicable, submit sample.

1.04 WARRANTY

- A. Permanent Grandstand shall be under warranty for a period of one year beginning at Date of Substantial Completion for Projects installed by Manufacturer. The Grandstand is warranted to be free from defect in materials and workmanship in the course of manufacture. This warranty excludes any other defects resulting from abnormal use in service, accidental or intentional damage or any occurrences beyond Manufacturer's control. Any exposed mill finish aluminum surface will become discolored due to oxidation which is a natural phenomenon. Bleacher manufacturer will not be responsible for discoloration of oxidized mill finish aluminum.

1.05 MAINTENANCE

- A. Owner is to conduct annual inspection and required maintenance of grandstand to ensure safe conditions. It is also recommended that a professional engineer or registered architect perform inspections biennially.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Steel Stadiums Horizontal Beam Permanent Grandstand Design with gross seating capacity of _____ and net seating capacity of _____ Rows x _____ Length. Press Box Support Structure _____ x _____. Press Box _____ x _____.

Other manufacturers seeking to be approved must submit product literature on horizontal beam design to the Owner for review and receive approval from Owner via addendum ten days prior to bid date.

2.02 PERMANENT STEEL GRANDSTAND

- A. Product Description
1. Horizontal Beam Permanent Grandstand Design: Vertical columns are placed 18 feet 0 inches on center laterally and _____ feet _____ inches on center front to back (refer to drawing). All horizontal beams are wide flange beams. Traverse bays are free of crossbracing the total length of the grandstand.
 2. Stringers: Stringers are wide flange with steel angle rise and depth fabrication and are placed at 6 feet on center.
 3. Front Walkway:
 - a. Clear width _____ inches.
 - b. Elevated _____ feet above grade at front of stand.

4. Entry stairs to be firmly anchored to uniformly poured concrete bases.
 - a. Stair rise: 6 inches with aluminum closure and contrasting aluminum stair nose.
 - b. Stair tread depth: 11 inches.
 - c. Guardrails on stair to be 42 inches above leading edge of step.
 - d. Stairs to have handrail extension. The handgrip portion of handrails shall not be less than 1 ½ inches or more than 2 inches in cross-sectional dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrail extensions shall have a smooth surface with no sharp corner. The top of handrails and handrail extensions shall be placed not less than 34 inches or more than 38 inches above the nosing of treads and landings. Handrails shall be continuous the full length of the stairs and shall extend in the direction of the stair run not less than 12 inches beyond the bottom riser. Ends shall be returned or shall terminate in newel posts or safety terminals.

5. Aisles:
 - a. Aisles with seating on both sides to have 34-inch high handrail with intermediate rail at approximately 22 inches above tread.
 - b. Anodized aluminum handrails with rounded ends are discontinuous to allow access to seating through a space 22 inches (min.) to 36 inches (max.).
 - c. Aluminum tread nosing of contrasting color on aisle steps.
 - d. (If required) Halfsteps shall provide equal rise and run throughout aisle. Each shall have aisle nosing with non-skid black powder coated finish or other paint system meeting AAMA 603.8-92 specifications with a hardness rating of 2H and riser closure with clear anodized finish. If colored riser is specified for seating area, the aisle nose and riser closure shall be of same finish.

6. Decking:
 - a. Rise per row _____ inches
 - b. Depth per row _____ inches.
 - c. Decking System _____
 - d. Seating
 1. Bench _____
 2. Chair _____
 3. Backrest _____
 - e. Joint Sleeve: Pair of aluminum sleeves to insert in flat plank to maintain true alignment in joining together two plank pieces. Splice cover is unacceptable between two flat plank pieces joined in a straight line.

7. Guardrailing: To be at all sides of bleacher, entry stairs and ramps, portals, and landings. Railing to be anodized aluminum with end plugs at ends of straight runs and/or elbows at corner. All guardrails shall be secured to angle rail risers by galvanized fasteners. Railing shall be 42" above walkways and entrances. Railing shall be 42" above any adjacent seat. Guardrailing on sides and back shall include 9 gauge galvanized chain link fencing fastened in place with galvanized fasteners and aluminum ties.
8. Cross Aisles (If required):
 - a. Clear width 60 inches.
 - b. Guardrail to be minimum 42 inches above tread.
9. Ramps:
 - a. Slope: 1 in 12.
 - b. Guardrail to be 42 inches above ramp with 9 gauge galvanized chain link fence and 2 x 6 toeboard.
 - c. Handrail: Ramps to have handrail extension. The handgrip portion of handrails shall not be less than 1 ½ inches or more than 2 inches in cross-sectional dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrails shall have a smooth surface with no sharp corners. The top of handrails and handrail extensions shall be placed not less than 34 inches or more than 38 inches above the ramp surface. Handrails shall be continuous the full length of the ramp and shall extend in the direction of the ramp not less than 12 inches beyond the end of the ramp. Ends shall be returned or shall terminate in newel posts or safety terminals.
10. Handicap provision:
 - a. Quantity of wheelchair spaces: _____
 - b. Riser area adjacent to wheelchair spaces to have intermediate construction so 4 inch sphere cannot pass through opening.

B. Materials/Finishes

1. Substructures:
 - a. Structural shapes meet one of the following ASTM specifications: A36, A36/A572 grade 50, A572 grade 50, A529-50 or A500 grade B.
 - b. Shop connections are seal welds.
 - c. After fabrication, all steel is hot-dipped galvanized to ASTM-A-123 specifications.
 - d. Painted steel finish is unacceptable.
 - e. Weathering steel is unacceptable.

2. Extruded Aluminum:
 - a. Extruded aluminum alloy, 6063-T6
 1. Clear anodized 204R1, AA-M10C22A31, Class II
 2. Coating:
 - a. Powder Coated or other paint system meeting AAMA 603.8-92 specifications with a hardness rating of 2H. (Specify Color).
 - b. Tread Planks: Extruded aluminum alloy, 6063-T6 mill finish.
 - c. Joint Sleeve Assembly to be inserted in flat plank to maintain true alignment in joining together two plank pieces. Extruded aluminum alloy, 6063-T6, mill finish. Splice cover is unacceptable between two plank pieces joined in a straight line.
 - d. Railing: Extruded aluminum alloy, 6063-T6 clear anodized 204R1, AA-M10C22A31, Class II.
 3. Accessories:
 - a. Channel End Caps: Aluminum alloy 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II.
 - b. Cast End Caps: Aluminum 319 alloy, cast finish.
 - c. Hardware:
 1. Bolts, Nuts: Hot-dipped galvanized or mechanically galvanized.
 2. Hold-down Clip Assembly: Aluminum alloy 6005A-T6, mill finish.
 3. Structural Hardware: Equal to or greater than hot-dipped galvanized ASTM-A307. No connections utilizing high strength bolts are classed as slip critical.
 - d. Aisle Nose and Stair Nose: Aluminum alloy, 6063-T6, non-skid black powder coated finish or other paint system meeting AAMA 603.8-92 specifications with a hardness rating of 2H.
- C. Fabrication:
1. Design Load:
 - a. Live Load: 100 psf gross horizontal projection.
 - b. Lateral Sway Load: 24 plf seat plank.
 - c. Perpendicular Sway Load: 10 plf seat plank
 - d. Live Load of Seat and Tread Planks: 120 plf.
 - e. Guardrail: Per Building Code.
 2. All manufactured connections to be shop welded.
 - a. Manufactured by certified welders conforming to AWS Standards.

2.03 PRESS BOX

A. Product Description: Type II Construction

1. Press Box Support Structure: Independently supported but connected to rear of grandstand. Support Structure to be _____ feet wide x _____ feet long with 6 feet landing on _____ end(s).
2. Press Box Dimensions: _____ feet wide x _____ feet long.
3. Optional: Filming Area/Observation Deck located on Press Box roof.
4. Press Box to be of open construction, allowing inspection of electrical wiring, switches and other components without destructive disassembly.

B. Materials/Finishes

1. Press Box Support Structure:
 - a. Structural shapes meet one of the following ASTM specifications: A36, A36/A572 grade 50, A572 grade 50, A529-50, or A500 grade B.
 - b. Shop connections are seal welds.
 - c. After fabrication, all steel is hot-dipped galvanized to ASTM-A-123 specifications.
2. Press Box: All materials shall be new and shall comply with ASTM specifications.
 - a. Floor
 1. Main support to be a galvanized steel floor frame sized to support structure and metal belly pan for support of insulation.
 2. Floor to be INTERLOCK Aluminum Decking System, extruded aluminum alloy 6063-T6, mill finish. Attach Decking System to steel floor frame with mechanical fasteners at end of plank and at intermediate supports. (Tongue & Groove or Standard extrusion is not acceptable.)
 3. Insulation: Poly-encapsulated Formaldehyde-free fiberglass building insulation R-11, 3 1/2 inches thick. Batt or roll as manufactured by Johns Manville, or equal.
 - b. Wall Structure
 1. 4 inch x 4 inch x 11 gauge square tubing with maximum span of 14 feet on front wall and maximum span of 6 feet on back wall and 4 inch x 2 1/2 inch x 14 gauge steel

"cees" with maximum spacing of 5 feet for all walls with siding. Spans greater than these require engineered calculations for design.

2. Insulation: Poly-encapsulated Formaldehyde-free fiberglass building insulation R-11, 3 1/2 inches thick. Batt or roll as manufactured by Johns Manville or equal.
3. Interior Finish
 - a. 1/2 inch vinyl coated gypsum panels, Gold Bond vinyl-surfaced Durasan- Harvest Cotton.
 - b. Cove Base: Vinyl 4 inches x .080 equal to PRO CB-35 Nubian.
4. Exterior Finish
 - a. 26 gauge prefinished R-Panel paneling as manufactured by MBCI, Signature 200 color series, or equal.
 - b. Wall panels are attached with #12 TEK screws - 6" O.C. at the top, midpoint and bottom of the panels.
 - c. Lap screws are placed at each end of the panels, at the intermediate supports, and at the mid point between supports (TEK #14).
 - d. All fasteners to be painted same color as exterior paneling.
- c. Roof Structure
 1. 4 inch x 4 inch x 11 gauge square tubing with maximum spacing of 6 feet on center and 4 inches x 2 1/2 inches x 14 gauge steel "cees" with maximum spacing of 2 feet on center.
 2. Roof: 1/8 inch fourway steel plate roof, continuous welded seams coated with acrylic metal primer as manufactured by Coronado and 36 mils of acrylink roof coating as manufactured by Isothermal Protective Coatings, or equal. Plate is welded on both sides of rafters with 1-1/2 inch long 1/8 inch fillet welds on 12 inch centers.
 3. Insulation: Poly-encapsulated Formaldehyde-free fiberglass building insulation, R-19 (minimum) 6 inches thick. Batt or roll as manufactured by Johns Manville or equal.
 4. Cornice: 26 gauge steel prefinished to match metal siding.
 5. Ceiling: 24 inch x 24 inch x 5/8 inch acoustical ceiling tile (model #- USG Fissured 560) with USG grid main tee (model # DXL24), cross tee (model # DXL 216), wall angle (model # M7), wind clips and other components as manufactured by USG, or equal.

- d. Exterior Door(s)
 - 1. Full flush steel construction with honeycomb core. 18 gauge skin sheets. Dimensions: 3 feet 0 inches x 6 feet 8 inches. Color: White.
 - 2. Steel door frame (16 gauge) complete with 1/2 inch threshold and weather-stripping.
 - 3. Exterior Hardware: Yale 546F Exterior Trim, or equal. Handles shall be lever type that allow operation without tight grasping or twisting of the wrist. Keyed alike locks.
 - 4. Interior Hardware: Yale 2100 Exit Device, or equal. Handle shall be panic bar that allows for opening without any grasping, twisting or turning.

- e. Interior Door (Optional)
 - 1. Interior Birch Unit. Dimensions: 3 feet 0 inches x 6 feet 8 inches.
 - 2. Hardware: Handles shall be lever type that allow operation without tight grasping or twisting of the wrist.

- f. Interior Walls (Optional)
 - 1. Framing to be steel galvanized studs (25 gauge) 1 1/4 inch x 3 5/8 inch at maximum 2 feet on center.
 - 2. Finishes to be consistent with all other interior finishes.

- g. Windows
 - 1. Frame: Extruded aluminum single hung, vertical sliding unit, thermal break.
 - 2. Sash: Tilt toward inside for easy cleaning.
 - 3. Glazing: Clear tempered panes.
 - 4. Dimensions of each unit: Dependent on compartment size. At interior wall locations or structural support locations the dimension between windows shall be no greater than 6 inches.
 - 5. Finish: Electrostatically applied acrylic enamel.

- h. Work Bench
 - 1. 18 inch wide work bench constructed of 4 inch x 2 1/2 inch x 14 gauge steel, and 3/4" wood. Countertops heights shall be constructed to allow wheelchair usage at all locations.
 - 2. Plastic laminate top: Equal to Wilsonart Laminates. Finish: 2904-60 White Suede. Thickness: 050 (12 mm nominal)
 - 3. Glue: 3M Green Contact Adhesive, or equal.

- i. Painting: Materials equal to Coronado, or equal.
 - 1. Surfaces: Exterior Door(s), Door Frame(s)
 - a. Primer: Applied by Door Manufacturer.

- b. Finish: 2 coats acrylic latex semi-gloss enamel applied by press box manufacturer.
 - 2. Surfaces: Interior Doors (if applicable)
 - a. Primer: Jones Blair Interior Exterior Oil Primer, or equal.
 - b. Finish: 2 coats acrylic latex semi-gloss enamel.
 - 3. Surfaces: Exterior Siding
 - a. Primer: Applied by Siding Manufacturer.
 - b. Finish: Applied by Siding Manufacturer.
 - c. Touchup: If applicable
 - 4. Surfaces: Wall and Roof Structure
 - a. Primer: Coronado DTM Industrial 180-11 acrylic metal primer applied after welding, or equal.
- j. Caulking: Sonneborn NP1 – Polyurethane sealant, All temperature, UV resistant, or equal. Silicone products are not acceptable.
- k. Electrical
 - 1. Submittal drawing shall indicate devices and circuitry.
 - 2. Fixtures: 2-lamp, 40 watt fluorescent, white strip design as manufactured by Lithonia Lighting, or equal. Fixtures shall be located above countertop and be maximized to full length of compartment space.
 - 3. Wiring to be in nonmetallic Panduit, or equal. N.E.C. breaker box to be 100 amp surface mounted on wall with 2 inch rigid conduit to be stubbed out at back wall of press box ready for service line to be connected. (Service line to Press Box is responsibility of Owner).
 - 4. Electrical outlet(s) installed per NEC shall be standard duty. All outlets shall be surface mounted on wall.
 - 5. Sound, Telephone, Clock, Field Communication: Empty double outlet boxes per N.E.C. with 3/4 inch conduit stubbed out bottom of Press Box for use of Owner. Outlet boxes to be flush mounted into wall. Any wiring completed on-site will be responsibility of such contractor for inspections. Quantity. Two will be provided. Owner shall indicate additional boxes needed.
 - 6. (Optional) Filming Area/Observation Deck: Weathertight outlet box for cameras. Quantity: One. Owner shall indicate additional outlets needed.
- l. Filming Area/Observation Deck (If applicable)
 - 1. Access Options [select (a) or (b)]
 - a. Interior: Roof hatch with OSHA-rated aluminum ladder mounted to an interior back wall.
 - b. Exterior: Stairs up to roof shall run along back wall of press box with support of same being provided by

extended landing platform at bottom and by stub beam attached to press box back wall at top of stairs. No supports from grade are required.

2. Roof guardrailing to be 42" above walking surface around perimeter of deck attached to 5/8 inch galvanized studs to be welded to roof support structure. The guardrailing to include anodized aluminum with 9 gauge galvanized chain link fencing fastened in place with galvanized fasteners and aluminum ties.

2.04 WARRANTY

- A. The Press Box is warranted to be free from defect in materials and workmanship in the course of manufacture. This warranty excludes any other defects resulting from abnormal use in service, accidental or intentional damage or any occurrences beyond manufacturer's control.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. All work performed by technicians experienced in bleacher seating installation.
- B. Project as per approved shop drawings.

3.02 FIELD QUALITY CONTROL

- A. Foundation: Footings for the grandstand shall provide sufficient bearing area at bottom to support all loads of the grandstand. Depth and design of footings shall be determined by Owner supplied soil test. Hot-dipped galvanized anchor bolts shall be secured in the concrete footings. Concrete shall attain working strength of 3,000 psi.

3.03 CLEAN-UP

- A. Clean up all debris caused by work of this section.

(All specifications are subject to change without notice to allow for continuous product improvement.)