

SECTION 13125

PERMANENT GRANDSTANDS LEG TRUSS DESIGN

PART 1 - GENERAL

1.01 SYSTEM DESCRIPTION

- A. Provide labor, material, equipment and supervision necessary to complete installation of permanent steel grandstand, including the following:
[SELECT ITEMS WHICH APPLY]
 - 1. Steel Substructure
 - 2. Decking System
 - 3. Concrete Foundation
 - 4. Press Box Support Structure
 - 5. Press Box

1.02 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturers must have ten years of experience in the manufacture of bleachers and grandstands; manufacturer must exhibit proof of business existence for past five years with documentation; welders must be AWS certified.
- 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 engineer and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the applicable code and relevant laws.
- C. Certificates:
 - 1. Insurance Certificate
 - 2. Bid Bond
- D. Product Sample: Submit one 18-inch seat sample.
- E. Color Sample: If applicable, submit sample.

1.04 SITE CONDITIONS

- A. Field Site:
 - 1. Owner to make site accessible.
 - 2. Owner to verify site locations, benchmarks.
- B. Underground Utility Line: Owner to clearly mark all underground utilities and obstructions and Owner to relocate all that conflict with grandstand.
- C. Soil Test: Furnished by Owner.

1.05 BUILDING CODES

- A. Must meet or exceed all State and Local applicable codes and in compliance with the International Building Code adopted by the jurisdiction and CABO/ANSI A117.1 Barrier Free Subcode.

1.06 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.

1.07 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. Southern Bleacher Company (800) 433-0912. Leg Truss Design.

Other manufacturers seeking to be approved must submit product literature on leg truss design to the Owner for review and receive approval from Owner seven days prior to bid date.

2.02 PERMANENT STEEL GRANDSTAND

- A. Product Description
 1. Leg Truss Design: Gross seating capacity of _____, _____ rows, and _____ feet long.
Press Box Support Structure _____ x _____.
Press Box _____ x _____.
 2. Vertical columns are placed 6 feet on center laterally and _____ feet on center front to back.
 3. Stringers: Stringers are wide flange with steel angle rise and depth fabrication and are placed at 6 feet on center.
 4. Front Walkway:
 - a. Clear width ____ inches.
 - b. Elevated ____ feet above grade at benchmark.
 5. Entry stairs to be firmly anchored to uniformly poured concrete bases.
 - a. Stair rise: ____ inches with aluminum closure and contrasting aluminum stair nose.
 - b. Stair tread depth: ____ inches.
 - c. Guardrails: As required by code.

- d. Stairs to have handrail extension. The handgrip portion of handrails shall not be less than 1 1/2 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 nosing of treads and landings. Where handrails are not continuous between flights, the handrails shall extend horizontally at least 12 inches beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. Ends shall be returned or shall terminate in newel posts or safety terminals.
6. Aisles:
- a. Aisles with seating on both sides to have discontinuous mid-aisle handrails. The handrails shall be discontinuous with breaks at intervals not to exceed five rows. These breaks shall have a clear width of at least 22 inches and not greater than 36 inches horizontally.
 - b. Anodized aluminum handrails with rounded ends to be provided with an intermediate handrail below the main handrail.
 - c. Aluminum tread nosing of contrasting color on aisle steps.
 - d. Halfsteps shall be provided for riser heights above 8 inches.
 - e. 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.
 - f. Aisles with a riser height of non-uniformity shall be indicated with distinctive markings as required by code.
7. Decking:
- a. Rise per row _____ inches, depth per row _____ inches.
 - b. Each seat 17 inches above its respective tread.
 - c. Mill Aluminum Decking Arrangement [SELECT ONE]
 - (1) INTERLOCK Aluminum Decking System
 - (2) Tongue-and-Groove System
 - (3) Closed Deck Aluminum Arrangement
 - (4) Full-Plank Arrangement
 - d. Seating Selection [SELECT ALL WHICH APPLY]
 - (1) Anodized Aluminum Bench Seat [SELECT ONE, STANDARD PLANKS ARE NOTED]
 - (a) 2 x 10 (standard), Die #7758 with height of 1 1/2".
 - (b) 2 x 12 (standard), Die #7878 with height of 1 1/2".
 - (c) 2 x 10 RS, Die #17627 with height of 1 9/16" (back), 1 3/4" (front).
 - (d) 2 x 11 RS, Die #17626 with height of 1 1/2" (back), 1 3/4" (front).
 - (e) 2 x 12 RS, Die #13315 with height of 1 1/2" (back), 1 3/4" (front).
 - (2) Anodized Aluminum Backrest 2 x 6, Die #7969 with height of 5 1/2".
 - (3) Stadium Chair Model _____, as manufactured by _____.
 - (a) Manual lift, Self-rising or Fixed
 - (b) Quantity _____. Width _____.
8. 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 at heights as required by code for its location on the grandstand. Guardrailing shall include intermediate

railing, or galvanized chain link fencing fastened in place with galvanized fasteners and aluminum ties.

9. Cross Aisles: Clear width ____ inches.
10. Ramps:
 - a. Slope: 1 in 12.
 - b. Guardrails: As required by code plus toeboard.
 - c. Handrail: Ramps to have handrail extension. The handgrip portion of handrails shall not be less than 1 1/2 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. Where handrails are not continuous between runs, the handrail shall extend horizontally above the landing 12 inches minimum beyond the top and bottom ramps. Ends shall be returned or shall terminate in newel posts or safety terminals.
11. 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 is unacceptable.
2. Extruded Aluminum: [SELECT ITEMS WHICH APPLY]
 - a. Seat Planks, Backrests, Stanchions, Riser Planks and Railing are extruded aluminum alloy, 6063-T6.
 - (1) Clear anodized 204R1, AA-M10C22A31, Class II
 - (2) Coating (Optional with additional cost):
 - (a) Factory applied, baked-on Kynar or Hylar/acrylic resin based paint coating, Dur-Kyn, as manufactured by the Valspar Corporation. Dur-Kyn meets or exceeds the physical and performance properties of AAMA 2603. (Specify color).
 - (b) 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. 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. (Required for backrest and RS plank only)
 - 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. Tread and Seat Area: 100 psf uniform live load.
 - b. Seat (Vertical): 120 lbs/lf.
 - c. Seat (Horizontal Sway): 24 lbs/lf parallel and 10 lbs/lf perpendicular to seat.
 - d. Handrail and Guardrail: 50 lbs/lf in any direction.
 - e. Handrail and Guardrail: 200 lbs concentrated in any direction.
 - f. Snow Loads: As per State adopted code.
 - g. Wind Loads: As per State adopted code.
 - h. Seismic Loads: As per State adopted code.
 - 2. All manufactured connections to be shop welded.
 - a. Manufactured by certified welders conforming to AWS Standards.

These specifications serve as a template only and items listed may or may not apply to your project. Please call a Southern Bleacher representative at (800) 433-0912 for technical assistance in preparing specifications.

OPTIONAL ITEMS AVAILABLE:

- 1. Kynar paint for aluminum products.
- 2. Powder coat for aluminum products.
- 3. Full line of fixed chair seating available.
- 4. Custom color for aisle and stair contrasting nosing.
- 5. Vertical Picket Rail Systems (available in galvanized steel or an assortment of aluminum finishes).
- 6. Elite Seat – plastic blow molded, UV protected plastic seat used to individualize seating sections.
- 7. Seat Numbers:
 - a. Decal with black lettering on aluminum field.
 - b. Rows: Numerals or alphabetical letters.
 - c. Seat Numbers: Numerals.

2.03 PRESS BOX [SPECS INSERTED HERE]

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.
- B. The Owner, Architect and Contractor acknowledge and accept that mill finish aluminum as specified will have water stains present from transportation and storage during installation. Removal of these stains is not part of this contract.
- C. Stand to be broom cleaned at completion.

** All specifications are subject to change without notice to allow for Southern Bleacher's policy of continuous product improvements.*

Specs: Gnr-LT (04/2009)