

Outdoor Aluminum

13 34 16/OUT
BuyLine 4927



- ◆ **Permanent Grandstands**
- ◆ **Aluminum Plank Seating**
- ◆ **Custom Bleachers**
- ◆ **Standard Bleachers**
- ◆ **Picnic Tables**
- ◆ **Highway Series**
- ◆ **Benches**

PERMANENT GRANDSTANDS



Permanent Grandstands – Section 13 34 16

Contact our sales office at (800) 225-4249 for complete individualized project specifications.

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:

1. Steel Substructure;
2. Decking System;
3. Concrete Foundation;
4. Press Box Base;
5. Press Box

1.02 Quality Assurance

- A. Manufacturer: Outdoor Aluminum, Inc., P.O. Box 118, Geneva, AL 36340 U.S.A.; (800) 225-4249 or (334) 684-2296; FAX (334) 684-2231.
- B. 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.
- C. Installer Qualifications: Factory-trained and experienced in the proper installation of grandstands.
- D. Source Quality Control: Mill Test Certification.
- E. The owner shall supply manufacturer with all state and/or local code requirements. Owner shall also supply manufacturer with applicable handicap regulations.

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;
2. Bid Bond

D. Product Sample: Submit one 12-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.

C. Soil Test: Furnished by owner.

1.05 Warranty

Outdoor Aluminum warrants its permanent grandstands to be free from all defects in materials and workmanship for a period of one year under normal use. (1) Warranty period shall begin on date of completed installation for projects installed by Outdoor Aluminum. (2) Warranty period shall begin on date of final delivery on projects installed by other. In addition, all seat and deck plank extrusions shall be covered by a 1-year warranty against loss of structural strength or finish deterioration due specifically to exposure to varying weather conditions or ultra-violet rays. Damage resulting from abnormal use, vandalism or improper installation will render warranties above null and void.

PART 2 – PRODUCTS

2.01 Acceptable Manufacturer

A. Outdoor Aluminum, Inc.

2.02 Permanent Steel Grandstand

A. Product Description

1. Horizontal Beam Design: Vertical columns are placed 18 feet on center laterally and up to 20'-0" front to back. All horizontal beams shall be wide flange. All columns shall be ASTM A-500-B structural square tube with a minimum of a 3/4" base plate. Traverse bays shall be free of cross bracing. Longitudinal bays shall be braced in alternate bays utilizing 7/8" rod. (Provision can be made for buildings and egress underneath the stand by strategic placement of brace members.)
2. Stringers: Stringers are wide flange with angle rise and depth fabrication and are placed at 6 feet on center.
3. Rise and Depth Dimensions: Vertical rise per row: 10"; Horizontal depth per row: 26"; Front walkway: Minimum 54" in clear width, elevated 42" above grade with each seat 17" above its respective tread.
4. Entry Stairs: Stairs shall conform to applicable code and shall be constructed with structural aluminum supports; 2 x 12 tread extrusions; and, anodized aluminum handrail.
5. Aisles: Aisle width is 42" or conforms with local code.
6. Decking: Standard 10" rise x 26" tread depth.
 - a. Semi-closed: Seats: 2 x 10 anodized aluminum; tread: two 2 x 10 mill finish aluminum; risers: 8" mill finish aluminum; aisle extensions: 2 x 8 mill finish aluminum; front



- walkway: five 2 x 10 mill finish aluminum.
- b. Tredwelld Plus™: Seats: 2 x 10 anodized aluminum; seat support bracket: 5 1/2" "Z" mill finish aluminum field welded to tread; tread: Tredwelld Plus™ Decking System, Specifications available upon request.
 - c. Welded Deck: Seats: 2 x 10 anodized aluminum; seat support bracket: 5 1/2" "Z" mill finish aluminum field welded to tread; tread: one custom nose with interlocking riser, one 2 x 10, one 2 x 8, and one custom back mill finish aluminum with integral riser protrusion of sufficient height to allow interlocking riser to overlap. Individual aluminum extrusions are then fixture welded in a single pass; front walkway: custom front and back, five 2 x 10, one 2 x 12 mill finish aluminum.
 - d. Semi-Closed/Courtesy Lip: Seats: 2 x 10 anodized aluminum; seat support bracket: part of steel stringer assembly; tread: one custom back, one 2 x 8, one 2 x 10 mill finish aluminum, fixture welded in a single pass to form a nominal 22" solid tread with an integral riser protrusion; front walkway: one custom back, three 2 x 12, one 2 x 10 fixture welded in a single pass.
7. Guardrailing: To be at all sides of bleacher, entry stairs and ramps, portals, and landings. Railing shall be anodized aluminum with end plugs at ends of straight runs and elbows at corners. All guardrails shall be secured to aluminum channel rail supports by galvanized fasteners. Railing shall be 42" above walkways and entrances. Railing shall be 42" above the center of any adjacent seat. Guardrailing on sides and back shall include 9 gauge aluminumized chain link fencing fastened in place with aluminum fittings and aluminum ties.

8. Press Box
- a. Press box understructure shall be an integral part of grandstand structure. The understructure shall measure 8 foot x (6 foot increments) long.
 - b. Press Box: Specifications available upon request.
9. Handicap Provision: Wheelchair accessible ramp with a minimum 60" clear width and a maximum 1:12 slope leading to a minimum 90" wide x (3 foot increments) long platform shall be provided conforming to local code requirements. Individual mill aluminum walk surfaces shall be welded.
- B. Materials/Finishes
- 1. Substructures: ASTM steel only
 - a. Galvanized Steel: Structural fabrication with ASTM-A36 steel. After fabrication all steel hot-dipped galvanized to ASTM-A123 specifications.
 - b. Weathering Steel: Structural fabrication with ASTM-A242 and ASTM-A588 high strength "weathering steel." Shop welds are made with weathering steel electrodes.
 - 2. Extruded Aluminum (See additional data, page 12):
 - a. Seat Planks, Backrests, Stanchions: Extruded aluminum alloy, 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II. Optional on Backrests: Powder Coated Primary Colors.
 - b. Tread Planks, Riser Planks: Extruded aluminum alloy, 6063-T6, mill finish. Optional on Riser Planks: Powder Coated Primary Colors.
 - c. Joint Sleeve Assembly: Extruded aluminum alloy, 6063-T6, mill finish.
 - 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
 - (2) Hold-Down Clip Assembly: Aluminum alloy 6063-T6.
 - (3) Structural Hardware: Hot-dipped galvanized, ASTM-A325.

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. Wind Load: Determined by local code; e. Live Load of Seat and Tread Planks: 120 plf; f. Guardrail: 100 plf vertical and 50 plf horizontal.
- 2. All connections made in shop to be shop welded.
 - a. Manufactured by certified welders conforming to AWS Standards.

PART 3 – EXECUTION

3.01 Installation

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

3.02 Concrete Foundation

- A. Foundation: Footing shall extend not less than 42" below grade, unless solid rock is encountered at a lesser depth, and shall provide sufficient bearing area at bottom to support all design loads. Footings & Piers shall be poured with reinforced steel as required including four 7/8" anchor bolts per pier. Concrete shall attain working strength of 3,000 psi.

D e c k i n g S y s t e m



Tredweld *Plus*™

Since the 1970's aluminum grandstand decking systems have basically been built the same way. Now there's the Tredweld Plus Decking System—a revolutionary, proprietary technology that allows us to produce components that are amazingly uniform. Our new decking panels are stronger, more durable and incredibly consistent throughout, with virtually no noticeable deflection. The result is a decking system that is truly built to last. Tredweld Plus technology also allows us to install seating and handrail components using top-side attachment methods from the entry stairs to the aisle handrails. Try to find this level of precision on any other grandstand. With the Tredweld Plus process, we have the technology that will revolutionize the grandstand industry. More importantly, you can have the best-built grandstand decking system in the country. Contact us today, because the Tredweld Plus is like nothing you've ever seen.

**The Tredweld
Plus™
Decking
System is
designed for
compatibility
with
Outdoor
Permanent
Grandstands,
Custom
Bleachers and
Dura-lite
Bleachers**



THE MOST INNOVATIVE DECKING SYSTEM IN OVER 20 YEARS.



13 34 16/OUT
BuyLine 4927



Code compliant markers with no external fasteners



No threaded fasteners through decking at any location creating the "cleanest" look in the industry



All accessory connections are from the top side of decking system



No-gap design eliminates trash collecting in riser portion of system



 Venue I Chair



New beveled threshold splice cover



No-gap entrance stairs



All stairs and aisle steps are designed with 1/2" overhang for added safety

The Facts Speak for Themselves

- Unique one-piece platforms for added rigidity
- No gap risers
- No penetration of threaded hardware
- Contrasting aisle and entrance stair markers
- Completely closed egress stairs
- Smooth stair grabrail transition to grade
- All threaded hardware is stainless steel or galvanized
- End caps completely close all ends of extrusions
- Fluted walking surface for added safety
- No-trip beveled thresholds
- Bench seating can be upgraded to chair seating with no modifications to deck including through bolting of decking system (Row depth must be code compliant to chair requirements at time of purchase)
- Non-slip anodized stair and step tread nosing

CUSTOM BLEACHERS

When usable space underneath the bleacher is not a consideration, our custom bleachers are the answer to your seating budget needs. Give us a flat and level surface and we can build a bleacher to virtually any size and configuration you desire. Whether elevated or non-elevated, these bleachers are built in accordance with the most stringent of Building Codes out of the most durable components.

Framework can be from our DLW, DLWE, TSA, TSAE, SG or SGE series. The design of these bleachers is limited only by your needs and the amount of area available. Wheelchair space, in accordance with the requirements of ADA, can be neatly tucked in between frames along the continuous front walkway

with access provided by means of a ramp located on the end. Pressbox buildings can be supported utilizing the same economical understructure as the bleacher itself. Rise per row and tread depth can be varied to suit your desires and the code requirements of your bleacher. Decking systems can be as simple as double footboards and riser, *welded decking system*, and the new *Tredweld Plus™ Decking System*. In short, we offer an almost limitless number of options for construction of your bleacher system while keeping an eye on the budget constraints under which we all must operate.

Outdoor Aluminum recommends these bleachers be

anchored to prevent “overturning” in heavy winds. Whether you choose to anchor the frame to a concrete pad or runner, the bleacher unit retains the design flexibility of relocation of all or part to another site using simple hand tools.



PART 1 – GENERAL

1.01 System Description

A. Provide labor, material, equipment, and supervision necessary to complete installation of bleacher, including the following:

1. Substructure; 2. Decking System;
3. Concrete Foundation; 4. Press Box Base;
5. Press Box

1.02 Quality Assurance

A. Manufacturer: Outdoor Aluminum, Inc., P.O. Box 118, Geneva, AL 36340 U.S.A.; (800) 225-4249 or (334) 684-2296; FAX (334) 684-2231.

B. 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.

C. Installer Qualifications: Factory-trained and experienced in the proper installation of grandstands.

D. Source Quality Control: Mill Test Certification.

E. The owner shall supply manufacturer with all state and/or local code requirements. Owner shall also supply manufacturer with applicable handicap regulations.

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; 2. Bid Bond

D. Product Sample: Submit one 12-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.

C. Soil Test: Furnished by owner.

1.05 Warranty

Outdoor Aluminum warrants its permanent grandstands to be free from all defects in materials and workmanship for a period of one year under normal use. (1) Warranty period shall begin on date of completed installation for projects installed by Outdoor Aluminum. (2) Warranty period shall begin on date of final delivery on projects installed by other. In addition, all seat and deck plank extrusions shall be covered by a 1-year warranty against loss of structural strength or finish deterioration due specifically to exposure to varying weather conditions or ultra-violet rays. Damage resulting from abnormal use, vandalism or improper installation will render warranties above null and void.

PART 2 – PRODUCTS

2.01 Acceptable Manufacturer

A. Outdoor Aluminum, Inc.

2.02 Bleachers

A. Product Description

1. Framework: Prefabricated angle or aluminum square tube angle bleacher frames are spaced at 6 foot intervals.
2. Framework is joined by aluminum angle cross brace.
3. Rise and Depth Dimensions: Vertical rise per row: 8"; Horizontal depth per row: 24"; Front

walkway: Minimum 54" in clear width, elevated 32" above grade with each seat 17" above its respective tread.

4. Entry Stairs: Stairs shall conform to applicable code and shall be constructed with structural aluminum supports; 2 x 12 tread extrusions; and, anodized aluminum handrail.

5. Aisles: Aisle width to conform with local code.

6. Decking: Standard 8" rise x 24" tread depth.

a. Semi-closed: Seats: 2 x 10 anodized aluminum; tread: two 2 x 10 mill finish aluminum; risers: 6" mill finish aluminum; aisle extensions: 2 x 8 mill finish aluminum; front walkway: five 2 x 10 mill finish aluminum.

b. Tredweld Plus™: Seats: 2 x 10 anodized aluminum; seat support bracket: 5 1/2" "Z" mill finish aluminum field welded to tread; tread: Tredweld Plus™ Decking System, Specifications available upon request.

c. Welded Deck: Seats: 2 x 10 anodized aluminum; seat support bracket: 5 1/2" "Z" mill finish aluminum field welded to tread; tread: one custom nose with interlocking riser, one 2 x 10, one 2 x 8, and one custom back mill finish aluminum with integral riser protrusion of sufficient height to allow interlocking riser to overlap. Individual aluminum extrusions are then fixture welded in a single pass; front walkway: custom front and back, five 2 x 10, one 2 x 12 mill finish aluminum.

d. Semi-Closed/Courtesy Lip: Seats: 2 x 10 anodized aluminum; seat support bracket: part of steel stringer assembly; tread: one custom back, one 2 x 8, one 2 x 10 mill finish aluminum, fixture welded in a single pass to form a nominal 22" solid tread with an integral riser protrusion; front walkway: one custom back, three 2 x 12, one 2 x 10 fixture welded in a single pass.

7. Guardrailing: To be at all sides of bleacher, entry stairs and ramps, portals, and landings. Railing shall be anodized aluminum with end plugs at ends of straight runs and elbows at corners. All guardrails shall be secured to aluminum channel rail supports by galvanized fasteners. Railing shall be 42" above walkways and entrances. Railing shall be 42" above the center of any adjacent seat. Guardrailing on sides and back shall include 9 gauge aluminum chain link fencing fastened in place with aluminum fittings and aluminum ties.

8. Press Box

- a. Press box understructure shall be of the same material as bleacher understructure. The understructure shall measure 8 foot x (6 foot increments) long.
- b. Press Box: Specifications available upon request.

9. Handicap Provision: Wheelchair accessible ramp with a minimum 60" clear width and a maximum 1:12 slope leading to a minimum 90" wide x (3 foot increments) long platform shall be provided conforming to local code requirements. Individual mill finish aluminum walk surfaces shall be welded.

B. Materials/Finishes

1. Substructures: ASTM steel only
 - a. Galvanized Steel: Structural fabrication with ASTM-A36 steel. After fabrication all steel hot-dipped galvanized to ASTM-A123

specifications.

2. Extruded Aluminum (See additional data, page 12):

a. Seat Planks, Backrests, Stanchions: Extruded aluminum alloy, 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II. Optional on Backrests: Powder Coated Primary Colors.

b. Tread Planks, Riser Planks: Extruded aluminum alloy, 6063-T6, mill finish. Optional on Riser Planks: Powder Coated Primary Colors.

c. Joint Sleeve Assembly: Extruded aluminum alloy, 6063-T6, mill finish.

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
- (2) Hold-Down Clip Assembly: Aluminum alloy 6063-T6.
- (3) Structural Hardware: Hot-dipped galvanized, ASTM-A325.

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. Wind Load: Determined by local code;
- e. Live Load of Seat and Tread Planks: 120 plf;
- f. Guardrail: 100 plf vertical and 50 plf horizontal.

2. All connections made in shop to be shop welded.

- a. Manufactured by certified welders conforming to AWS Standards.

PART 3 – EXECUTION

3.01 Installation

A. All work performed by factory-trained technicians experienced in bleacher seating installation.

B. Project as per approved shop drawings.

DURA-LITE PORTABLE SERIES

When there is a need for portable seating, Outdoor Aluminum has the answer. Outdoor Aluminum offers two choices of aluminum frame construction. Our DLW or DLWE series offers aluminum angle design with all components being fully welded at all possible connection points. (Frame in left of picture.)

The TSA or TSAE series offers 2" aluminum square tube angle components fully welded at all connection points. (Frame in right of picture.) Of course both frame types have been engineered to

meet or exceed applicable design loads.

The Dura-Lite series is also available in hot-dipped galvanized angle construction (SG or SGE).

When any of the frame constructions are coupled with anodized seat plank and mill foot plank, you can be assured

of many years of maintenance free performance.

All series of bleachers can be constructed as transportable models with tongue brackets and wheel sleeves permanently attached. To order transportable, add (T) to any model number.



TIP N' ROLL SERIES

Outdoor Aluminum Tip N' Roll bleachers are also available as an all aluminum constructed unit. Tip N' Roll models can be manufactured with welded aluminum angle (DLWTR), or welded aluminum square tube angle (TSATR) frame construction. Each unit is supplied with 5" non-marring swivel casters and rubber pad to protect floors.



The DLW frame (shown on the left) and the TSA frame (shown above) will meet all your needs for aluminum seating.

For Complete Specifications, See Page 9.

PART 1 – GENERAL

1.01 System Description

A. Design and fabrication of Portable Bleachers.

1.02 Quality Assurance

A. Manufacturer: Outdoor Aluminum, Inc., P.O. Box 118, Geneva, AL 36340; (800) 225-4249 or (334) 684-2296; FAX (334) 684-2231.

B. Manufacturer Qualifications: Manufacturer must have ten years of experience in the manufacture of bleachers and grandstands; welders must be AWS certified.

C. Source Quality Control: Mill Test Certification.

D. The owner shall supply manufacturer with all state and/or local code requirements. Owner shall also supply manufacturer with applicable handicap regulations.

1.03 Warranty

Outdoor Aluminum warrants its portable bleachers to be free from all defects in materials and workmanship for a period of one year under normal use. (1) Warranty period shall begin on date of completed installation for projects installed by Outdoor Aluminum. (2) Warranty period shall begin on date of final delivery on projects installed by others. In addition, all seat and foot plank extrusions shall be covered by a 1-year warranty against loss of structural strength or finish deterioration due specifically to exposure to varying weather conditions or ultra-violet rays. Damage resulting from abnormal use, vandalism or improper installation will render warranties above null and void.

PART 2 – PRODUCTS

2.01 Acceptable Manufacturer

A. Outdoor Aluminum, Inc.

2.02 Portable Bleachers

A. Product Description

1. Rise and Depth Dimensions: Vertical rise and horizontal depth per row: 8" x 24". Seat is 17" above its respective tread.
2. Framework: Prefabricated angle or aluminum square tube angle bleacher frames are spaced at 6 foot intervals and joined by aluminum angle cross brace.
3. Seats: Nominal 2 x 10 anodized aluminum plank, with 2 x 10 end caps.
4. Treads: Nominal 2 x 100 mill aluminum plank, with 2 x 10 end caps (optional 2 x 12 or two 2 x 10 mill aluminum planks).
5. Risers: Optional 8" riser, mill finish aluminum.
6. Joint Sleeve Assembly: Optional on large continuous units to maintain true alignment in joining two planks together.
7. Entry Stairs: On elevated units, frames shall be constructed of structural aluminum channel supports with 2 x 12 mill finish aluminum treads and anodized aluminum handrail pipe.
8. Guardrailing: To be at all sides of bleacher (to meet 94 UBC Code). Railing shall be anodized aluminum with end plugs and elbows where required. All rails shall be secured to

structural aluminum channel supports with galvanized fasteners. Top rail on back and sides shall be 42" above nearest seat.

a. Standard System: Chain link fencing to provide enclosure as required by Uniform Building Code on all 4-row and above bleachers.

9. Transporting Option: Portable bleachers may be made transportable with wheel unit and tongue. (See list at right for sizes.)

10. Vertical aisle with handrail if required by code.

B. Materials/Finishes

1. Framework:

- a. Galvanized Steel: Structural fabrication with ASTM-A36 steel. Shop connections are welded. After fabrication all steel is hot-dipped galvanized to ASTM-A123 specification.
- b. Aluminum: Structural fabrication with aluminum alloy 6061-T6, mill finish.

2. Extruded Aluminum:

- a. Seat Planks: Extruded aluminum alloy 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II.
- b. Tread Planks, Riser Planks: Extruded aluminum alloy 6063-T6, mill finish.
- c. Joint Sleeve Assembly: Extruded aluminum alloy 6063-T6, mill finish.

3. Accessories:

- a. Channel End Caps: Aluminum alloy 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II.
- b. Hardware:
 - (1) Bolts, Nuts: Hot-dipped galvanized
 - (2) Hold-Down Clip Assembly: Aluminum alloy 6063-T6.
- c. Guardrailing: Handrail pipe to be schedule 40 anodized aluminum. Optional: Aluminized chain link fence on backs and side in lieu of multiple lined rail to conform to applicable code requirements.

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. Wind Load: Determined by local code; e. Live Load of Seat and Tread Planks: 120 plf; f. Guardrail: 100 plf vertical and 50 plf horizontal.

PART 3 – EXECUTION

3.01 Installation

A. Install bleacher unit in accordance with manufacturer's installation procedures.

NOTE: All dimensions regarding rise per row, tread depth, seat and foot board width may be changed to suit individual project requirements. Contact our sales office at (800) 225-4249 for complete individualized project specifications.

Non-Elevated

| MODEL | ROWS | LENGTH | SEATS | WEIGHT (DLW) | WEIGHT (TSA) |
|-------------------|------|--------|-------|--------------|--------------|
| (DLW) (TSA) 3-15 | 3 | 15' | 30 | 200 | 204 |
| (DLW) (TSA) 3-21 | 3 | 21' | 42 | 270 | 284 |
| (DLW) (TSA) 3-27 | 3 | 27' | 54 | 350 | 364 |
| (DLW) (TSA) 4-15 | 4 | 15' | 40 | 500 | 560 |
| (DLW) (TSA) 4-21 | 4 | 21' | 56 | 650 | 733 |
| (DLW) (TSA) 4-27 | 4 | 27' | 72 | 785 | 891 |
| (DLW) (TSA) 5-15 | 5 | 15' | 50 | 590 | 671 |
| (DLW) (TSA) 5-21 | 5 | 21' | 70 | 780 | 885 |
| (DLW) (TSA) 5-27 | 5 | 27' | 90 | 960 | 1085 |
| (DLW) (TSA) 10-15 | 10 | 15' | 100 | 1390 | 1587 |
| (DLW) (TSA) 10-21 | 10 | 21' | 140 | 1840 | 2104 |
| (DLW) (TSA) 10-27 | 10 | 27' | 180 | 2420 | 2576 |

Elevated

| MODEL | ROWS | LENGTH | SEATS | WEIGHT (DLWE) | WEIGHT (TSAE) |
|---------------------|------|--------|-------|---------------|---------------|
| (DLWE) (TSAE) 5-21 | 5 | 21' | 70 | 1950 | 2187 |
| (DLWE) (TSAE) 5-27 | 5 | 27' | 90 | 2360 | 2650 |
| (DLWE) (TSAE) 5-33 | 5 | 33' | 110 | 2760 | 3100 |
| (DLWE) (TSAE) 10-21 | 10 | 21' | 140 | 3180 | 3593 |
| (DLWE) (TSAE) 10-27 | 10 | 27' | 180 | 3850 | 4345 |
| (DLWE) (TSAE) 10-33 | 10 | 33' | 220 | 4600 | 5173 |

Tip N' Roll Series

| MODEL | ROWS | LENGTH | SEATS | WEIGHT (DLWTR) | WEIGHT (TSATR) |
|----------------------|------|--------|-------|----------------|----------------|
| (DLWTR) (TSATR) 3-15 | 3 | 15' | 30 | 210 | 224 |
| (DLWTR) (TSATR) 3-21 | 3 | 21' | 42 | 279 | 310 |
| (DLWTR) (TSATR) 3-27 | 3 | 27' | 54 | 367 | 396 |

Wheel Set (WS-1)

4.80/4.00 x 8 tires
Suggested for use on all 10 row or less bleachers, 21'0" or less, wt. 50 lbs.

Wheel Set (WS-2)

B78-13 tires
Suggested for use on bleachers longer than 21'0" and all elevated bleaches, wt. 80 lbs.

Tongues (T15-S) – To be used on all 15'0" bleachers, wt. 31 lbs.

Tongues (T21-S) – To be used on all 21'0" bleachers, wt. 50 lbs.

Tongues (T27-S) – To be used on all 27'0" bleachers, wt. 68 lbs.

*Only one set of wheels and one tongue required for any number of bleachers.

REPLACEMENT SEATING



Outdoor Aluminum seating is right for any renovation job whether indoor or outdoor, replacement of wood or fiberglass; Little Kids Baseball, High School Football, College and University Athletics as well as Rodeos and Race Tracks. Remember, the advantages of aluminum are the same regardless of the size of the project.

If your seating facility's understructure is structurally sound, yet deteriorating wood or fiberglass make it unsafe and unsightly, then a renovation project by Outdoor Aluminum can improve its safety and appearance. Without having to purchase an understructure again, renovation jobs can be done at prices considerably less than all new facilities. If budget restraints dictate, renovation projects don't have to be



completed in one phase. Renovation can be done section by section, year by year, or at any progression to fit your needs. Renovations for any facility can be accomplished efficiently and economically using Outdoor Aluminum's Aluminum Seating Components, detailed on page 8, that best fit your particular needs.

These similar facilities were originally constructed as a concrete grandstand with wood planking for seats. As is characteristic of wood, it deteriorated and became unsafe and unsightly. Owners of these facilities chose to utilize their existing brackets in conjunction with Outdoor Aluminum adapter plates and 2" x 10" flat plank to end these maintenance problems.

HIGHWAY SERIES



Our Highway Series is a truly over-the-road movable bleacher. The design of these units allows their owners to realize the maximum potential of their seating. Outdoor Aluminum's Highway Series consists of a maintenance-free aluminum understructure, seat planks, foot planks, and guardrail system that is then made an integral part of a hot-dipped galvanized trailer assembly. This combination creates a unit that can be licensed for towing over state and federal highways. This feature coupled with the ability of these units to quickly and easily go from their towing position to fully set up and ready for use make them a most versatile seating system. A Highway Series unit can be used for spectator seating at an event and then only minutes after the event has ended be on its way to yet another event across campus, city, town, or state.



AVAILABLE OPTIONS



13 34 16/OUT
BuyLine 4927



Front walkway with handicap platform extension.



Handicap ramp with landings to main bleachers.



Galvanized steel understructure with welded aluminum decking.



Welded deck walkway and decking.



Vomitory exit with ramp to grade.



Custom made press boxes.

BENCHES/TABLES

Outdoor Aluminum offers a variety of aluminum frame and steel galvanized frames with aluminum seats and backs, either in movable or permanent for your every need.

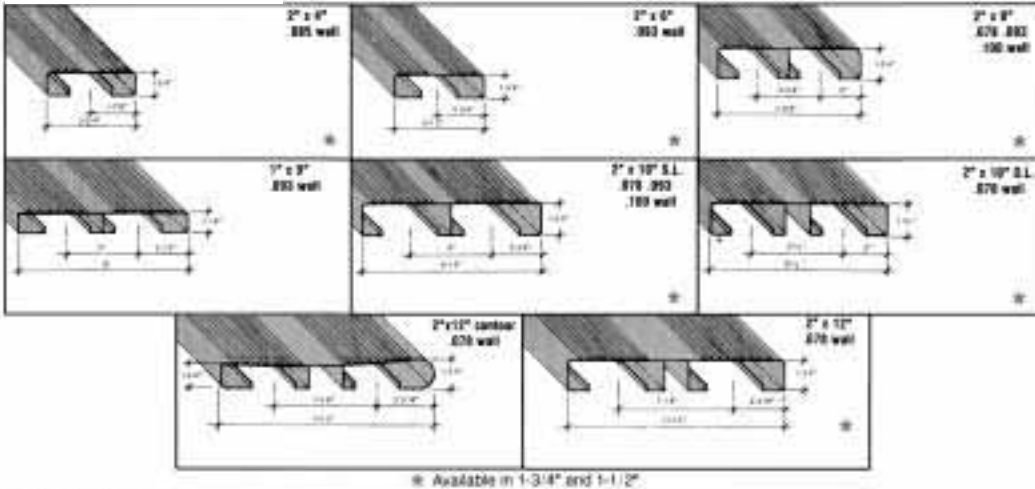
Picnic tables are also available in both aluminum and steel frames.



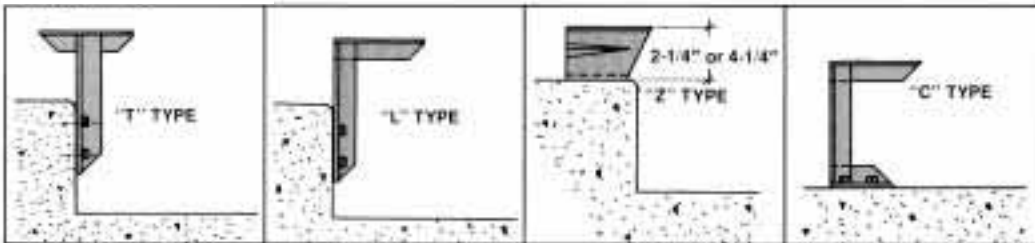
Outdoor Aluminum, Inc.

Stadium seating facilities utilizing maintenance-free aluminum offer so many advantages over similar facilities using other materials, that aluminum is now recognized as the industry's standard. Aluminum stadium seating will not split, crack, warp, rot, splinter, delaminate or flake. Costly damage and deterioration from sun, rain, sleet and snow can now be a problem of the past. Aluminum seating materials are perfect for new construction or to upgrade unsightly and unsafe facilities.

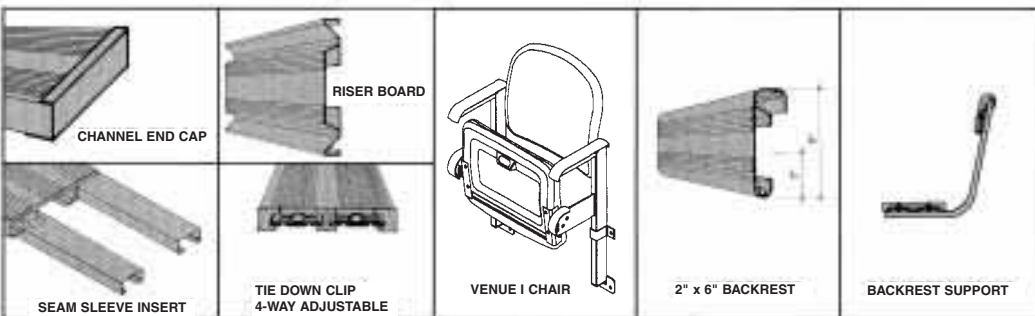
ALUMINUM PLANKS



BRACKETS



ACCESSORIES



SHIPMENT: Shipments will be made via the quickest and most economical way. If requested in advance, freight charges will be prepaid and added to invoice.

LOSS OR DAMAGE IN SHIPMENT: Shipments must be inspected and checked for damage, loss, or shortage, and notation made on delivery receipt or bill of lading before signing it. Outdoor Aluminum is not responsible for damage or loss in transit.

DELAY IN TRANSIT: Outdoor Aluminum is not responsible for delays in transit. Invoice terms are not affected by such delays.

SPECIFICATIONS: Outdoor Aluminum reserves the right to improve, alter, or discontinue specifications without notice.



Aerial view of Outdoor Aluminum with new manufacturing building in foreground.



OUTDOOR ALUMINUM

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Sweets.com