



Outdoor Aluminum

CONTENTS

**4-9 PERMANENT
GRANDSTANDS**

10-15 CUSTOM BLEACHERS

**16-17 TREDWELD PLUS
DECKING SYSTEM**

18-19 WELDED DECK SYSTEMS

20-21 OPTIONS

22-25 STANDARD BLEACHERS

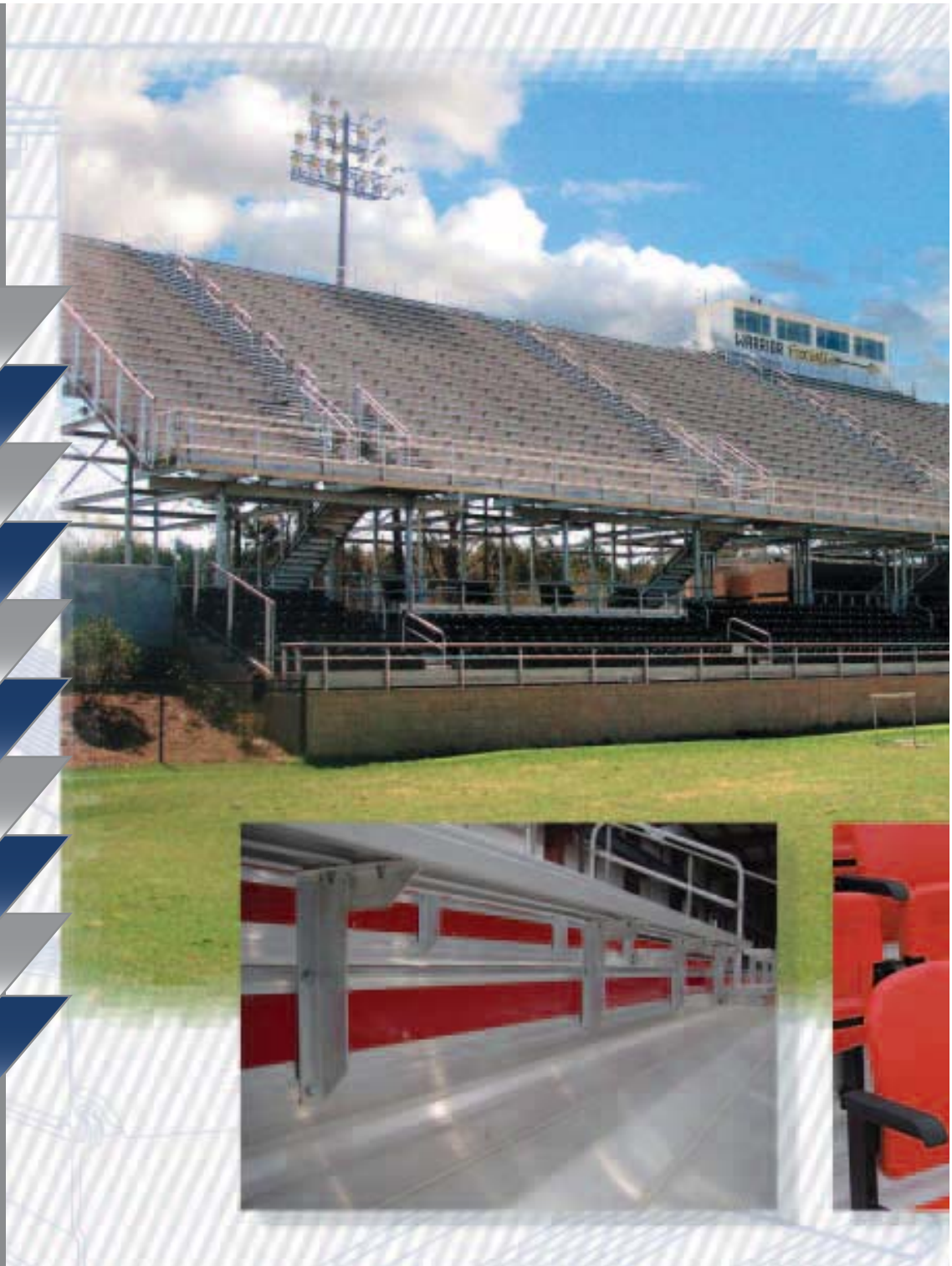
26-27 HIGHWAY SERIES

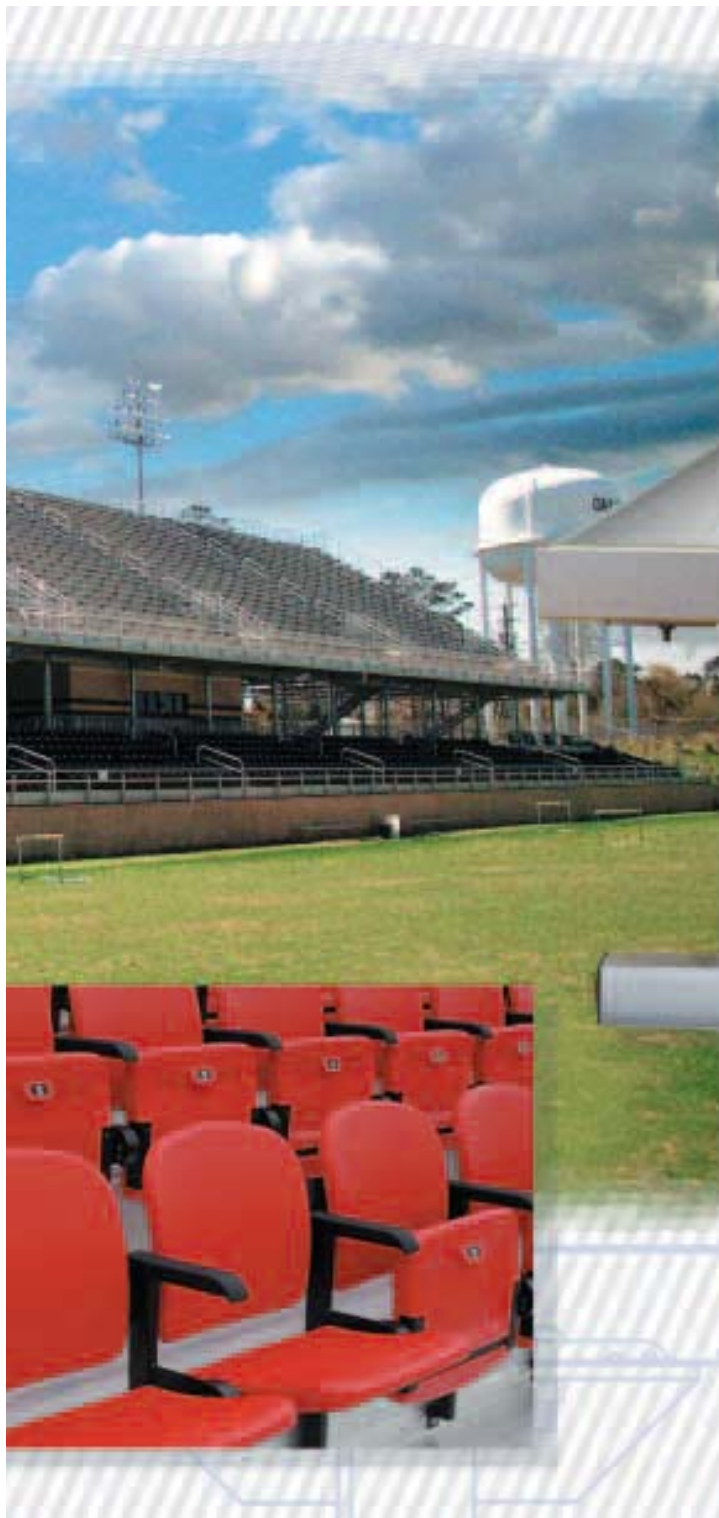
28-29 ALUMINUM PLANK SEATING

30-31 BENCHES

32-33 PICNIC TABLES

34-35 SPECIFICATIONS





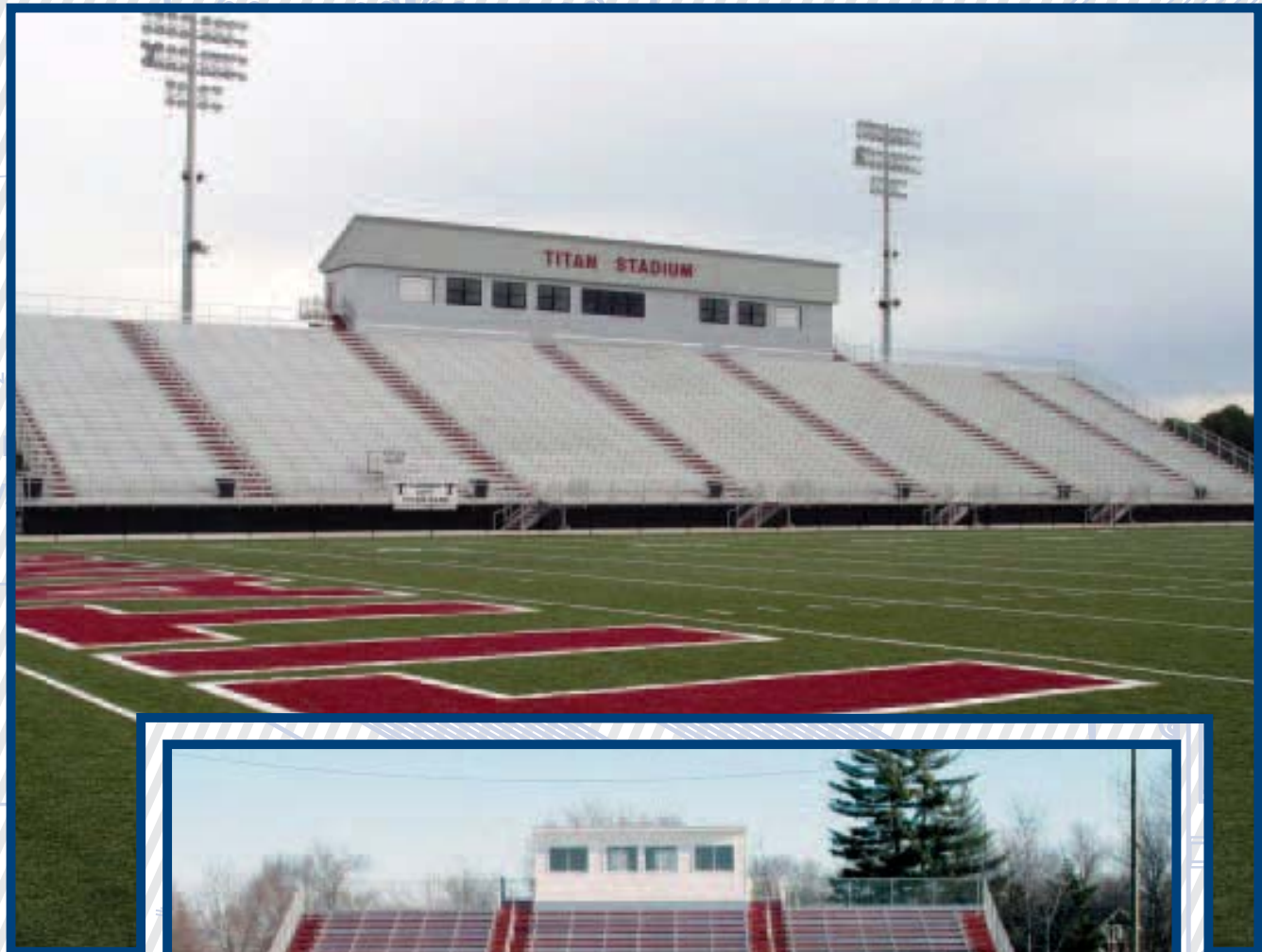
Outdoor Aluminum

Permanent Grandstands

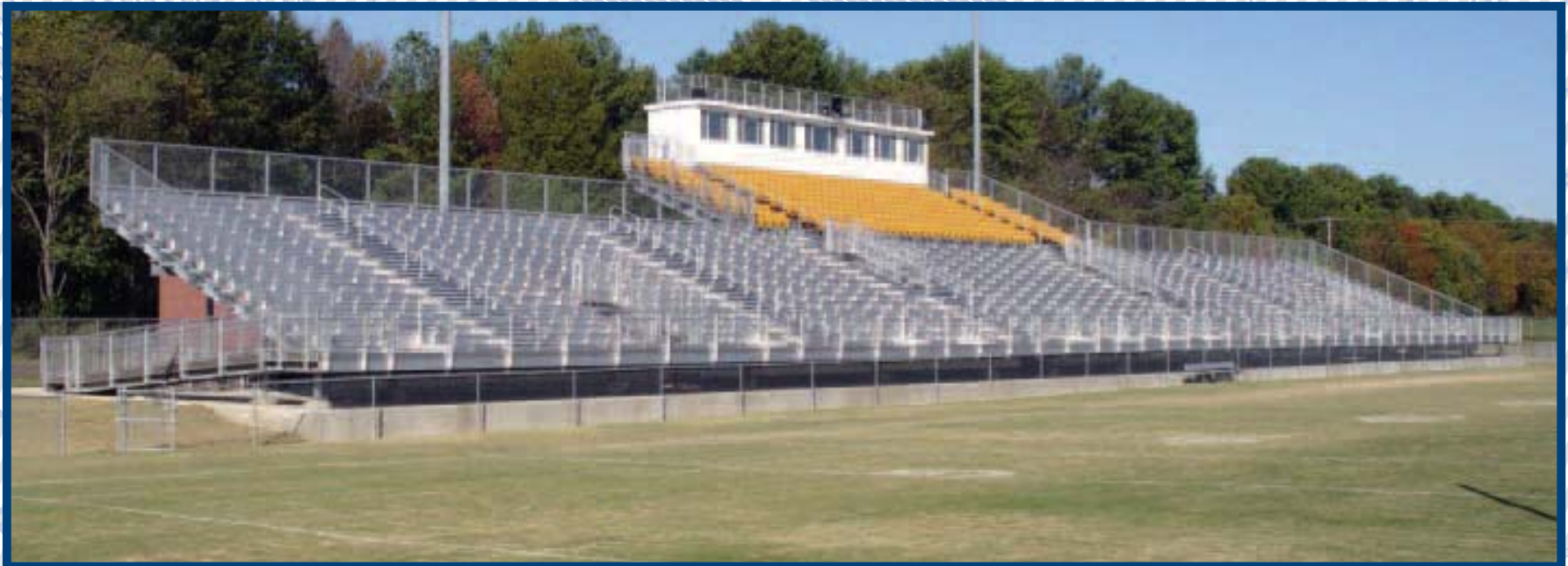
Tell Outdoor Aluminum what you need, we'll design it, build it to the highest standards and install it. Our unique, versatile, clear span understructure system gives you the finest, state-of-the-art, maintenance-free grandstands, custom designed and engineered to fit your existing buildings or grounds, so don't spend a fortune on site preparation. Plus, the clear span design actually creates space under the grandstand! Space you can use for concession stands, restrooms, storage space, locker rooms and more.

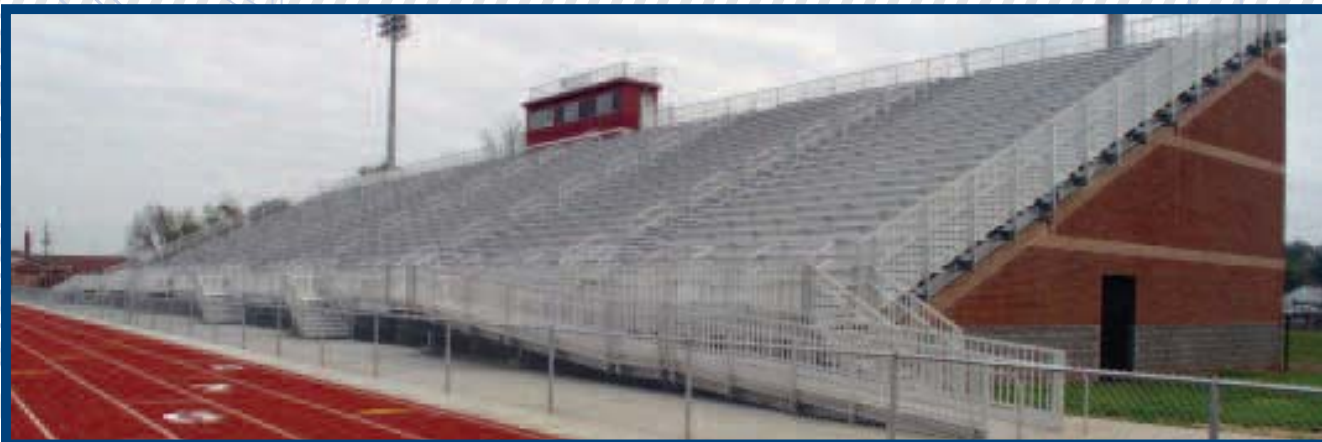
We'll build your grandstand on the firmest foundation in the business! The rock-solid understructure is built from tough, raw structural steel shapes; hot-dip galvanized after all the cutting, punching and welding are done. That way, every inch,

continued on pg. 7







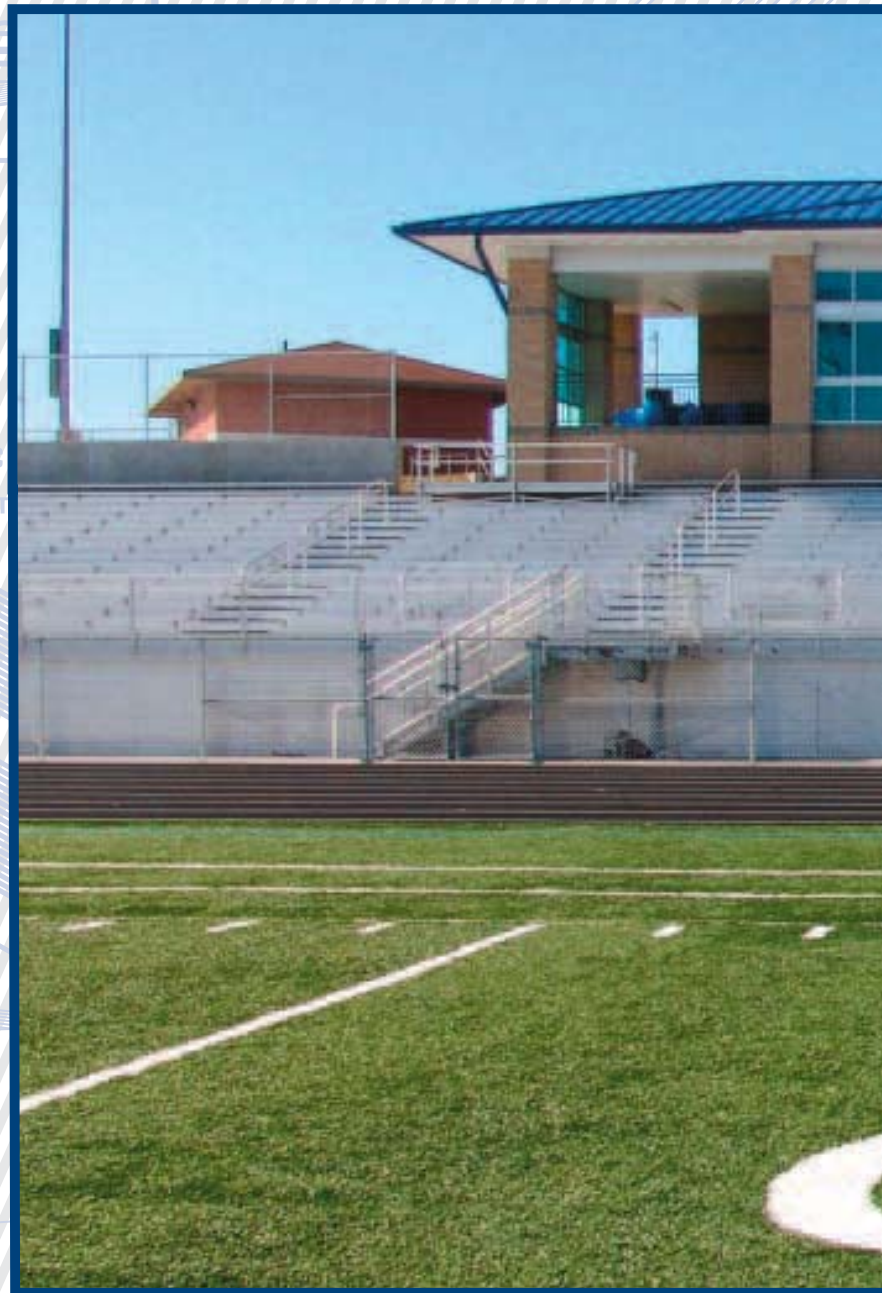
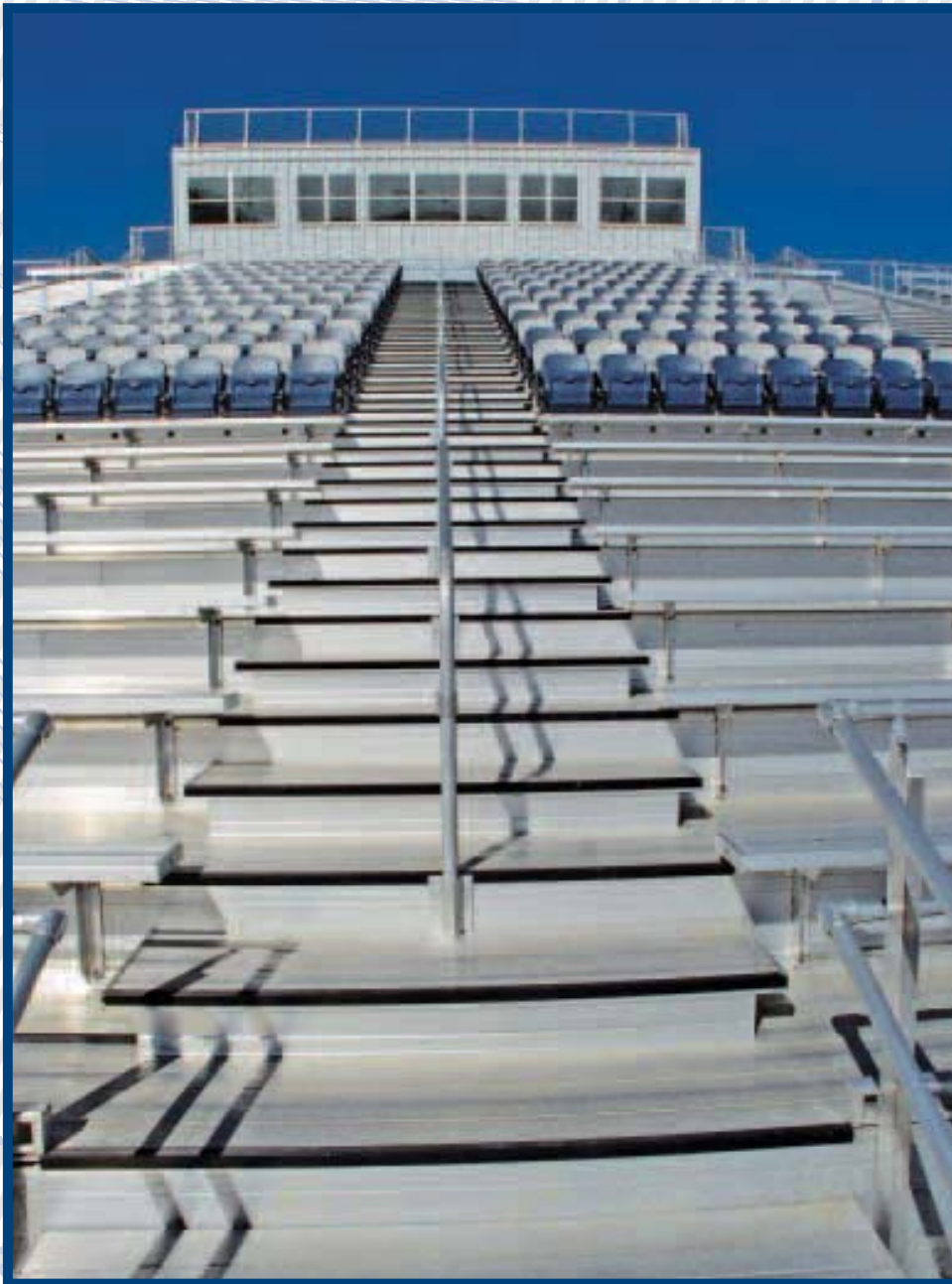


every joint gets maximum protection against nature's ravages. To help you control maintenance costs, we use aluminum decking that stands up to the heaviest traffic and anodized aluminum seating that keeps its clean, neat look, event after event, season after season. Trash and spills literally slide right off.

Because our system is so flexible, your custom design options are almost limitless. You'll see some of them here. Turn to pages 20 and 21 for even more options.

Outdoor Aluminum, with the most advanced grandstand designs, will build to fit your needs. That's something to stand up and cheer about! ♦





8 **Outdoor Aluminum**

INTERLOCKING RISER WITH DRIP EDGE



Custom Bleachers

Where 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. These bleachers whether elevated or non-elevated, provide quality, durability, appearance and low-cost maintenance, while being built out of the most durable components.

Framework can be from our DLW, DLWE, TSA, TSAE, SG or SGE series as detailed on page 15. The design of these bleachers is limited only by your needs and the amount of area available. Wheelchair spaces, in accordance with the requirements of ADA, can be



1 □ **Outdoor Aluminum**

INTERLOCKING RISER WITH DRIP EDGE



neatly tucked in between frames, along the continuous front walkway, with access provided by means of a ramp located on one end. Where wheelchair provisions are not a requirement of the project, we can offer a further cost savings, by replacing the continuous front walkway with a narrow front extension and stairs leading directly to the vertical aisles. 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 to the welded deck system shown on pages 18 and 19. In short, we offer an almost limitless number of options for



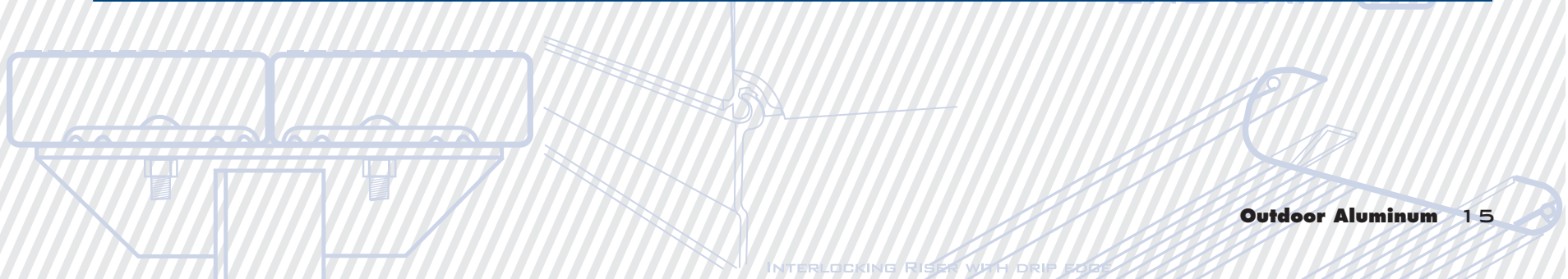


construction of your bleacher system, while keeping an eye on the budget constraints under which we all must operate. Turn to pages 20 and 21 to see more of the options available on our custom bleachers, as well as our 2" x 6" permanent steel grandstands.

These bleachers can be provided for assembly on a variety of surfaces, from grass and dirt to asphalt and concrete. Although the bleacher derives its support from the ground surface, 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.

See page 35 for specifications.





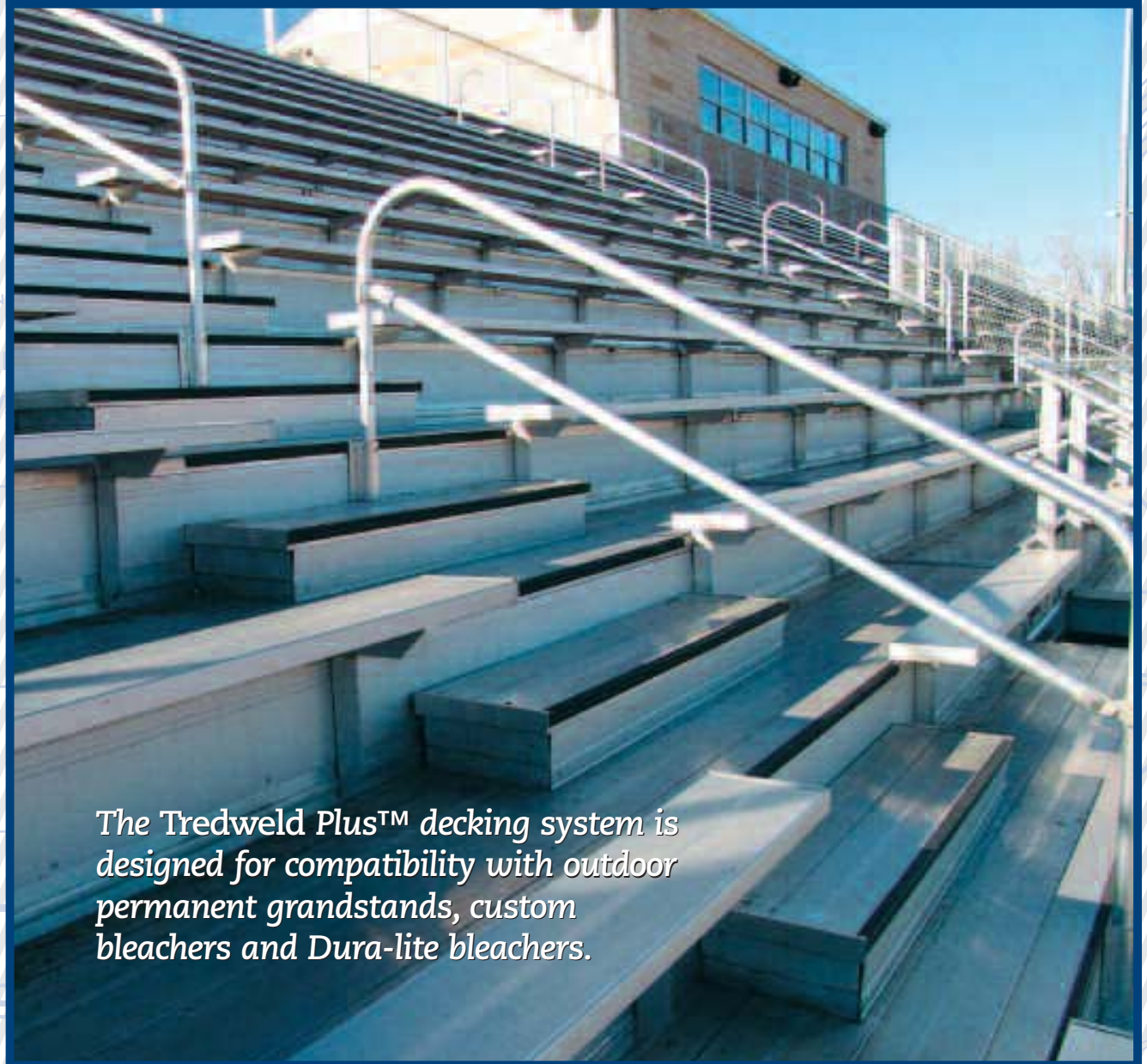
Tredweld Plus™

Introducing 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.

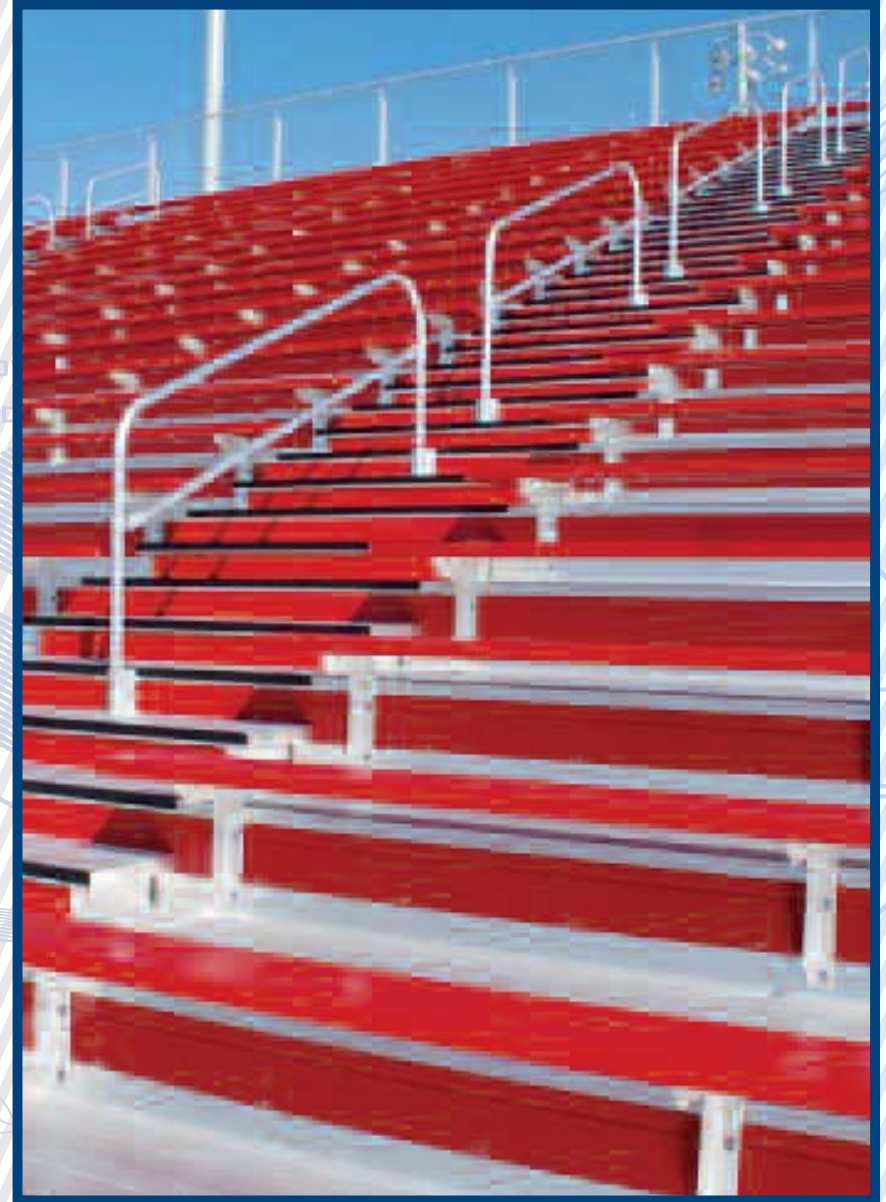


The most innovative



The Tredweld Plus™ decking system is designed for compatibility with outdoor permanent grandstands, custom bleachers and Dura-lite bleachers.

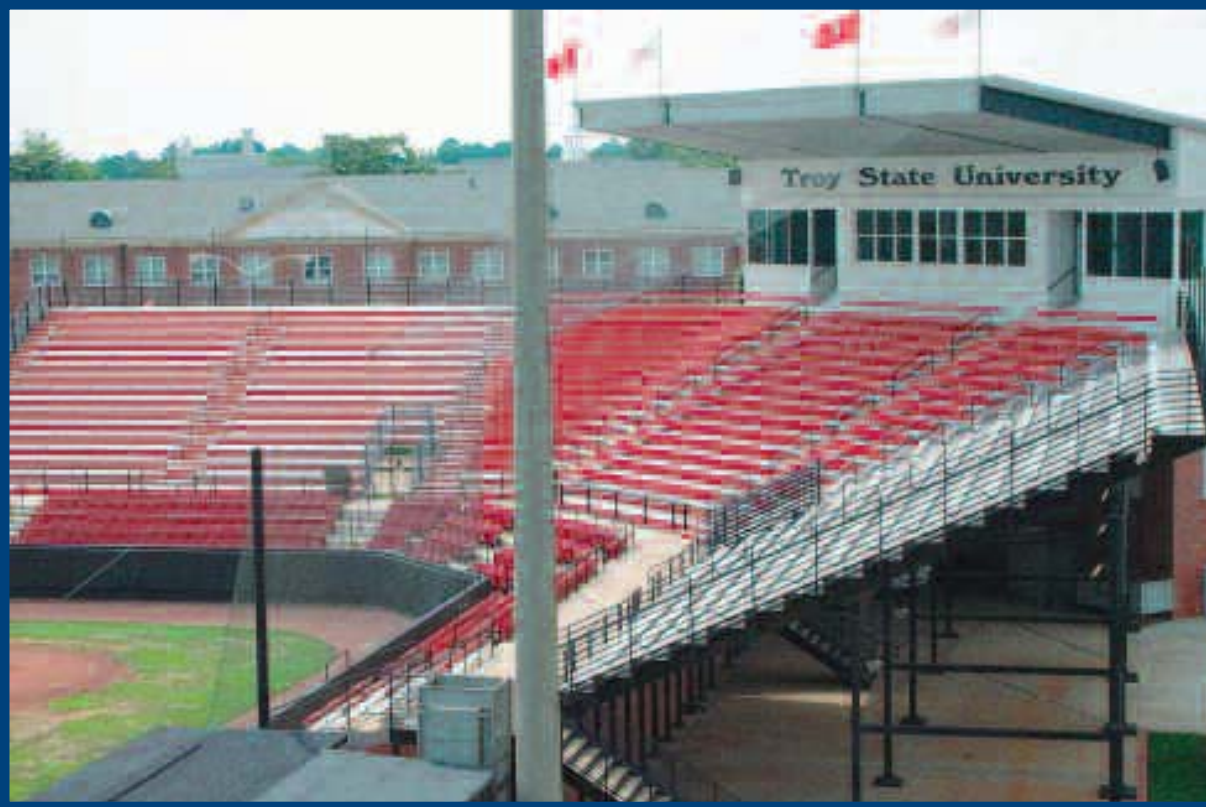
decking system in over 20 years.



Tredweld Plus™

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 grab rail 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



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

18 **Outdoor Aluminum**

Welded Deck System

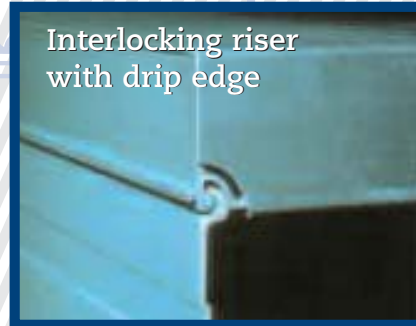
For permanence and rigidity, the grandstand consumer has traditionally turned to concrete to provide the answers. Outdoor Aluminum has a better way. With the welded deck, we offer a system which has the rigidity of a concrete deck and requires no annual maintenance program to protect the surface. With the addition of powder coating, as shown on page 29, the riser material can be provided with a variety of colors without the normal maintenance headaches associated with color finishes. This will enhance both the appearance of your stand as well as reduce glare for the players on the field.

As with all of our raw materials, each piece of the welded deck is received at

the factory and subjected to a rigorous quality control inspection. This assures you, the customer, that the material on your project is exactly per plans and specifications.

Deck seams are machine welded in a single pass to guarantee the proper penetration and heat so crucial to an aluminum weld. Interlocking connections, grooved hold-down clips, and field welded supports all combine to allow the material to expand and contract unhindered without distortion or displacement. Even our riser lip is stitched with structural aluminum rivets. The use of through-bolting or self-threading connections cannot withstand the constant expansion and contraction inherent with aluminum.

Interlocking riser with drip edge



Seat to deck attachment



Bleacher Options

Every Outdoor Aluminum grandstand installation is custom designed to fit our customer's application. Over the years we've achieved some unique designs with our permanent grandstand systems and that experience has led to some "standard" options that can be incorporated into your grandstand. Shown here are a few of the options for your consideration – from a roof, to theatre seating, to entry and exit systems that take advantage of local topography instead of being hindered by it. We can even anodize or paint enclosure panels, seats or risers to match your school colors!

Share your needs and ideas with us and perhaps your special need will become our next "standard" option.

20 Outdoor Aluminum



Theatre Chair
(VIP / Reserved Seating)



Pressbox Building / Landing



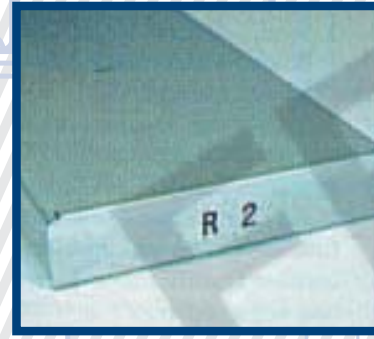
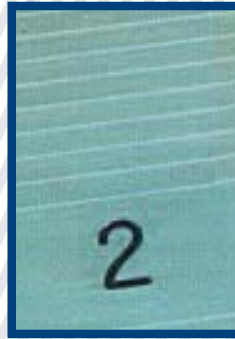
Entry / Exit Ramps



Vomitory Exits



Bench Seating with Backs



ENGRAVING

Outdoor Aluminum provides the perfect permanent solution to the problem of seat numbering, donor recognition, and property identification. Decals peel and fade and name plates break.

Our engraving process provides a permanent marking system with the flexibility to number, name or identify your seating. Engraving is done in the factory, you are assured consistent quality and permanence.



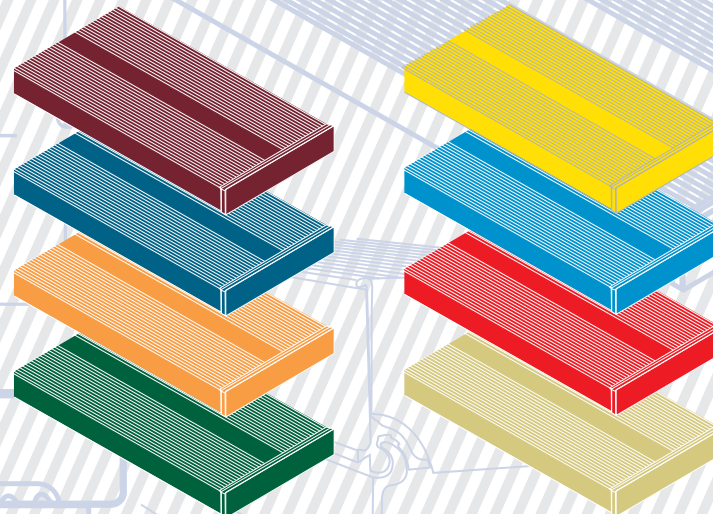
Handicap Platform



Rear Entry (Topography Aided)



Entry / Exit Stairs



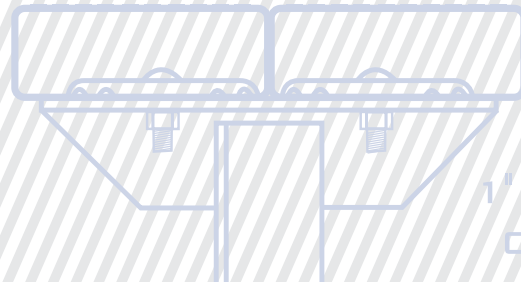
Most any color is available in our custom powder coating. Please call for a color chart.

COLOR FINISHES

Outdoor Aluminum offers Power Coat finishes on risers, backrests and railing in almost any color. Colors can be used throughout your stadium or to accent VIP areas, band sections, or to follow through your school's team colors. "Stadium Glare" can be controlled through the use of Powder Coated stadium components. The Powder Coating process offers excellent color and gloss stability. These finishes are chip and impact resistant, not to mention being environmentally friendly. If color is in your stadium's future, the Powder Coat process should be your choice.

Standard Bleachers

When a permanent grandstand is not practical, Outdoor Aluminum has the answer with portable or transportable bleachers. Outdoor Aluminum offers two choices of all aluminum construction. Our (DLW or DLWE) series offers aluminum angle design with all components being welded together. Our (TSA or TSAE) series offers aluminum square tube and angle design with all components being welded together. All Outdoor Aluminum standard bleachers have been designed to meet the '94 Uniform Building Code for safety. This allows you and your family to feel safe while in stands. Both series have been engineered to meet the toughest codes. Add anodized aluminum seat planks and mill finish foot



1" x 6" RISER
0.62 WALL





planks to any of these frames to form a lightweight, maintenance-free unit for years of durable service.

When your seating requirements call for bleachers with a steel framework combined with aluminum seat planks and foot planks, Outdoor Aluminum offers you yet another choice. Our (SG or SGE) series offers frames of steel angle design with all components being welded together. After fabrication, these frames are hot-dipped galvanized to ensure the most durable product.



2" x 6" BACKREST
1080 WALL

4-WAY A

All series of Outdoor Aluminum bleachers can be constructed as transportable models with tongue guides and wheel sleeves attached. This transportable option will allow you to move seating to different locations around your immediate facility for various activities. This option is not intended for over-the-road use. To order transportable bleachers, add (T) to any model number. Wheel and tongue assemblies used with transportable bleachers are listed on this page.



Non-Elevated

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

Elevated

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

Tip N'Roll Series

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

Wheel sets & Tongues

(Only one set of wheels and tongue required for any number of bleachers)

(WS-1) 4.80/4.00 x 8 TIRES- 10 row or less bleachers, 21' 0" or less, Wt. 50 lbs.
 (WS-2) B78-13 TIRES- bleachers longer than 21' 0", Wt. 80 lbs.
 TONGUE (T15-A) 15' 0" bleachers, Wt. 31 lbs.
 TONGUE (T21-A) 21' 0" bleachers, Wt. 50 lbs.
 TONGUE (T27-A) 27' 0" bleachers, Wt. 68 lbs.



Tip N' Roll Series

The perfect answer to auxiliary seating requirements is Outdoor Aluminum's Tip N' Roll bleachers. Tip N' Roll bleachers can be constructed as (DLW) or (TSA) models. When in use, these units function as ordinary bleachers. After your event or when extra space is needed, simply tip the bleacher onto its 5" non-marring swivel casters and roll the unit to a safe storage area. All Tip N' Roll models are supplied with rubber pads under the frames to protect your floors.

See page 35 for complete specifications.

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 only minutes after the event has ended be on its way to yet another event across campus, city, town, or state. Complete specifications are available upon request.





HIGHWAY SERIES

MODEL	ROWS	SEATING LENGTH	SEATING CAPACITY	OVERALL LENGTH	WEIGHT
HWY 9-30	9	30'-0"	180	35' 6"	4980
HWY 9-40	9	40'-0"	234	45' 6"	5940

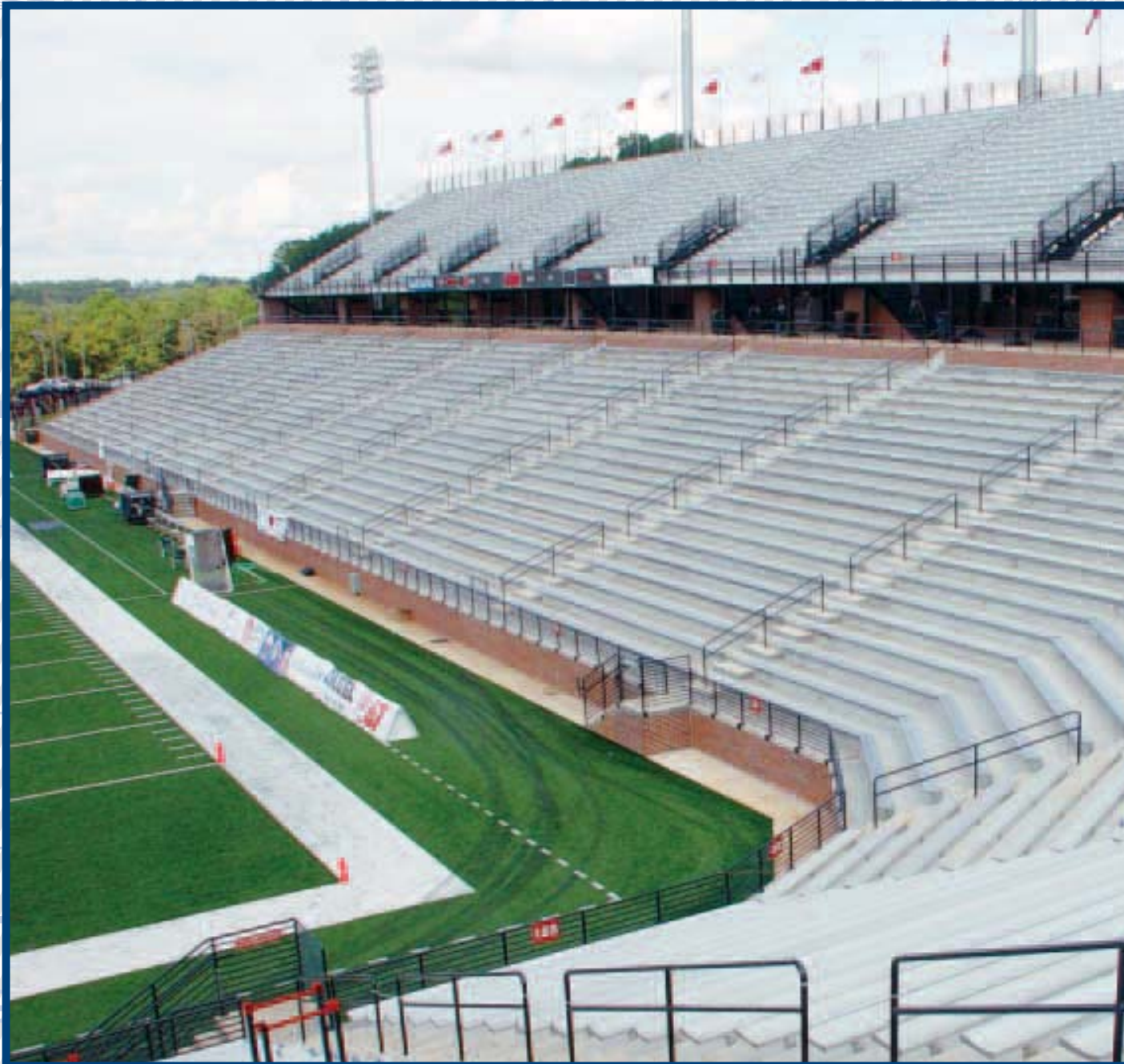


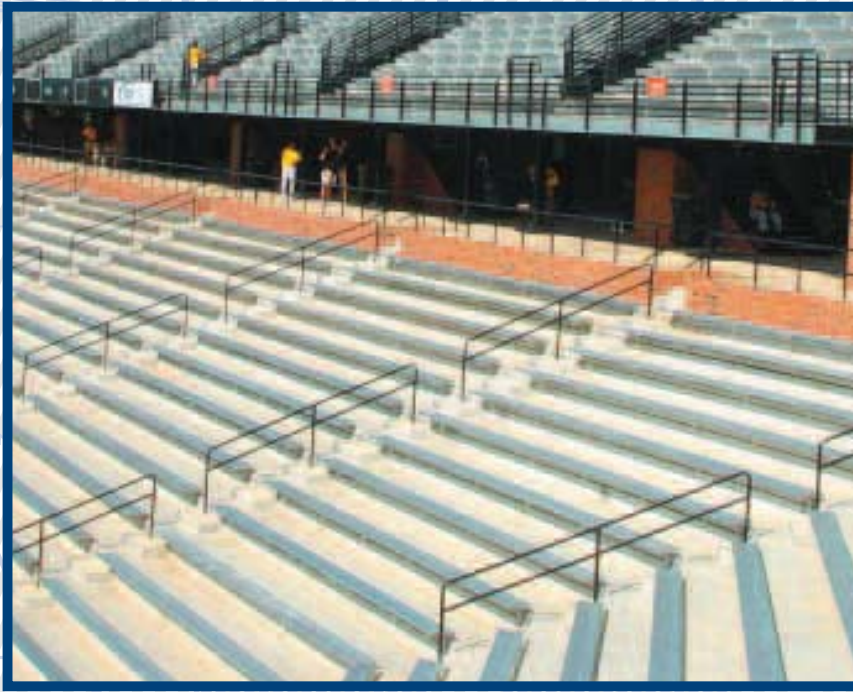
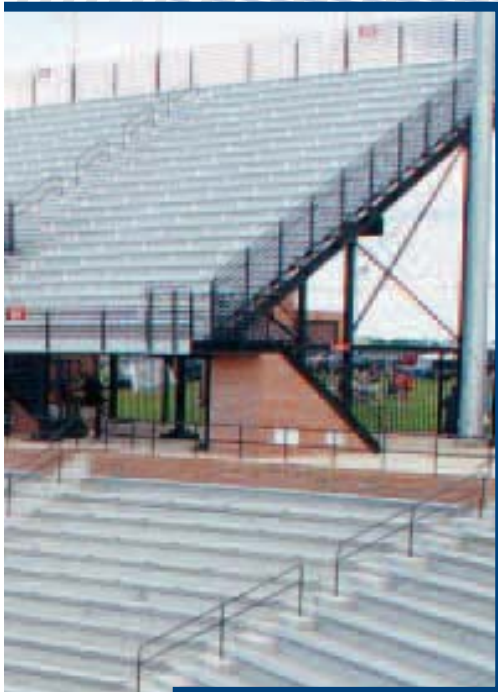
Aluminum Plank Seating

Whether renovating an existing structure or building a new facility, the cornerstone of the project is choosing the right aluminum extrusion. With a nearly unlimited variety of sizes and styles at our disposal, Outdoor Aluminum is prepared to offer you the perfect extrusion.

Existing structures can be easily upgraded with the addition of aluminum seat and decking materials using components designed to match the specific requirements of any project. Our internal sleeve assembly and concealed clip system allows renovation to be undertaken all at once or in phases as your budget dictates.

New construction can be aided by our experienced

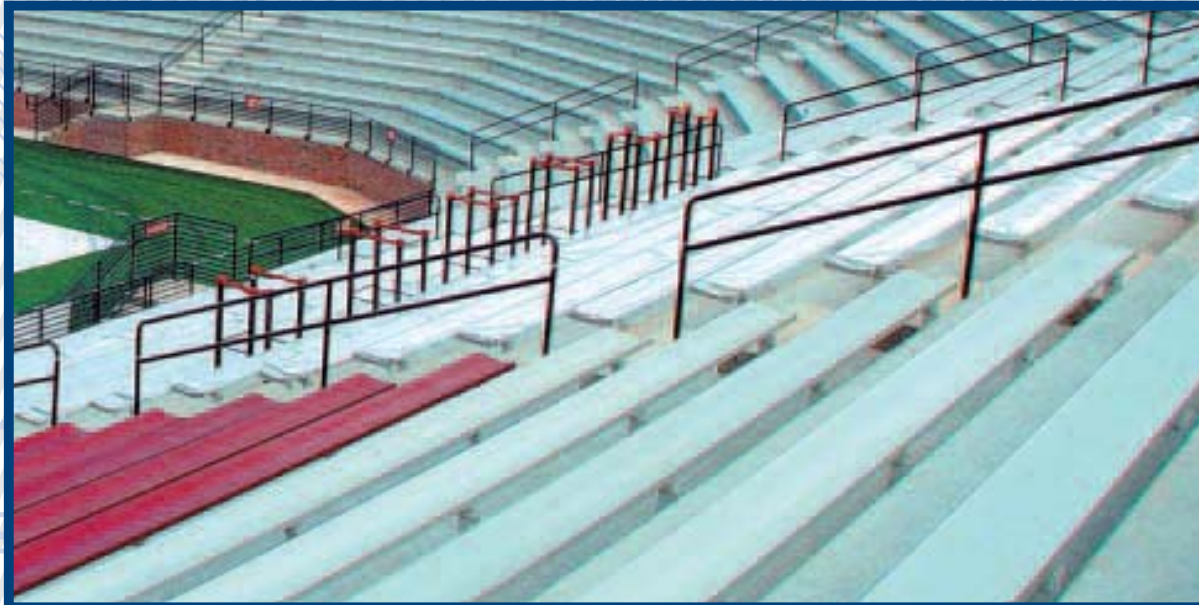




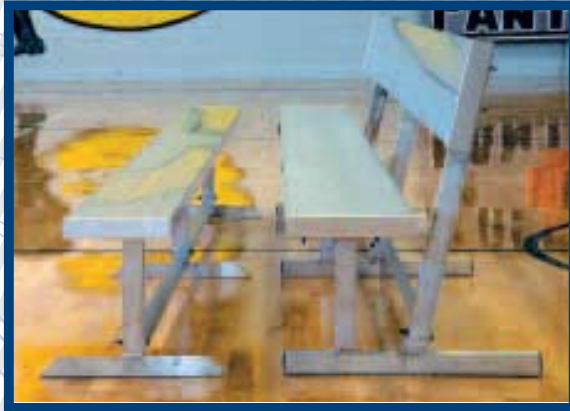
design staff to translate your needs into a seating system, which combines economy, durability, and aesthetics into one package. From field measurements to installation on site, Outdoor Aluminum has the answer to your seating needs.

While direct shipment to the project site is commonplace within this industry, Outdoor Aluminum receives all raw materials in house prior to shipment to the site. Your material is subjected to painstaking quality control inspections, which assures you, our customer, of a product, which Outdoor Aluminum proudly stands behind.

See page 35 for specifications.



Aluminum Benches



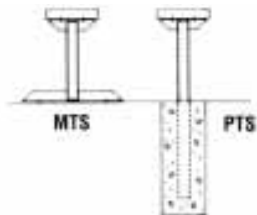
No splinters, no rust, no painting. With over thirty models to choose from, there's an Outdoor Aluminum bench to fit your every need. Choose the all-aluminum models, which are constructed from 2" square tube or the steel models, which are hot-dipped galvanized after fabrication. Seating options range from single plank to double plank to seats with backs. Permanence can be achieved by bolting the unit to the floor or embedding into concrete. Whatever your choice, you can be assured that your bench will provide you years of maintenance-free service.



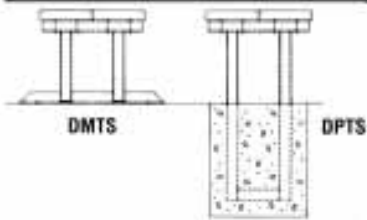
30 **Outdoor Aluminum**

INTERLOCKING RISER WITH DRIP EDGE

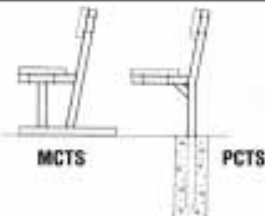
All Aluminum Benches



MODEL	LENGTH	WEIGHT
MTS 7.5	7'-6"	23
MTS 15	15'-0"	40
PTS 7.5	7'-6"	23
PTS 15	15'-0"	40

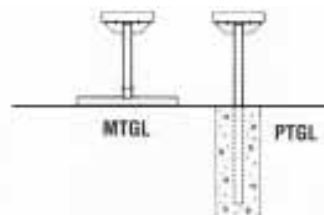


MODEL	LENGTH	WEIGHT
DMTS 7.5	7'-6"	41
DMTS 15	15'-0"	75
DPTS 7.5	7'-6"	41
DPTS 15	15'-0"	75

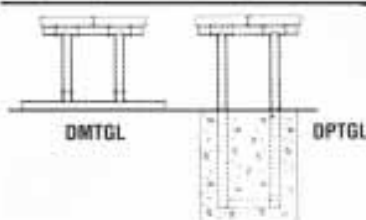


MODEL	LENGTH	WEIGHT
MCTS 7.5	7'-6"	46
MCTS 15	15'-0"	86
PCTS 7.5	7'-6"	46
PCTS 15	15'-0"	86

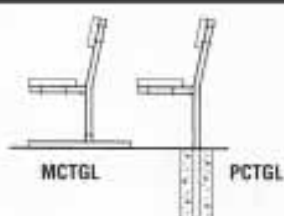
Galvanized Steel Benches



MODEL	LENGTH	WEIGHT
MTGL 7.5	7'-6"	30
MTGL 15	15'-0"	52
PTGL 7.5	7'-6"	30
PTGL 15	15'-0"	52

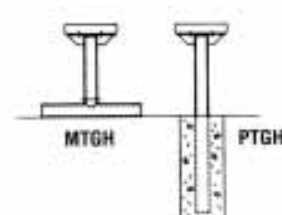


MODEL	LENGTH	WEIGHT
DMTGL 7.5	7'-6"	65
DMTGL 15	15'-0"	115
DPTGL 7.5	7'-6"	65
DPTGL 15	15'-0"	115

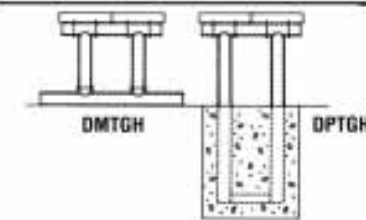


MODEL	LENGTH	WEIGHT
MCTGL 7.5	7'-6"	70
MCTGL 15	15'-0"	120
PCTGL 7.5	7'-6"	70
PCTGL 15	15'-0"	120

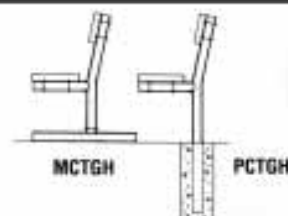
Heavy Duty Galvanized Steel Benches



MODEL	LENGTH	WEIGHT
MTGH 7.5	7'-6"	50
MTGH 15	15'-0"	85
PTGH 7.5	7'-6"	50
PTGH 15	15'-0"	85



MODEL	LENGTH	WEIGHT
DMTGH 7.5	7'-6"	80
DMTGH 15	15'-0"	140
DPTGH 7.5	7'-6"	80
DPTGH 15	15'-0"	140



MODEL	LENGTH	WEIGHT
MCTGH 7.5	7'-6"	85
MCTGH 15	15'-0"	148
PCTGH 7.5	7'-6"	85
PCTGH 15	15'-0"	148

ALL ALUMINUM BENCHES

Bench frames to be constructed of mill finished aluminum, 6061-T6 alloy. All joints to be welded utilizing the Mig process, filler material to be 5356. All planking to be 6063-T6, with 204-R1 anodized clear finish. All exposed frame ends to be capped with cast end plugs, all seat backrests (as required) shall be fitted with heavy duty channel end caps. All connecting hardware to be hot-dipped galvanized.

GALVANIZED STEEL BENCHES

Bench frames to be constructed of 1 1/4" schedule 40 steel pipe measuring 1 5/8" outside diameter. After fabrication all frames are hot-dipped galvanized and all exposed ends are fitted with pipe plugs. All planking to be 6063-T6, with 204-R1 anodized clear finish. Seat and backrest (as required) shall be fitted with heavy duty channel end caps. All connecting hardware to be hot-dipped galvanized.

HEAVY DUTY GALVANIZED STEEL BENCHES

Bench frames to be constructed of 2" schedule 40 steel pipe measuring 2 3/8" outside diameter. After fabrication all frames are hot-dipped galvanized and all exposed ends are fitted with pipe plugs. All planking to be 6063-T6, with 204-R1 anodized clear finish. Seat and backrest (as required) shall be fitted with heavy duty channel end caps. All connecting hardware to be hot-dipped galvanized.

Picnic Tables

Incredibly durable and virtually maintenance-free, these are picnic tables you can install and forget. Our all-aluminum or aluminum and steel picnic tables come in lengths to fit every need, with options to suit any application.

If you need a table that moves, check our industry-exclusive, TS and TFS all-aluminum tables. Weighing one-third to one-half of an equivalent steel-framed table, rearranging your seating can be accomplished with ease. For permanent or semi-permanent installations, look over the steel framed TFGH or TFGL series tables. Their frames are built from raw steel, formed and welded and hot-dip galvanized for strength and durability. Gaps are virtually nonexistent in the coating, blocking out water that could cause rust.



TFS

Outdoor Aluminum's TFS series picnic table is constructed of mill finished aluminum 2"x 2"x 1/8" square tube, 6061-T6 alloy, feature a welded one-piece walk-thru design. All planking to be 6063-T6, with 204-R1 anodized finish. Plank ends are fitted with heavy duty channel end caps. All connecting hardware to be hot-dipped galvanized.



MODEL	LENGTH	WIDTH	WEIGHT
TFS-6	6'	5'-3"	91
TFS 7.5	7'-6"	5'-3"	105
TFS-8	8'	5'-3"	109
TFS-15	15'	5'-3"	195

TS

The TS series picnic table frame is constructed of mill finished aluminum 2"x 2"x 1/8" square tube, 6061-T6 alloy. Frames are welded using filler material of 5356. All planking to be 6063-T6, with 204-R1 anodized finish. Plank ends are fitted with heavy duty channel end caps. All connecting hardware to be hot-dipped galvanized.



MODEL	TOP SIZE	OVERALL	WEIGHT
TS-38	38' x 38'	5'-9 1/2"	100
TFS 7.5	48'-48'	6'-7"	129

TFGL

The TFGL series picnic table features a one-piece welded walk-thru design. Table frames are constructed of 1 1/4" schedule 40 steel pipe measuring 1 5/8" outside diameter. After fabrication all frames are hot-dipped galvanized. All planking to be 6063-T6, with 204-R1 anodized finish. Plank ends are fitted with heavy duty channel end caps. All connecting hardware to be hot-dipped galvanized.



MODEL	LENGTH	WIDTH	WEIGHT
TFGL-6	6'	4'-11"	134
TFGL 7.5	7'-6"	4'-11"	144
TFGL-8	8'	4'-11"	154
TFGL-15	15'	4'-11"	272

TFGH

Our TFGH series picnic table features a one-piece welded walk-thru design. Table frames are constructed of 2" schedule 40 steel pipe measuring 2 3/8" outside diameter. After fabrication all frames are hot-dipped galvanized. All planking to be 6063-T6, with 204-R1 anodized finish. Plank ends are fitted with heavy duty channel end caps. All connecting hardware to be hot-dipped galvanized.



MODEL	LENGTH	WIDTH	WEIGHT
TFGH-6	6'	5'-1"	173
TFGH 7.5	7'-6"	5'-1"	190
TFGH-8	8'	5'-1"	195
TFGH-15	15'	5'-1"	319

PERMANENT GRANDSTAND 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: Manufacturer 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. Tredweld *Plus*™: Seats: 2 x 10 anodized aluminum; seat support bracket: riser mounted brackets 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 aluminized 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 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.
 - 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 Colors.
 - b. Tread Planks, Riser Planks: Extruded aluminum alloy, 6063-T6, mill finish. Optional on Riser Planks: Powder Coated 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.

BLEACHER SPECIFICATIONS

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

3.4 Outdoor Aluminum

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 6 mill finish aluminum; front walkway: five 2 x 10 mill finish aluminum.
 - b. Tredweld *Plus*™: Seats: 2 x 10 anodized aluminum; seat support bracket: riser mounted brackets 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 aluminized 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 Colors.
 - b. Tread Planks, Riser Planks: Extruded aluminum alloy, 6063-T6, mill finish. Optional on Riser Planks: Powder Coated 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.

PLANK SPECIFICATIONS

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 10 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 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 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:

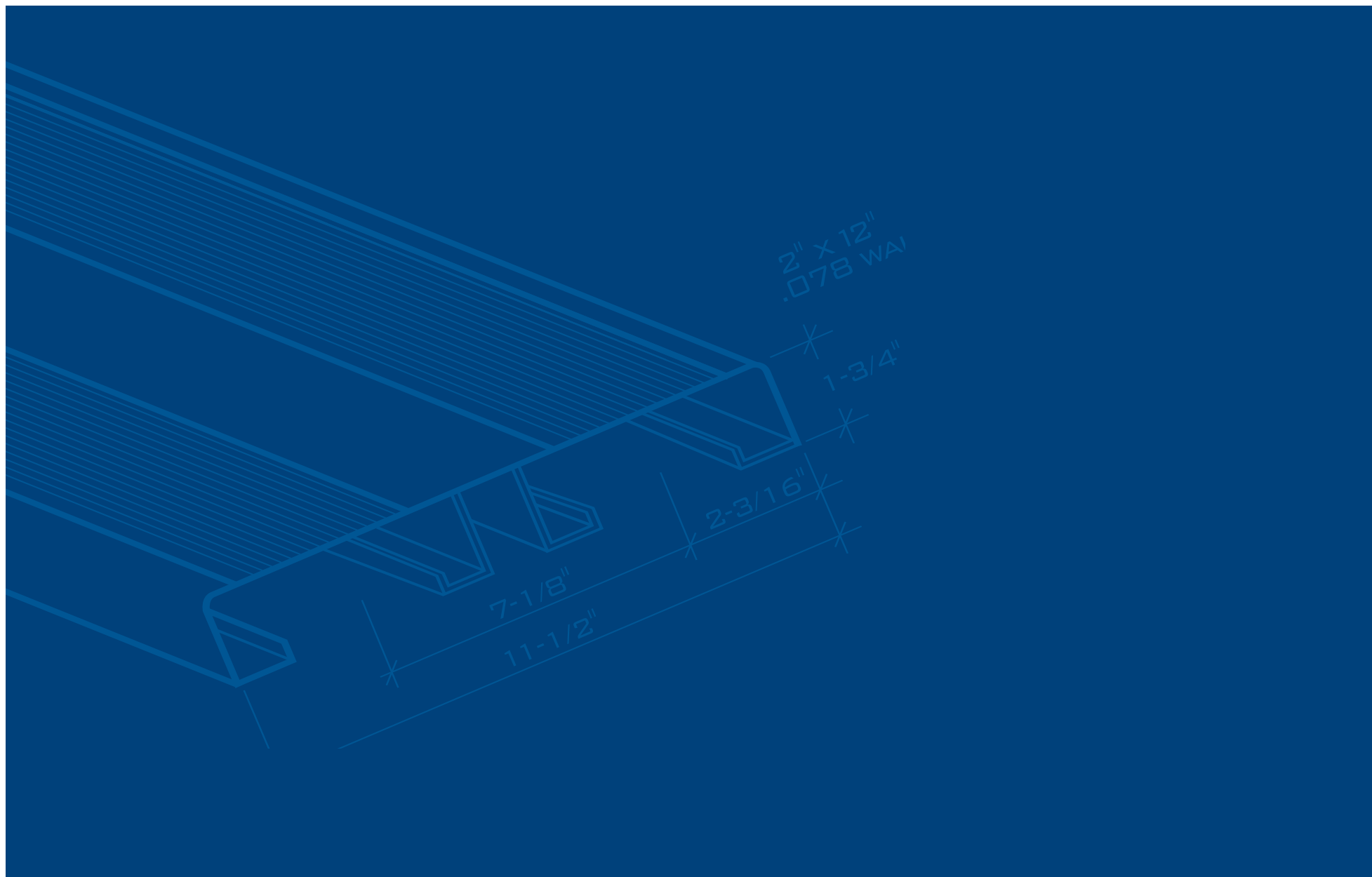
- a. Live Load: 100 psf gross horizontal projection;
- b. Lateral Sway Load: 24 plf seat plank;
- c. Perpendicular Sway Load: 10 plf seat plank;
- d. Wind Load: Determined by local code;
- e. Live Load of Seat and Tread Planks: 120 plf;
- f. Guardrail: 100 plf vertical and 50 plf horizontal.

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.



Call Toll Free 800-225-4249 or 334-684-2296 ■ Fax 334-684-2231 ■ www.outdooraluminum.com



Outdoor Aluminum