INVITATION FOR BIDS

BLEACHERS AND RELATED PRODUCTS
BID #22-374

Kay Park Recreation Bleachers
Galvanized Steel Frame Bleachers BLG Series

Frames are fabricated from A36 alloy steel angles using full welds at all joints to give added strength. A combination of 2" x 2" x 3/16" and 1-3/4" x 1-3/4" x 3/16" angles are used, as required, for strength throughout each frame. Connecting "X" braces are 1-1/2" wide by 1/4" thick A36 alloy steel. For greatest protection and longest life, all parts are hot-dip galvanized after fabrication.

3 Lengths available: 15', 21' and 27'
3 Seat plank choices: Wood, Aluminum or Fiberglass seats
2 Frame choices: Aluminum angle and Galvanized Steel angle Foot planks are mill finish aluminum except units with wood seats, which come with wood foot planks.

Think Safety. Reduce Liability. Use Vertical Guard Rails
Guard Rails: In the past, bleacher guard rails usually consisted of a series of horizontal pipes or chain link fencing attached around the seating perimeter to keep people from accidentally falling off the bleacher and being injured.
Both horizontal pipes and chain link fencing create a "ladder effect" and readily lend themselves to being climbed on. This activity can easily lead to unnecessary injury and liability.4" Spaced Vertical Bar Guard Rails (V4)
Kay Park engineers recently introduced vertical bar guard rails (Patent Pending) to the outdoor portable bleacher industry, an innovation whose time has come. Vertical bars eliminate the "ladder effect" and a possible toe-hold for climbing on the guard rails. The possibility of accidents, serious injury and liability can be reduced by using vertical bar railings. This is part of Kay Park's continuing effort to make good products even better.

Note: Kay Park's New 3 Row Bleachers are exempt from current guard rail rules because they are less than 30" high.5 Rail Horizontal Bar Guard Rails (H9)
Basic guard rails consist of 5 horizontal galvanized tubes across the back and on the ends extending down to the 5th row. Please check your local code requirements.
4" Spaced Horizontal Bar Guard Rails (H4)
Most recent building codes for outdoor bleacher seating require any opening more than 30" above the ground be small enough that a 4" sphere cannot pass through. On bleachers having and 8" rise per row, and meeting the 4' rule, the guard rails extend down to include the 3rd row seat.
Both vertical 4" and horizontal 4" railing systems meet this requirement when used in conjunction with our full width footboard system.
Full Width Footboards (F4) Many of the various recent codes for outdoor bleacher seating require any openings more than 30" above the ground be small enough so that a

4" sphere cannot pass through. Kay Park has designed a new system using 2 additional footboards with one having an attached riser plate. This new system fills the space underneath the seats to meet the 4" sphere guideline.

3 Plank Choices
Aluminum: Seat planks are 2" x 10" 6063-T6 extruded aluminum which is clear anodized to standard 204-R1 specification. Walk boards are 2" x 10" 6063-T6 extruded mill finish aluminum. End caps and hold down clips are also extruded aluminum.
Wood: Seats and walkboards are 2" x 10" precision drilled, CCA pressure treated and kiln dried specially selected Southern Yellow Pine.
Fiberglass: Seat planks are 2-1/2" x 10" reinforced core, sandwich type construction fiberglass with UltraGel coating up to 20 mils thick for long lasting finishing. Blue, Yellow, Red, White,Champagne, Hunter Green and Shamrock Green are standard colors. Walk boards furnished with fiberglass bleachers are 2" x 10" mill finish aluminum. Plastisol coated expanded metal seats may also be available.

Aluminum Angle Frame Bleachers / BLA SERIES

Frames are fabricated from 2" x 2" x 3/16" 6061-T6 alloy aluminum angles using a punched and bolted type construction for maximum strength and safety. All main frame components are pre-assembled with large 1/2" diameter bolts, lock washers and nuts. This bolted aluminum frame provides strong joints that will not develop weld cracks.

INVITATION FOR BIDS

BLEACHERS AND RELATED PRODUCTS
BID #21-374

* OUTDOOR ALUMINUM FRAMED BLEACHER SPECIFICATIONS

SCOPE

Design of the bleacher shall conform in all respects to the requirements as set forth in these specifications. The description of the bleacher is as follows:

Number of rows: 3, 5, AND 10
Overall length: 21'-0" OR 27'-0"

UNDERSTRUCTURE

The understructure of the bleacher shall consist of a series of welded aluminum angle frames spaced at intervals of no more than 6'-0" and joined by means of aluminum sway braces, alloy 6061-T6, mill finish. Each frame shall consist of vertical members, adequate diagonal braces, and horizontal members welded to form an 8" rise on 5 and 10 row units (6" rise on 3 row units only) and a 24" back to back spacing between seat rows. All welded connections shall be by certified aluminum welders and all mating parts shall be welded on all sides to assure adequate strength.

DESIGN

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

SEATS AND DECKING

Seats shall be 2"x 10" nominal extruded (1.75"x9.5"actual) aluminum, alloy 6063-T6, wall thickness .078" (+/- .006" industry tolerance) with a raised fluted surface to provide a non-skid surface. Seats shall be anodized clear (204R1), conforming to the Aluminum Association Architectural Standard AA-C22A31. Seat planks shall have one internal support leg, and shall be designed to rest on a seat support with a minimum bearing surface of 8-1/2" to provide adequate resistance to torsion stress. Footboards shall consist of **two** 2"x10" nominal extruded (1.75"x9.5" actual) aluminum, alloy 6063-T6, wall thickness .078"(+/- .006" industry tolerance) with a raised fluted surface to provide a non-skid surface. Footboards shall have a mill finish. End caps provided for footboards shall match in both color and finish, shall be full length single piece, and shall attach by means of aluminum rivets on the underside of the plank. Rows 2 thru next to last row shall have a continuous 1 x 6 mill finished riser board and a 2 x 10 riser on last row. **Each bleacher unit shall have one (1) 60" wide vertical aisle with center handrail as required by UBC 97**

End caps shall be of a heavy duty clamping, channel design, and shall match in both color and finish the plank to which they will attach. End caps shall be fastened to the underside by means of two aluminum rivets. Seats and footboards shall be connected to the supporting structure so as to transmit all live and sway loads to the understructure members, so placed to resist those loads specified in the design section. The connecting hardware (bolt clips) shall be of extruded aluminum, mill finish. Clips shall be so designed as to provide adjustability in four directions.

GUARDRAIL SYSTEM
Shall be a 2/3 aluminum lined rail system with 9 ga. **aluminized** chain link fabric on rear and sides to row 3 (no rails are required on 3 row bleachers only). Aluminum line rails (1-1/4” schedule 40) and fabric shall fasten to **aluminum channel** vertical supports as required. Galvanized vertical supports, lined rails or chain link fabric will not be allowed so as to prevent possibility of electrolysis.

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

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

INVITATION FOR BIDS

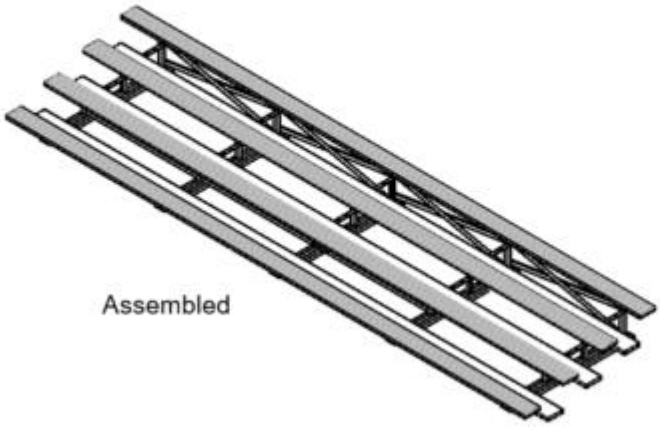
BLEACHERS AND RELATED PRODUCTS
BID #22-374

PATTERSON WILLIAMS ALUMINUM BLEACHERS

4-ROW BLEACHERS

D MODEL#1174-27 4 ROW 27' STEEL W/0 GUARDRAILS (787 lbs)

D MODEL#1175-27 4 ROW 27' ALUMINUM W/0 GUARDRAILS (534 lbs)



Assembled

Specifications:

Bleacher Frames, Horizontal and diagonal Bracing:
Fabricated from 2" x 2• x 3116" steel or aluminum angle. Frames are welded into a single unit. (Frames may have optional 2" x 6" ground sills at every point where frames are in contact with the ground.)

Seat and Foot Planks: 2" x 1a• x 27' extruded ribbed aluminum. The wall thickness at any point shall not be less than .080". The edges and tops of planks shall be ribbed. The ribbed pattern,non-slip surface,is designed for safety and comfort with a grooved anodized coating. All exposed ends shall have aluminum caps fastened to the underside of the plank. Planks secure to each frame with two friction-type aluminum mounting clips capable of securing plank against movement. (All hardware is provided.)

Finish: All fasteners shall be zinc plated. All welds ground smooth.

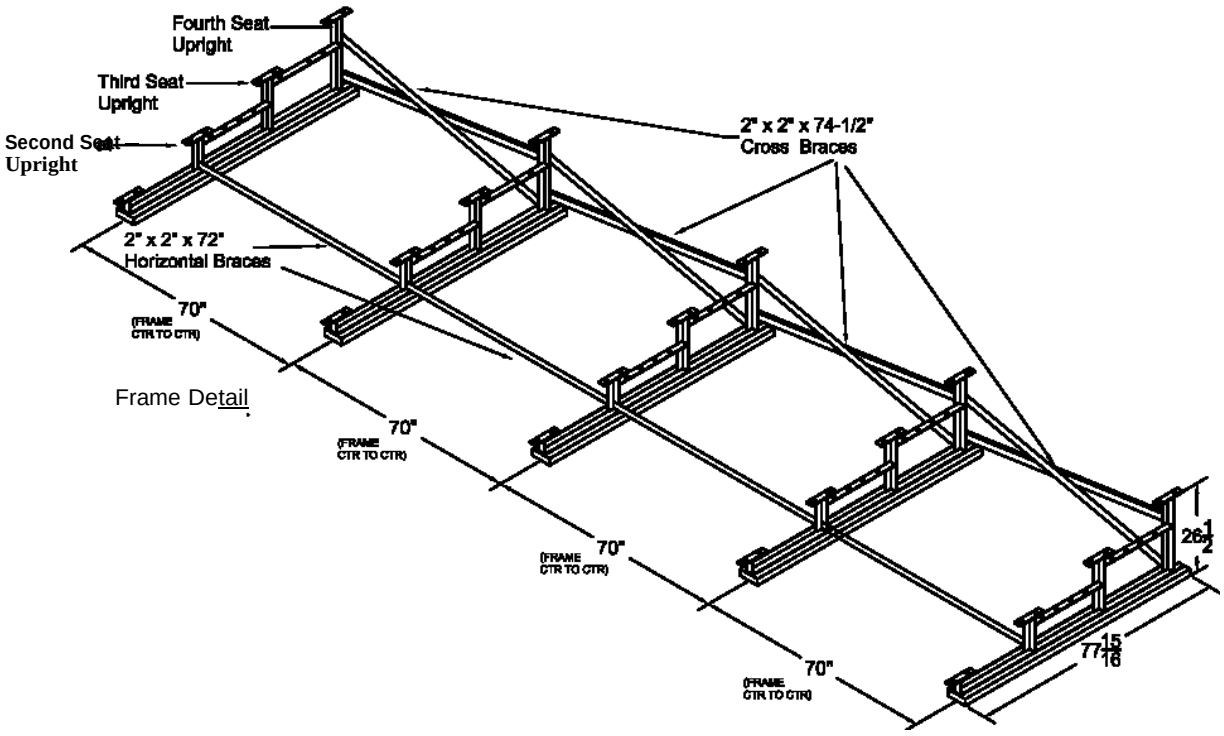
Note: Our three and four row bleachers are exempt from current guardrail rules because they are less than 30" high.

INSTALLATION INSTRUCTIONS:

1. Check materials received with the parts list (Page 4) to make sure that all components are included and to assure that the unit is complete.
2. Installing End Caps on seat and fool planks:
   a. Locate (7) 2x 10x 27' seat and foot planks and (14) 2x 10 end caps.
   b. Align and assemble all end caps to aluminum planks. Secure using a #10 x 3/4• self-tapping screw in two locations on the underside of the plank. (See End cap Detail)
3. Locate five bleacher frames and set on a level surface on 70" centers. (See Frame Detail)
4. To Install Cross Braces:
   a. Locate two sets of cross & horizontal braces measuring 2•x 2"x 74-1/2". (See Frame Detail) Install on the backside of the 4th seat upright using the top and bottom holes in the frame. Repeat steps to assemble second and third sets of cross braces to the other bleacher frames.
   b. On the center bleacher frame at the top and bottom brace attachment locations where two diagonal braces attach at the same Installation point secure braces using 3/8x 1-1/4" hex bolt, washers and lock nut provided.(See Detail B)
   c. At the center point of the cross braces secure brace connection using 3 /8" x 1-1/4" hex bolt,washer and locknut provided. (See Detail C)
   d. Install 2x 2" x 74-1/2 Horizontal braces below 2nd foot board support on the second seat upright with 3 /8" x 1-1/4" hex bolts & 3/8" flat washer & nuts.
   e. At all installation points install washers and nuts but leave hardware loose until assembly is complete for easy installation. Note: Two washers are provided to use at every hex bolt location.
5. To Install seat planks:
   a. First Install the plank clips using 5/16x 1" carriage bolts, washer and lock nuts, on top of seat and foot board supports. Give nuts about 3/4 tum just enough to secure). Tum plank clips perpendicular to the frames. (See Detail D)
   b. Position seal planks on the seat supports so the plank clips are between the slots in the bottom of planks. See Detail E.
   c. Reach up underneath the seal & foot planks and tum the plank clips to the position shown. (See Typical Cross Section Detail)
6. To install foot planks:
   a. Follow the steps as outlined in step 5 for installation of foot planks.
7. To Secure Planks to Frames:
   a. Align the end of the planks on rows so they are approximately 18ft from outside edge of plank to center of bleacher frame to end of plank looking at the bleacher. (See Detail E) Tighten all hardware on frames & planks securely.
8. Cut and peen all exposed bolt threads past 2 threads out of nut.

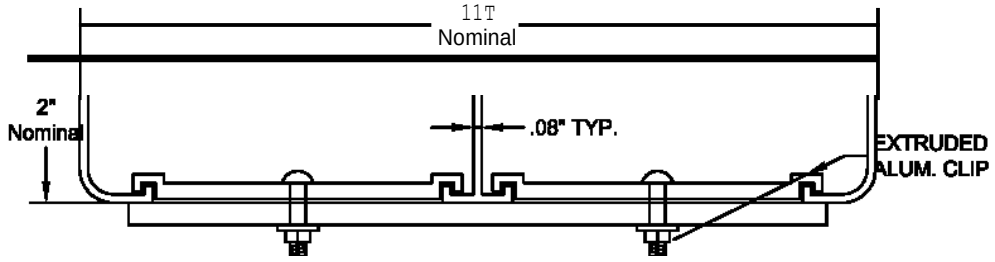
Note:To insure proper installation, bolts used to secure seat, foot and riser planks must be tightened until the clips are firmly in contact with the plank. (See Typical Cross Section)

9. Installing (Optional) Ground sills (wood measuring 2" x 6" x 6'-6.):
   a. Center one ground sill under each bleacher frame so the ends are evenly spaced and are centered from side to side. Mark the (2) hole locations in each bleacher frame on each of the ground sills and drill ¼" x 1" deep pilot holes. Do Not drill completely through the ground sills.
   b. Attach the ground sills to the bottom of the bleacher frames with 5/16 x 1-1/2" lag bolts and flat washers provided.

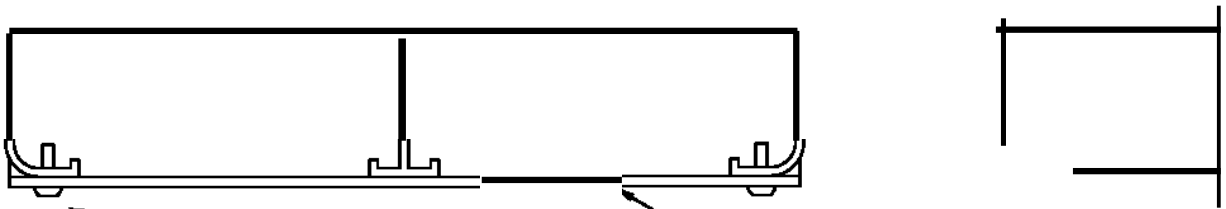


Frame Detail

TYPICAL CROSS SECTION



ALUM. PLANK



END CAP DETAIL

#10 X 3/4" self-tapping screw

ATHLETIC MFG. CO.
Patterson-Williams
QUALITY ATHLETIC AND PARK EQUIPMENT SINCE 1919

P.O. Box 9028
Ph: 800-687-5768
Fax: 866-888-1110
Mesa, AZ 85214

SCALE:	N.T.S.
DATE:	5-4-04
DRAWN BY:	AMC
REV:	2-28-07

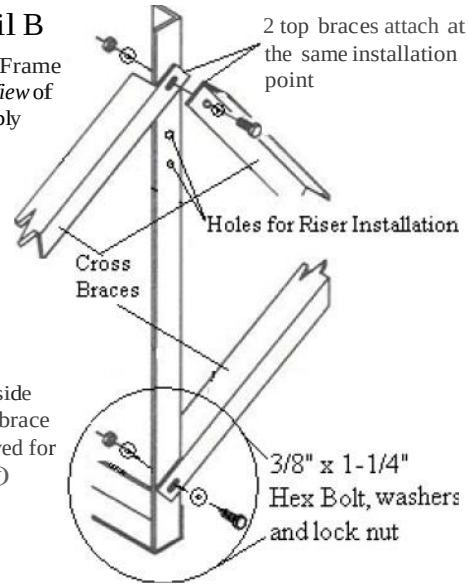
TITLE: Specification/Installation Instructions

4 ROW BLEACHERS

DWG. NO.
MODEL #1174-27 4 ROW 27' STEEL
MODEL #1175-27 4 ROW 27' ALUMINUM

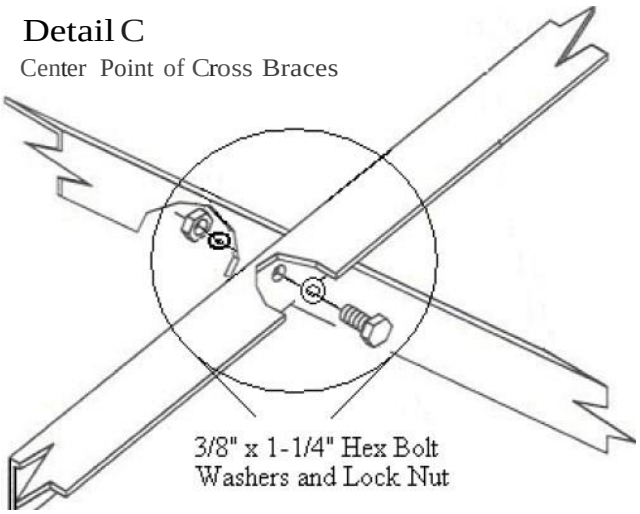
Detail B

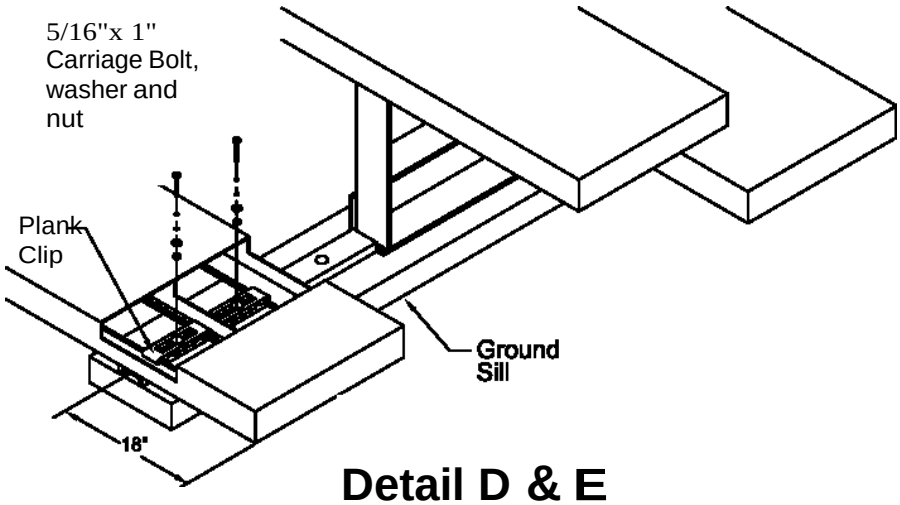
Center Frame Rear *View* of Assembly



Detail C

Center Point of Cross Braces





Detail D & E

MATERIAL LIST	QTY
Aluminum Plank (2T) anodized	7
4 row bleacher frame	5
Diagonal frame brace-74-1/2"	8
Diagonal frame brace--72"	4
Aluminum end cap (2" x 10•)	14
#10 x 3/4• self tapping screw	28
Aluminum Plank clip	70

MATERIAL LIST	QTY
5/16" x 1" carriage bolt	70
5/16" flat washer	70
5/16" lock nut- nylock	70
3/8• x 1-1/4" hex bolt	19
3/8 flat washer	38
3/8• lock nut - nylock	19

OPTIONAL GROUND SILL HARDWARE

MATERIAL LIST	QTY
2" x 6" x 6'-6" Ground Sill	5
5/16" x 1-1/2" Lag Screws	15
5/16" Flat Washer	15

ATHLETIC MFG. CO. Patterson-Williams
QUALITY ATHLETIC AND PARK EQUIPMENT SINCE 1919

P.O. Box 9028
Ph: 800-687-5768
Fax: 866-888-1110
Mesa, AZ 85214

SCALE:	N.T.S.
DATE:	5-4-04
DRAWN BY:	AMC
REV:	6-29-06

TITLE: *Specification/Installation Instructions*

4 ROW BLEACHERS

DWG. NO.
MODEL #1174-27 4 ROW 27' STEEL
MODEL #1175-27 4 ROW 27' ALUMINUM

SHEET 4 OF 4

INVITATION FOR BIDS

BLEACHERS AND RELATED PRODUCTS

BID #22-374

*STURDISTEEL OUTDOOR BLEACHERS ALUMINUM STADIUM SEATING

Continuous Angle Frame Bleachers

PORTABLE BLEACHERS AND CONTINUOUS ANGLE FRAME BLEACHERS
PART 1 GENERAL

1.01 SECTION INCLUDES

A. Design and fabrication of portable bleachers and continuous angle frame bleachers.

1.02 REFERENCES

A. ASTM A36 - Specification for Structural Steel.

B. ASTM A123 - Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.

C. ASTM A307 - Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile.

1.03 SUBMITTALS

A. Submit shop drawings in accordance with Section 01300 - Submittals.

B. Shop Drawings: Submit shop drawings sealed by a registered professional engineer indicating location, size, details, and quantity of all steel, aluminum, and wood components.

1.04 QUALITY ASSURANCE

A. Codes and Standards: Design, fabrication, and installation shall be in accordance with applicable codes, regulations, and handicap requirements. Owner will furnish local code requirements.

B. Manufacturer Qualifications: Minimum 10 years experience in the design and manufacture of bleachers.

C. Manufacturer Installed Qualifications: Employ persons trained and experienced in the installation of bleachers.

D. Welders: AWS certified.

1.05 WARRANTY

A. Guarantee bleachers to be satisfactory as to design, workmanship, and materials for 1 year beginning after completion of project. Guarantee also covers bleachers erected by the Owner and inspected by Sturdisteel personnel.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. Sturdisteel Company, PO Box 2655, Waco, Texas 76702-2655. (800) 433-3116. Fax (254) 666-4472.

2.02 PORTABLE BLEACHERS AND CONTINUOUS ANGLE FRAME BLEACHERS

A. Size: _____ feet long by _____ rows. (Refer to Seating Capacity Chart for portable bleachers or continuous angle frame bleachers.)

B. Design: Design shall be in accordance with American Institute of Steel Construction and Specifications for Aluminum Structures.

C. Design Loads:

1. Live Load: 100 psf gross horizontal projection.

2. Perpendicular Sway Load: 10 plf of seat plank.

3. Lateral Sway Load: 24 plf of seat plank.

4. Wind Load: 30 psf vertical projection.

5. Live Load for Seat and Tread Planks: 120 plf.

6. Guardrail Loads:

a. Vertical: 100 plf.

b. Horizontal: 50 plf.

D. Shop Connections: Welded and capable of carrying stress put upon them.

E. Welding: AWS standards.

F. Framework: Space prefabricated angle bleacher frames at 6 foot intervals and connect by cross braces.

G. Rise and Depth Dimensions:

1. Vertical Rise and Horizontal Depth per Row: 8 inches by 24 inches.

2. Seat Above its Respective Tread: 17 inches.

H. Riser: Nominal 1 by 8 mill aluminum plank at top row for elevated units and 10, 15, or 20 row non-elevated units. (optional riser plank at top row of 5 row non- elevated units or all rows of non-elevated and elevated units.)

I. Seats: Nominal 2 by 10 anodized aluminum plank, with 2 by 10 end caps.

J. Treads: Nominal two 2 by 10 mill aluminum plank with 2 by 10 end caps for elevated units or 10, 15, and 20 row non-elevated units. Nominal one 2 by 10 mill aluminum plank for 3 or 5 row non-elevated units. (optional two 2 by 10 at all rows.)

K. Guardrail: Each line with end plugs at ends of straight runs and elbows at corners. Secure to angle rail risers by fasteners.

1. Back and Side Top Rails: 42 inches above its adjacent seat.

2. Front Walkway Top Rails: 36 inches above plank decking.

3. Elevated Units: 2-line guardrail at back, sides and front.

4. Non-Elevated: 5, 10, 15, or 20 Row Units: 2-line guardrail at back and above row 3 at sides.

5. Chain Link Fence Enclosure: In accordance with local code requirements.

L. Front Walkway on Continuous Angle Frame Bleachers: 60 inches wide (optional 42 inch width), elevated 30 inches high (Optional 40 inches). Walkway deck with 2 by 10 mill aluminum plank, match footboards.

M. Steps: Frames with 2 by 12 mill aluminum plank.

N. Transport Kit for Portable Bleachers: Painted steel tube tow bar with tongue. Wheel sets with 5.30 x 12 tires.

O. Entry Stairs: Provide entry stairs for elevated bleachers in accordance with local code requirements.

P. Aisle Width: 48 inches, unless greater width specified by local code requirements.

Q. Mudsills: 2 inch by 8 inch treated lumber, drilled for field bolting. Not required for slab or concrete runners.

R. Press Box: Independently support and connect to rear of bleacher the press box support structure. (Contact Sturdisteel for complete press box specifications.)

S. Handicap Provision: Incorporate ramps and wheelchair spaces within bleacher system in accordance with local code requirements and ADA.

2.03 MATERIALS

A. Framework:

1. Galvanized Steel: ASTM A36. Hot-dipped galvanized after fabrication in accordance with ASTM A123.

2. Aluminum: Aluminum alloy 6061-T6, mill finish.

B. Extruded Aluminum:

1. Seat and Riser Planks: Extruded aluminum alloy 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II.

2. Tread Planks: Extruded aluminum alloy 6063-T6, mill finish.

C. Guardrail: Aluminum anodized pipe, 1.66 inches O.D.

D. Chain link: 9 gauge galvanized steel, Knuckle-Knuckle.

E. Accessories:

1. Steel Bolts and Nuts: ASTM A307 galvanized.

2. Hold-Down Clip Assembly: Aluminum alloy 6063-T6.

3. Channel End Caps: Aluminum alloy 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install portable bleachers and continuous angle frame bleachers complete in accordance with manufacturer's written instructions and approved shop drawings.

(Optional installation provided by manufacturer's trained crews.)

Note: Building codes vary from each site. It is the customers responsibility to verify local code requirements. Adjustments to meet LOCAL code requirements may require additional features.

GENERAL

1.01 SECTION INCLUDES

A. Design and fabrication of aluminum stadium seating for new or existing grandstands or bleachers.

1.02 REFERENCES

A. ASTM A307 – Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile.

1.03 SUBMITTALS

A. Submit shop drawings in accordance with Section 01300 – Submittals
B. Shop Drawings: Submit shop drawings sealed by a registered professional engineer indicating location, size, details, and quantity of all steel and aluminum components

1.04 QUALITY ASSURANCE

A. Codes and Standards: Design, fabrication, and installation shall be in accordance with applicable codes, regulations, and handicap requirements. Owner will furnish local code requirements.
B. Manufacturer Qualifications: Minimum 10 years experience in the design and manufacture of aluminum stadium seating
C. Installer Qualifications: Employ persons trained and experienced in the installation of aluminum stadium seating
D. Welders: AWS certified

1.05 WARRANTY

A. Guarantee aluminum stadium seating to be satisfactory as to design,workmanship, and materials for 1 year beginning after completion of project.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. Sturdisteel Company, P.O. Box 2655, Waco, TX 76702-2655.
Tel (800) 433-3116
Fax (254) 666-4472

2.02 ALUMINUM BENCH SEATS

A. Aluminum Extrusions:
    1. Planks:
        a. Maximum Clear Anodizing Length: 32 feet
        b. Tread Planks, Riser Planks: Extruded aluminum alloy 6063-T6, mill finish.
    2. Seat Planks, Backrests, Stanchions, and Covers: Extruded aluminum alloy 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II. Baked enamel primary colors or powder coat (optional on backrest)
    3. Joint Sleeve Assembly: Extruded aluminum alloy 6063-T6, mill finish. Insert aluminum sleeves in flat plank to maintain alignment in joining together 2 plank pieces.
        a. length: 12 or 18 inches
B. Accessories:
    1. End Caps: End of rows for flat seat planks and tread planks. Attach w/ 3/16 inch pop rivets.
        a. Channel End Caps
        b. Form Fitted End Caps
    2. Hold-Down Clip Assembly: Attach plank to bracket.
        a. Hold down clip: 4-way adjustable, 5/16 inch by 1 ¼ inch carriage bolt, 5/16 inch hex nut

2.03 HARDWARE

A. Steel Bolts and Nuts: ASTM A307, galvanized or cadium plated.
B. Hold down clip assembly: Aluminum alloy 6061-T6.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install aluminum stadium seating complete in accordance with manufacture's Written instructions and approved shop drawings.

All bleachers must meet the Uniform Building Code for the jurisdiction having authority at the point of installation.