



INLINE XTREME™ PRO (outdoor)

ENGINEERED DASHERBOARD SPECIFICATIONS

PART 1 - GENERAL

1.01 PROJECT SCOPE

- A. Contractor shall furnish and install one complete set of steel framed dasherboards as indicated on the drawings and specified herein. The contractor shall be responsible for all necessary labor, materials, equipment, and services to complete the project.

1.02 SUBMITTALS

- A. The contractor shall upon receipt of contract from Owner, prepare a set of shop drawings which will itemize sizes and materials as well as construction details for installation. The manufacturer will submit drawings to the Contractor for review and submittal to the Engineer, Architect or Owner for approval prior to actual fabrication of materials.
- B. Facing samples shall be submitted for Owner approval of color and quality.

1.03 QUALITY ASSURANCE

- A. All materials shall be per plans and specifications and constructed, manufactured, and installed per plans and specifications. All equipment and materials supplied under these specifications shall be new and of the highest grade material and construction.
- B. Approved dasherboard systems, manufacturers and installers:
 1. **Inline Xtreme™ Pro** dashboard system identical in design to Rink Systems, Inc., Albert Lea, Minnesota.
- C. To receive approval prior to bid, dashboard contractors must:
 1. Provide evidence of at least five (5) installations similar in construction to the following specifications, each with a minimum of three (3) years operating experience prior to the bidding date. A list of these installations including names, addresses, contacts, and telephone numbers is to be included with requests for prior approval.
 2. Manufacturers wishing to obtain prior approval shall have a factory representative perform a site visit.

3. Submit a sample panel of proposed dashboard system being bid showing exactly how the system will be manufactured. Samples shall show how shield mounting hardware will be attached to system, as well as samples of gate latches, hinges, and related hardware.
 4. Submit dasher shop drawings detailing systems design. Drawings must be prepared and approved by a licensed professional engineer.
 5. Approval must be obtained at least 10 days prior to the bid date.
- D. Bids received from contractors without prior approval will be returned unopened.

1.04 GUARANTEE

- A. Manufacturer shall warranty all equipment provided under this project against all defects in materials and/or workmanship for a period of three years from the date of completed installation.

1.05 DELIVERY

- A. To be arranged to coordinate with completion date of the project. Delivery date shall allow for sufficient installation time prior to project completion date.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURER/TYPE

- A. As noted in 1.03 B above.

2.02 MATERIALS AND EQUIPMENT

- A. Demountable Frame Sections:

1. Dasher panels shall be fabricated in demountable sections of nominal 8' lengths. The design of all panels, whether straight sections, curved sections, or sections in which a gate is located shall be fundamentally similar.
2. Each section shall be made of three horizontal 2" x 1-1/2" x 14 ga. steel rectangular tubes used at the top, mid, and base locations.
3. At the back, each section shall have two 2" x 2" x 11GA steel square tubes welded vertically within the panel to accept the shielding posts.
4. At the bottom of each section, shall have two 1/2" x 6" x 6" steel hold down plates welded to the angle and support tubes. Plates shall have a 1" hole to accept a 3/4" bolt and flat washer for securing the dasher panels to the 3/4" drop-in type floor anchors.

5. All horizontal angles shall be welded to end plates on each end of the panel. The end plates shall be made of a 2" x 2-1/2" x 3/16" steel angle.
6. Each end plate shall have three 9/16" matching holes to accommodate 1/2" through bolts.
7. Each panel is to be a complete welded construction. After construction of the framing, each panel shall hot dip galvanized.
8. Standard size of dasher panel frame shall be 96" long x 42" high x 4" thick.
9. Dasherboard system shall be self supporting. Systems which require separate support posts to support the dashboard system are not acceptable.
10. The use of aluminum frame members as a substitute for hot dip galvanized steel is not acceptable.

B. Floor Anchors:

1. The dasher contractor shall supply all new steel anchors and hardware, as detailed on the drawings, required for the installation of the dasherboards around the perimeter of the rink.
2. The dasher contractor shall supply 1/2" x 6" x 6" steel hold down plates. Plates shall have a 7/8" hole to accept a 5/8" bolt and flat washer for securing the dasher panels to the 5/8" epoxy sleeve type floor anchors. Each panel shall be fastened to the floor with a minimum of two 5/8" anchors and bolts per 8' section. Anchors smaller than 5/8" diameter are unacceptable.
3. In applications where the dasherboards are to be removed, all anchors shall be supplied with flush plugs.

C. Dasher Facing:

1. Dasherboard cladding shall be Rinkmaster Outboard™ FRP facing.
2. The facing shall be constructed of 1/4" or 3/8" UV stabilized solid fiberglass sheeting, color white, texture smooth
3. Facing panels shall be one piece and cut to match length of demountable framing sections.
4. On panels that require game lines, a vinyl adhesive back strip shall be installed over the facing material. The kickplate shall be removed by the widths specified so that a 1/2" thick red kickplate panel of high molecular weight polyethylene can be inserted. Lines shall extend from the kickplate to the caprail.

5. The facing material shall be attached to the horizontal and vertical frame members with 1/4" phillips flat head tek screws. Spacing of fasteners shall not exceed 10" on center. All exposed fastener heads shall be painted to match facing color.

D. Caprail:

1. The caprail shall be constructed of 3/4" thick UV stabilized high density polyethylene. The caprail must have a textured or mat finish. A smooth finish shall be unacceptable.
2. The 3/4" caprail shall be attached to the front horizontal frame member with 1/4" phillips flat machine screws and locking nuts. Spacing of fasteners shall not exceed 12" on center. All exposed fastener heads shall be painted to match caprail color.
3. The caprail shall have smooth and radiused edges on the front and back edges.
4. Caprail to be (red) (dark blue) in color.

E. Kickplate:

1. Kickplate shall be constructed of 1/4" thick x 8" high, solid fiberglass, and shall surround the entire rink.
2. The top edge of the kickplate shall be beveled.
3. The 1/4" kickplate shall be attached to the bottom of the dasher panel with 1/4" phillips flat head tek screws. All fastener heads used to attach kickplate to dasher panels shall be painted to match the kickplate color.
4. Red center line and blue lines shall be flush or integral with the kickplate.
5. Kickplate shall be yellow in color.

F. Access and Players' Gates:

1. Access gates shall be 3'-0" wide and/or 4'-0" wide in quantity as specified in the drawings.
2. Players' gates shall be 2'-6" wide in quantity as specified in the drawings.
3. Gates shall be built into 8' dasher panels and shall be left or right hand swing as specified in the drawings.
4. Gate panels shall be constructed of the same materials and methods as the demountable frame panels.

5. The double bar gate latch mechanism shall be designed so the gate can be closed and latched in a single movement. The gate handle shall be designed so players wearing hockey gloves can easily open the gates. Latches shall be of solid welded steel construction. Spring loaded bolt latches shall be unacceptable.
6. Hinges for all gates shall be of steel construction and bolted to the frame for easy maintenance, two per gate door. Hinges to have horizontal and vertical adjustment. Hinges shall have 1/2" diameter pins and grease fittings for lubrication purposes. Hinges shall be designed so gates can be lifted off and removed. Piano style hinges or hinges welded to the frame shall be unacceptable.
7. All single swing access and player gates shall have 3/8" x 3-1/2" x 3" door stops welded to the frame gate. All gate with shielding shall be equipped with push button releases located on the caprail on the ice side of the shielding. Latches shall be designed so players wearing hockey gloves can easily open the gates.
8. Gates with shielding shall be made to accept shield mounting hardware.
9. Thresholds for 3' and 5' access gates shall be approximately 2" above floor level.
10. Thresholds for players' and penalty box gates shall be 8-1/2" above floor level.

G. Equipment Gate:

1. Equipment gate shall be a double leaf gate with either a 8'-0" or 10'-0" opening. Each leaf shall be either 4' or 5' wide, respectively.
2. Gate panels shall be constructed of the same materials and methods as the demountable frame panels.
3. Hinges for all gates shall be of steel construction and bolted to the frame for easy maintenance, two per gate door. Hinges to have horizontal and vertical adjustment. Hinges shall have 1/2" diameter pins and grease fittings for lubrication purposes. Hinges shall be designed so gates can be lifted off and removed. Piano style hinges or hinges welded to the frame shall be unacceptable.
4. Equipment gate latch shall be the sliding bar type, constructed of 2" x 2" x 11ga square tubing for structural rigidity, with a large grasp handle. Slide bars fabricated from round tube shall be unacceptable.
5. Each equipment gate shall lock into the steel threshold with 3/4" x 12" long cane bolts.
6. Each equipment gate shall be equipped with a sturdy spring loaded, adjustable caster. For safety and component protection, the spring shall be totally enclosed in the caster mechanism, casters with exposed springs shall be unacceptable.

7. Threshold for equipment gate shall be 1" above floor level.

H. Hardware:

1. All steel hardware used during the construction or installation of the system shall be hot dip galvanized or stainless steel for rust resistance.
2. Hardware shall include hinges, latches, nuts, bolts, washers, and miscellaneous fastening devices necessary to complete installation.

I. Thresholds:

1. Access and players' gates shall have 1" thick high molecular weight polyethylene, replaceable thresholds.

J. Spectator Shielding (Tempered Glass):

1. Shielding shall be clear float tempered glass, 1/2" thick on the ends and corner radii of the rink and 1/2" thick at the sides of the rink. Tempered glass shielding shall have the top two corners clipped and all edges ground to minimize breakage and for safety in handling. Seamed edges are not acceptable.
2. All shielding shall be 48" wide except those at gates, or similar openings in the dasherboards.
3. Height of spectator shielding shall be 6' above the dasher caprail at the ends and corners radii of the rink.
4. Height of spectator shielding shall be 4' above the dasher caprail at the sides of the rink.
5. Spectator shielding shall be installed behind and along side, but not in front of players boxes at a height of 4' above the dasher caprail.
6. Spectator shielding shall be installed behind, along side, and in front of penalty boxes at a height of 4' above the dasher caprail.
7. Spectator shielding shall be installed behind, along side, and in front of officials box at a height of 4' above the dasher caprail.
8. Transition spectator shielding shall be installed to connect shields of differing heights.
9. Specially designed vinyl covered foam safety pads shall be placed at all corners of spectator shielding inside rink to prevent injury. Color of padding shall match the caprail.

10. All spectator shielding shall be mounted in aluminum support posts.

K. Glass Shield Mounting Hardware:

1. Spectator shield mounting supports shall be rectangular (H-channel) in design and of one piece construction. Shield mounting supports shall be made of solid architectural grade aluminum (alloy #6061-T6). Supports shall be installed through a snug fitting contoured opening in the finished caprail and secured at the bottom with a support mounting bracket at the center horizontal tube of the dasher panel. Installation of shielding panels to be from the rink side with the vertical support posts within the dimensions of the panels. No protruding anchors shall extend behind the boards. Total width of supports shall not exceed 2-1/2".
2. Spectator shield mounting supports shall be furnished with PVC gasketing to secure and cushion the shield panels.
3. Mounting hardware is to be removable so that the spectator shielding can be removed without demounting the dasher system. The round shield supports shall be attached at the center angle with rectangular mounting pocket that extends a minimum of 4" into the support post.
4. Gate shield mounting hardware shall be made of architectural grade extruded aluminum (alloy #6061-T6). It shall be of one piece design to allow the operation of the gate sections.
5. The height of the supports above the caprail shall be 2" below the height of the shielding.
6. The spectator shield supports shall be nominally 48" apart except at gates or similar openings in the dasherboards.

L. Spectator Shielding (Chain Link Fencing):

1. Shielding shall be 6 gauge extruded vinyl coated chain link steel fence 2" x 2" mesh fabric mounted to vertical and horizontal fence post members. Fencing system shall be securely held in place with the appropriate hardware.
2. Vertical fence posts shall be 1-5/8 schedule 20 galvanized steel pipe located on 8' centers. Posts shall be installed through a snug fitting contoured opening in the finished caprail and secured at the bottom with a support mounting bracket at the center horizontal tube of the dasher panel.
3. Horizontal top and bottom rails shall be 1-5/8" schedule 20 galvanized steel pipe.
4. Height of fencing shall be 6' above the dasher caprail at the ends and corners radii of the rink.

5. Height of fencing shall be 4' above the dasher caprail at the spectator side of the rink.
6. Fencing shall be installed behind and along side, but not in front of players' boxes at a height of 4' above the dasher caprail.
7. Fencing shall be installed behind, along side, but not in front of penalty boxes at a height of 4' above the dasher caprail.
8. Fencing shall be installed behind, along side, and in front of officials' box at a height of 4' above the dasher caprail.
9. Specially designed vinyl covered foam safety pads shall be placed at all corners of spectator shielding inside rink to prevent injury. Color of padding shall match the caprail.

M. Boxes:

1. Boxes shall consist of two players boxes 24' in length, two penalty boxes 8' of length, and one official box 8' long. Box shall be 5' deep.
2. Incorporated into the players box areas shall be a shelf for the storage of water bottles, etc. This shelf shall be 1/4" white fiberglass identical in color of the 1/4" white facing material and be constructed as detailed on the drawings. The shelf shall be located between the players gates.
3. One 1" x 20" x 8'-0" polyethylene score's table shall be installed in the officials box as shown on the drawings. The color of the table shall be white.

N. Benches:

1. The benches used in the players and penalty boxes shall be constructed of 2" thick by 9-1/2" wide fluted aluminum planking. The use of thinner bench material requiring the use of steel or aluminum angle horizontal supports is not acceptable.
2. The players box benches shall be 24' in length. The penalty box benches shall be 6' in length. The scorekeepers bench shall be 6' in length.
3. The benches shall be supported using supports constructed of 8" x 8" x 1/4" steel plates welded to 2" x 2" x 11 ga. steel square tubing. Height of benches shall be as indicated on drawings.
4. The supports will not exceed 6'-0" on center and will be fastened to the bench material with 5/16" flat head bolts and 5/16" lock nuts.

O. Netting:

1. Spectator protective netting shall be black nylon, 1-1/2" mesh, 420 lb. break strength. Grommets shall be located every 18" on top and sides and at each shielding support location at tie bottom edge. Netting shall be coated for outdoor use.
2. Netting shall be 4' in height and extend the length of each end and radius of the rink and fastened to the shielding supports in such a way to prevent pucks from falling outside the rink area.
3. Glass shielding or fencing support posts shall be extended vertically to support netting. 1/8" galvanized aircraft cabling will be installed at the horizontally at the top and bottom of the net for support.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Manufacturer shall construct, fabricate and deliver all materials to the job site per plans and specifications under the direct supervision of a licensed professional engineer. All materials shall be installed to result in a complete steel frame dasher system with all boards and shielding to be straight and true in line and properly braced. All installation work shall be completed by a factory installation crew
- B. Installation shall be in strict conformance with manufacturer's requirements and instructions. Erect units rigid, straight, level, plumb, and true with horizontal and vertical lines level, and securely anchored in place. Whether shown on the drawings or not, this contractor shall provide all accessory materials for a complete, finished installation. No defective, scratches, marred or otherwise equipment and materials shall be installed.
- C. Put all items of equipment and systems through at least five complete cycles of operation, verifying that each item is properly installed and properly operating, and making required adjustments to achieve optimum operation.

3.03 CLEANING

- A. Clean all surfaces removing all evidence of dirt, packaging materials and protective wrappings.
- B. Replace all damaged materials including scratched glass.

END OF SECTION