ARCHITECTURAL FENCE GUIDE

CONSTRUCTION SPECIFICATION 32 31 00

ORNAMENTAL STEEL FENCES & GATES | ORNAMENTAL ALUMINUM FENCES & GATES
HIGH SECURITY FENCES & GATES | ENGINEERED CANTILEVER, ROLL & PEDESTRIAN EGRESS GATES

FENCE PRODUCTS

AMERISTARFENCE.COM | 800-321-8724
Experience a safer and more open world

ASSA ABLOY
Ameristar’s Project Solution Specialists are experienced in every facet of perimeter security design. Our goal is to assist the architectural community in finding the best perimeter and entry solutions for their projects.

SERVICES

- Extensive library of project photos
- BIM & CAD drawings
- Architectural specifications
- Project budget quotes
EDUCATION
As a registered AIA/CES provider, we offer a variety of educational LU, HSW and CE programs to help you make informed decisions, including the following:

- Architectural Perimeter Security Alternatives
- Bollards – Perimeter Security and Traffic Management Design & Practices
- Codes and Standards for Perimeter Security
- Fence Framework – Design and Construction Standards
- Integration of Safety Standards Site/Climate Conditions with Gates and Automation
- Perimeter Security Planning, Products and Procedures
- Understanding Modern Ornamental Fence Products and Applications

All programs listed above qualify for AIA/CES learning units.

AFFILIATES
- Airports Council International ACI-NA (ACI)
- American Association of Airport Executives (AAAE)
- American Fence Association (AFA)
- American Institute of Architects (AIA)
- American Society for Industrial Security (ASIS)
- American Society of Landscape Architects (ASLA)
- Chain Link Fence Manufacturers Institute (CLFMI)
- Security Industry Association (SIA)
- Society of American Military Engineers (SAME)

See full list of affiliates on our website

See complete list of all programs offered at ameristarfence.com/education
Montage fence systems are coated inside and out for maintenance-free protection.

Montage fence systems are backed by over 30 years of excellence in the fencing industry.

Ameristar is committed to providing products that meet the Buy American Act.

Ameristar products have the opportunity to earn LEED points.
PROFUSION WELDING

Montage fence panels are fabricated through a welding technique that combines laser and fusion technology to create a virtually invisible structural connection at every picket to rail intersection. Montage welded steel construction is unmatched in strength and durability.

RAKEABLE VS STAIR-STEP

The ProFusion welded picket to rail connection is the method used to construct Montage panels, which allows a minimum biasability of 25%, eliminating any possible security risks due to large gaps under the fence panels.

- **FULLY RAKEABLE PANELS**
- **STAIR-STEPPING PANELS**

PICKET TO RAIL PROFUSION WELDING

Each picket is welded precisely at each rail connection for ease of installation yet remaining flexible as an all-terrain fence.

- **PANEL BRACKET**
  - Universal Boulevard Bracket enables easy installation while allowing for adjustment of panel height and positioning
- **SECURITY FASTENERS**
  - Security fastener secures the rail and deters removal by typical tools
- **NO VISIBLE WELDS**
  - Profusion welding techniques are both strong and hidden from view providing a good neighbor profile
Major corrosion problems start from the inside. That’s why all products in the Montage® family are coated inside and out. Our galvanized steel framework is subjected to a multi-stage pre-treatment/wash, followed by a duplex cathodic electrocoat system consisting of an epoxy primer, which significantly increases corrosion protection, and an acrylic topcoat, which provides the protection necessary to withstand adverse weathering effects.
Immersion processes coat and cleanse the inside of the fence components as thoroughly as the outside. This prevents corrosion, giving Montage products the ability to withstand the elements and be maintenance-free.

**Layered Protection**

Protection against corrosion starts with a proven process, which is why Ameristar emulated its PermaCoat method to develop a superior E-Coat process that protects the product with complete coverage inside and out.

- Acrylic Topcoat
- Epoxy Primer
- Phosphate
- Galvanized Steel
Built for strength yet a penchant for beauty, Montage II is an industrial grade steel fence that delivers on both levels. Superior welding techniques create a profile that lends itself to landscaping design while maintaining a level of perimeter security that is unmatched.
Montage II gate options vary from swing gates for pedestrian or vehicle access to sliding gates for high-functioning points of entry. Each of these gate systems is individually constructed to provide project specific performance.

<table>
<thead>
<tr>
<th>PICKETS</th>
<th>RAILS</th>
<th>POSTS</th>
<th>HEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot; SQ. x 14 GA.</td>
<td>1.75&quot; x 1.75&quot; x 12 GA.</td>
<td>2.5&quot; SQ. x 12 GA.</td>
<td>3', 3½', 4', 4½', 5', 6', 7', 8'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3&quot; SQ. x 12 GA.</td>
<td></td>
</tr>
</tbody>
</table>

**STYLES**
- CLASSIC™
- MAJESTIC™
- GENESIS™
- INVINCIBLE™

**ADORNMENTS**
- QUAD FLARE
- TRIAD
- ROYALTY
- BALL CAP

**COLORS**
- BLACK
- BRONZE

Refer to color sample for actual color
Montage Commercial steel fences have redefined the commercial fence industry with strength that matches the level of security demanded. In the past commercial fencing was defined as a chain link fence with three strands of barb wire, today Montage Commercial ornamental fences are the standard for security fencing.
Montage Commercial gate options vary from swing gates for pedestrian or vehicle access to sliding gates for high-functioning points of entry. Each of these gate systems is individually constructed to provide project specific performance.

<table>
<thead>
<tr>
<th>PICKETS</th>
<th>RAILS</th>
<th>POSTS</th>
<th>HEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>.75” SQ. x 14 GA.</td>
<td>1.4375” x 1.5” x 14 GA.</td>
<td>2.5” SQ. x 14 GA.</td>
<td>7’, 8’</td>
</tr>
</tbody>
</table>

**STYLES**

CLASSIC™ INVINCIBLE™ GENESIS™ MAJESTIC™

Also available in Pool, Pet & Play (3” air spacing)*

**ADORNMENTS**

QUAD FLARE TRIAD ROYALTY BALL CAP BUTTERFLY SCROLL DOUBLE RINGS

**COLORS**

BLACK BRONZE

Refer to color sample for actual color
The Montage Plus ornamental steel fence has the versatility to fit many different project applications. With its ability to traverse varying grades, variety of distinct product styles and unmatched coating performance, Montage Plus is the preferred choice for ornamental fence.
Montage Plus gate options vary from swing gates for pedestrian or vehicle access to sliding gates for high-functioning points of entry. Each of these gate systems is individually constructed to provide project specific performance.

<table>
<thead>
<tr>
<th>PICKETS</th>
<th>RAILS</th>
<th>POSTS</th>
<th>HEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>.75&quot; SQ. x 18 GA.</td>
<td>1.4375&quot; x 1.50&quot; x 14 GA.</td>
<td>2.50&quot; SQ. x 16 GA.</td>
<td>3’, 3½’, 4’, 4½’, 5’, 6’</td>
</tr>
</tbody>
</table>

**COLORS**

- BLACK
- BRONZE

**STYLES**

- CLASSIC™
- MAJESTIC™
- GENESIS™
- WARRIOR™

**ADORNMENTS**

- QUAD FLARE
- TRIAD
- ROYALTY
- BALL CAP
- BUTTERFLY SCROLL
- DOUBLE RINGS

*Also available in Pool, Pet & Play (3” air spacing)*

**COLORS**

Refer to color sample for actual color
AEGIS II® Xtreme
Pedestrian Ornamental Railing

AEGIS II®
Industrial Ornamental Steel Fence

AEGIS PLUS®
Commercial Ornamental Steel Fence

Ameristar's Aegis fence systems are protected to endure the elements and are maintenance-free.

Ameristar's Aegis fence systems are backed by over 30 years of excellence in the fencing industry.

Ameristar is committed to providing products that meet the Buy American Act.

Ameristar products have the opportunity to earn LEED points.
FORERUNNER® LOCKING SYSTEM

Ameristar crafted the ForeRunner rail to increase strength through architecture. The innovative design of the ForeRunner rail contains an internally secured rod that allows for variable pitch connection, high-angle biasability and eliminates the need for visually unappealing external fasteners. The ForeRunner rail is galvanized inside and out to protect against internal corrosion, putting it in the upper echelon of fencing solutions.

Increased security
The ForeRunner Rail with internal retaining rod prevents the attachment from being compromised. Fasteners are not exposed.

Aesthetic details
“Good Neighbor Design” rod follows ForeRunner centerline providing a clean and uninterrupted look, void of visible screws or rivets.

RAKEABLE VS STAIR-STEP

Having a unique picket to rail connection allows Aegis products a minimum biasability of 25%, eliminating any possible security risks due to large gaps under the fence panels.

FULLY RAKEABLE PANELS

STAIR-STEPPING PANELS
The majority of Ameristar products are protected by the unique PermaCoat process. Our pre-galvanized steel base material is subjected to an 11-stage process to cleanse & prepare the steel for a dual top-coat finish. PermaCoat’s corrosion resistant abilities far surpass those of painted surfaces and have a “no-mar” polyester powder top coat. This dual coating not only provides resistance from weathering but also reduces scratch and burnishing marks typically encountered during shipping.
Once completed, these 7 stages will have removed everything from the surface of the steel that might inhibit the finish from properly adhering during the next 4 stages of the coating process.

**CORROSION TESTING**

Corrosion occurs more easily without the proper preparation and protection, which is why Ameristar has put our fence products to the test based on ASTM B117 standards. The results speak for themselves.

- **100 HOURS**
  - **PAINTED STEEL**

- **168 HOURS**
  - **PRIMED & PAINTED STEEL**

- **200 HOURS**
  - **SINGLE COAT PROCESS**
    - Iron Phosphate + Polyester Powder Coat

- **1,500 HOURS**
  - **SINGLE COAT PROCESS**
    - Phosphate + Polyester Powder Coat

- **3,500 HOURS**
  - **PERMACOAT PROCESS**
    - Phosphate + Epoxy Powder Coat + Polyester Powder Coat
Aegis II® Xtreme
Pedestrian Ornamental Railing

Engineered to meet AASHTO LRFD

Aegis II Xtreme is the obvious front-runner in strength and durability for decorative pedestrian bridge railing. With a dual ForeRunner rail and multi-layer coating, this pedestrian railing is unmatched in overall product performance. In addition, the manufactured design of Aegis II Xtreme allows for a simplistic installation that yields extreme project savings.
<table>
<thead>
<tr>
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<th>HEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot; SQ. x 14 GA.</td>
<td>1.75&quot; x 3.5&quot; x 14 GA.</td>
<td>4&quot; SQ. x 11 GA.</td>
<td>3½', 4', 5', 6', 7' &amp; 8'</td>
</tr>
</tbody>
</table>

**DUAL FORERUNNER™ RAILS**

**STYLES**

- CLASSIC™
- MAJESTIC™
- GENESIS™
- INVINCIBLE™

**ADORNMENTS**

- QUAD FLARE
- TRIAD
- ROYALTY
- BALL CAP

**COLORS**

- BLACK
- BRONZE
- SAND
- WHITE

Refer to color sample for actual color

Custom colors also available

The innovative design of the Dual ForeRunner rail contains an internally secured galvanized retaining rod that allows for variable pitch connection, biasability and eliminates the need for visually unappealing external fasteners. Galvanized inside and out to protect against internal corrosion, the Dual ForeRunner rail is in the upper echelon of decorative railing options.
The strength of Aegis II is rivaled only by the elegance of its profile. Manufactured as an industrial grade fence system, it is designed for strength and durability. Balanced by the beauty of its design features, Aegis II matches the level of security demanded by any application.
Aegis II gate options vary from swing gates for pedestrian or vehicle access to sliding gates for high-functioning points of entry. Each of these gate systems is individually constructed to provide project specific performance.

**STYLES**

CLASSIC™

MAJESTIC™

GENESIS™

INVINCIBLE™

**ADORNMENTS**

- QUAD FLARE
- TRIAD
- ROYALTY
- BALL CAP
- RING (internally secured)

**COLORS**

- BLACK
- BRONZE
- SAND
- WHITE

Refer to color sample for actual color

Custom colors also available
Aegis Plus combines strength greater than most commercial steel fences with a surface finish that is essentially maintenance-free. The size of Aegis Plus works well for numerous applications where users are seeking greater strength and a more substantial look without the high cost of industrial fencing.
Aegis Plus gate options vary from swing gates for pedestrian or vehicle access to sliding gates for high-functioning points of entry. Each of these gate systems is individually constructed to provide project specific performance.

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<th>POSTS</th>
<th>HEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>.75&quot; SQ. x 17 GA.</td>
<td>1.5&quot; x 1.5&quot; x 14 GA. FORERUNNER™ RAILS</td>
<td>2.5” SQ. x 12 GA.</td>
<td>3', 3½', 4', 5', 6', 7', 8' Custom heights also available</td>
</tr>
</tbody>
</table>

**STYLES**
- CLASSIC™
- MAJESTIC™
- GENESIS™
- WARRIOR™

**ADORNMENTS**
- QUAD FLARE
- TRIAD
- ROYALTY
- BALL CAP
- RING (internally secured)
- BUTTERFLY SCROLL
- DOUBLE RINGS

**COLORS**
- BLACK
- BRONZE
- SAND
- WHITE

Custom colors also available

Refer to color sample for actual color
# AEGIS STEEL RAIL STRENGTH COMPARISON

<table>
<thead>
<tr>
<th>STRUCTURAL PARAMETERS</th>
<th>FORERUNNER™ AEGIS II®</th>
<th>SQUARE RAIL INDUSTRIAL</th>
<th>FORERUNNER™ AEGIS PLUS®</th>
<th>SQUARE RAIL COMMERCIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effective Wall Thickness</strong> (inches)</td>
<td>.160</td>
<td>.083</td>
<td>.160</td>
<td>.095</td>
</tr>
<tr>
<td><strong>Section Modulus (inches vertical)</strong></td>
<td>.1624</td>
<td>.188</td>
<td>.1612</td>
<td>.115</td>
</tr>
<tr>
<td><strong>Section Modulus (inches horizontal)</strong></td>
<td>.367</td>
<td>.309</td>
<td>.254</td>
<td>.147</td>
</tr>
</tbody>
</table>

**Architectural Profile of rail shape. Vertical Design Loads are per rail.**

(For capacity of fence panel, multiply by number of rails)

<table>
<thead>
<tr>
<th><strong>Vertical Load Data</strong></th>
<th>6' span</th>
<th>8' span</th>
<th>6' span</th>
<th>8' span</th>
<th>6' span</th>
<th>8' span</th>
<th>6' span</th>
<th>8' span</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PVf = Ultimate Vertical</strong></td>
<td>676#</td>
<td>506#</td>
<td>523#</td>
<td>392#</td>
<td>652#</td>
<td>492#</td>
<td>320#</td>
<td>239#</td>
</tr>
<tr>
<td><strong>Horizontal Load Data</strong></td>
<td>6' span</td>
<td>8' span</td>
<td>6' span</td>
<td>8' span</td>
<td>6' span</td>
<td>8' span</td>
<td>6' span</td>
<td>8' span</td>
</tr>
<tr>
<td><strong>PHf = Ultimate Horizontal</strong></td>
<td>1,020#</td>
<td>765#</td>
<td>859#</td>
<td>644#</td>
<td>639#</td>
<td>482#</td>
<td>409#</td>
<td>306#</td>
</tr>
<tr>
<td><strong>Vertical Load Data</strong></td>
<td>6' span</td>
<td>8' span</td>
<td>6' span</td>
<td>8' span</td>
<td>6' span</td>
<td>8' span</td>
<td>6' span</td>
<td>8' span</td>
</tr>
<tr>
<td><strong>PVd = Vertical Design Load @ 66° Fy</strong></td>
<td>446#</td>
<td>334#</td>
<td>345#</td>
<td>259#</td>
<td>430#</td>
<td>325#</td>
<td>211#</td>
<td>158#</td>
</tr>
<tr>
<td><strong>Horizontal Load Data</strong></td>
<td>6' span</td>
<td>8' span</td>
<td>6' span</td>
<td>8' span</td>
<td>6' span</td>
<td>8' span</td>
<td>6' span</td>
<td>8' span</td>
</tr>
<tr>
<td><strong>PHd = Horizontal Design Load @ 66° Fy</strong></td>
<td>673#</td>
<td>505#</td>
<td>567#</td>
<td>425#</td>
<td>422#</td>
<td>318#</td>
<td>270#</td>
<td>202#</td>
</tr>
</tbody>
</table>

*Recommended load value for safe structural design / allowable strength = 66° F
Echelon fence systems are protected to endure the elements and are maintenance-free.

Echelon fence systems are backed by over 30 years of excellence in the fencing industry.

Ameristar is committed to providing products that meet the Buy American Act.
FORERUNNER® LOCKING SYSTEM

Ameristar crafted the ForeRunner rail to increase strength through architecture. The innovative design of the ForeRunner rail contains an internally secured rod that allows for variable pitch connection, high angle biasability and eliminates the need for visually unappealing external fasteners.

 Increased security

The ForeRunner Rail with internal retaining rod prevents the attachment from being compromised. Fasteners are not exposed.

 Aesthetic details

“Good Neighbor Design” rod follows ForeRunner centerline providing a clean and uninterrupted look, void of visible screws or rivets.

RAKEABLE VS STAIR-STEP

Having a unique picket to rail connection allows Echelon products a minimum biasability of 12.5%, eliminating any possible security risks due to large gaps under the fence panels.

FULLY RAKEABLE PANELS

STAIR-STEP PANELS

GROMMET
Aesthetic appearance while preventing moisture collection

INTERNAL RETAINING ROD
Variable pitch connection system provides ease of installation, high angle biasability and eliminates unsightly external fasteners

FORERUNNER™ RAIL
“U” Channel is a specifically formed, high-strength architectural shape

REINFORCED POST
Center rib increases strength against wind loading and other horizontally applied forces

PANEL BRACKET
Universal Boulevard Bracket enables easy installation while allowing for adjustment of panel height and positioning

SECURITY FASTENER
Security fastener secures the rail and deters removal by typical tools
Echelon II’s superior strength and durability is a result of combining top-quality design components with a maintenance-free, architectural grade finish. This revolutionary fence system is comprised of aluminum posts, panels, and mounting brackets that are easily installed along any terrain.
Echelon II gate options vary from swing gates for pedestrian or vehicle access to sliding gates for high-functioning points of entry. Each of these gate systems is individually constructed to provide project specific performance.

**PICKETS** | **RAILS** | **POSTS** | **HEIGHTS**
--- | --- | --- | ---
1" SQ. x .062" | 1.75" x 1.75" x (.070" SIDE & TOP WALL) | 2.5" SQ. x .080" | 4', 5', 6', 7', 8', 9', 10'
FORERUNNER™ RAILS | | 3" SQ. x .120" | Custom heights also available

**STYLES**
- CLASSIC™
- MAJESTIC™
- GENESIS™
- INVINCIBLE™

**ADORNMENTS**
- QUAD FLARE
- TRIAD
- ROYALTY
- BALL CAP
- RING (internally secured)

**COLORS**
- BLACK
- BRONZE
- SAND
- WHITE

Refer to color sample for actual color

Custom colors also available

ECHELON PRODUCTS
**ECHELON II ALUMINUM RAIL STRENGTH COMPARISON**

<table>
<thead>
<tr>
<th>STRUCTURAL PARAMETERS</th>
<th>FORERUNNER™ ECHELON II</th>
<th>SQUARE RAIL INDUSTRIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Architectural Profile of rail shape. Vertical Design Loads are per rail. (For capacity of fence panel, multiply by number of rails)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| T_{eff} = Effective Wall Thickness (inches) | .070 | .100 / .070 |
| S_v = Section Modulus (inches vertical) | .125 | .135 |
| S_h = Section Modulus (inches horizontal) | .260 | .260 |

<table>
<thead>
<tr>
<th>Vertical Load Data</th>
<th>6’ span</th>
<th>8’ span</th>
<th>6’ span</th>
<th>8’ span</th>
</tr>
</thead>
<tbody>
<tr>
<td>PV_v = Ultimate Vertical</td>
<td>243#</td>
<td>182#</td>
<td>262#</td>
<td>182#</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Horizontal Load Data</th>
<th>6’ span</th>
<th>8’ span</th>
<th>6’ span</th>
<th>8’ span</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH_v = Ultimate Horizontal</td>
<td>505#</td>
<td>379#</td>
<td>499#</td>
<td>373#</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vertical Load Data*</th>
<th>6’ span</th>
<th>8’ span</th>
<th>6’ span</th>
<th>8’ span</th>
</tr>
</thead>
<tbody>
<tr>
<td>PV_d = Vertical Design Load @ 66° F_y</td>
<td>145#</td>
<td>109#</td>
<td>145#</td>
<td>109#</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Horizontal Load Data*</th>
<th>6’ span</th>
<th>8’ span</th>
<th>6’ span</th>
<th>8’ span</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH_d = Horizontal Design Load @ 66° F_y</td>
<td>303#</td>
<td>227#</td>
<td>299#</td>
<td>224#</td>
</tr>
</tbody>
</table>

* Recommended load value for safe structural design / allowable strength = .66° F
Echelon Plus has taken the quality and performance of aluminum ornamental fencing to a higher level. The strength characteristics of the reinforced rail and posts, coupled with a superior powder coat finish, make Echelon Plus the most durable .75" ornamental picket product on the market.
Echelon Plus gate options vary from swing gates for pedestrian or vehicle access to sliding gates for high-functioning points of entry. Each of these gate systems is individually constructed to provide project specific performance.
Developed by the US Department of Homeland Security, the SAFETY Act established a system of risk and litigation management for claims arising out of, relating to, or resulting from an act of terrorism.

Ameristar is committed to providing products that meet the Buy American Act.

Ameristar products have the opportunity to earn LEED points.

Impasse II fence systems are protected to endure the elements and are maintenance-free.

Impasse II is backed by over 30 years of excellence in the fencing industry.

Impasse II®
High Security Steel Palisade Fence

AMERISTARFENCE.COM | 800-321-8724
DESIGN INTEGRATION

The Impasse II framework is a raceway for wiring, conduits, and/or security cabling required around the perimeter of a project. This integrated design eliminates the need for costly trenching and boring, becoming a value-added solution for perimeter security upgrades.

When installing these security elements use Impasse II as a platform:
- Communication & Video Cables
- Intrusion Detection / Fiber Optic Cables
- Access Control Wiring
- Conduits
- Anti-Ram Cabling (Stalwart)

FABRICATION & DESIGN

- High-tensile Pre-Galvanized Steel
- Roll formed profiles yield significant system strength
- Design enables fence panels to follow terrain

SECURITY FASTENER

Security fastener secures the rail and deters removal by typical tools

I-BEAM POST

Specifically formed I-beam; pre-punched for rail attachment with pass through integrated design features

POST CAP

Cast aluminum cap adds beauty and provides closure

STEEL PALES

Specifically formed high strength corrugated architectural shape resists prying or bending; bolt holes are recessed to prevent bolt head from chiseling

HIGH STRENGTH RAIL

Specifically formed for strength through architectural shape; lower lip contoured to conceal and carry security elements such as anti-ram cabling, IDS, etc.
IMPASSE II®
High Security Steel Palisade Fence

Maintaining a secure perimeter is your first line of defense against potential threats. Impasse II fence systems serve as a visual deterrent backed with heavy steel components that give a higher level of protection compared to the traditional chain link or architectural mesh fence alternatives.

PRIMARY APPLICATIONS
- Military Sites
- Government Facilities
- Petroleum & Chemical Facilities
- Power Plants & Substations
- Airports
- Data Centers
- Ports of Entry
- Water Treatment & Storage

AMERISTARFENCE.COM | 800-321-8724
Impasse II gate options vary from swing gates for pedestrian or vehicle access to sliding gates for high-functioning points of entry. Each of these gate systems is individually constructed to provide project specific performance.

### COLORS

Refer to color sample for actual color

BLACK | BRONZE | SAND | WHITE

### STYLES

- **TRIDENT™**
- **STRONGHOLD™**
- **GAUNLET™**

### ANTI-SCALE OPTION

The Impasse II Anti-Scale fence system has decreased pale spacing, which deters climbing and delays those trying to cut or pry through the fence.

<table>
<thead>
<tr>
<th>PALES</th>
<th>RAILS</th>
<th>I-BEAM POSTS</th>
<th>HEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.75&quot; W x 14 GA.</td>
<td>2&quot; x 2&quot; x 11 GA.</td>
<td>3&quot; x 2.75&quot; x 12 GA.</td>
<td>6', 7', 8', 9', 10'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4&quot; x 2.75&quot; x 11 GA.</td>
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Ameristar is committed to providing products that meet the Buy American Act. Ameristar products have the opportunity to earn LEED points.

Stalwart systems are protected to endure the elements and are maintenance-free.

Ameristar’s fence framework for Stalwart is backed by over 30 years of excellence in the fencing industry.

STALWART OPTIMA®
Fiber Rope Anti-Ram Barrier

STALWART®
Post & Rail Anti-Ram Crash Barrier

STALWART IS®
Anti-Ram Barrier + Security Fence

STALWART II®
Anti-Ram Barrier + Ornamental Fence

STALWART PLUS®
Anti-Ram Barrier + Architectural Mesh
DESIGN INTEGRATION

The Stalwart framework is a raceway for wiring, conduits, and/or security cabling required around the perimeter of a project. This integrated design eliminates the need for costly trenching and boring, becoming a value-added solution for perimeter security upgrades.

Use the Stalwart framework as a platform for these security elements:
- Communication & Video Cables
- Intrusion Detection / Fiber Optic Cables
- Access Control Wiring
- Conduits
- Anti-Ram Cabling (Stalwart)

CRASH RATINGS

Stalwart offers multiple anti-ram ratings. Each installation can be designed with the most appropriate stand-off distance from the assets.

- M50
- M40
- M30
- PU60
- PU50
- PU30
- K12
- K8
- K4

SAFETY ACT CERTIFIED

Developed by the US Department of Homeland Security, the SAFETY Act established a system of risk and litigation management for claims arising out of, relating to, or resulting from an act of terrorism.
STALWART OPTIMA®

Fiber Rope Anti-Ram Crash Barrier

Stalwart Optima Fiber Rope System redefines and sets the standard in vehicle crash protection for the 21st century. The inherently flexible and innovative design allows for multiple changes of direction with run lengths from 16’ to 1,500’ linear runs. A shallow footer design and simplified installation round out the innovations making Stalwart Optima the most cost-effective, economical, crash tested barrier system on the market today.

RAILS | 11" x 2.75" POSTS | 8" Diameter / 15" Set Depth

Minimum runs of 16’ and greater

STALWART SYSTEMS PRIMARY APPLICATIONS
- Government Facilities
- State Facilities
- Military Sites
- Petroleum & Chemical Facilities
- Stadiums & Event Centers
- Schools & Universities

STALWART®

Post & Rail Anti-Ram Crash Barrier

The Stalwart post and rail anti-ram barrier is the most economical passive perimeter barrier on the market. The Stalwart standalone design, when installed adjacent to an existing perimeter fence, transforms the perimeter into a secure anti-crash perimeter system.

RAILS | 2" x 2" x 11 GA. I-BEAM POSTS | 3" x 2.75" x 12 GA.
STALWART IS®

Anti-Ram Barrier + Security Fence

Rails | 2.75" x 14 GA.  I-Beam Posts | 3" x 2.75" x 12 GA.
Rails | 2" x 2" x 11 GA.

Style Options

Trident™  Stronghold™  Gauntlet™

Stalwart IS unites the strongest security fence available with the most widely used anti-ram perimeter barrier. The appearance of Stalwart IS is a great visual deterrent that delivers strength and fortitude for keeping any assailant from easily breaching the perimeter.

STALWART II®

Anti-Ram Barrier + Ornamental Fence

Rails | 2" x 2" x 11 GA.  I-Beam Posts | 3" x 2.75" x 12 GA.

Style Options

Classic™  Majestic™  Genesis™  Invincible™

Stalwart II integrates the design features of a traditional ornamental iron fence with the resilience of the Stalwart anti-ram barrier. The ornamental picket design blends into its surroundings, not drawing attention to itself, but still maintaining the requirements of an anti-ram barrier.

STALWART PLUS®

Anti-Ram Barrier + Architectural Mesh

Rails | 2" x 2" x 11 GA.  I-Beam Posts | 3" x 2.75" x 12 GA.

Style Options

Uplink™  X-Span™  Wireworks™

Stalwart Plus combines the design components of an anti-ram barrier with the industrial appearance of architectural mesh. Diverse mesh options are available, providing varied levels of security with anti-cut and anti-climb properties.
Our polyester powder coated steel guarantees a maintenance-free and environmentally friendly fence.

WireWorks welded wire steel fence is backed by over 30 years of excellence in the fencing industry.

COLORS

BLACK  BRONZE  TUBE BROWN  GREEN  SAND  WHITE

Refer to color sample for actual color
DESIGN INTEGRATION

The WireWorks Anti-Climb framework is a raceway for wiring, conduits, and/or security cabling required around the perimeter of a project. This integrated design eliminates the need for costly trenching and boring, becoming a value-added solution for perimeter security upgrades.

When installing these security elements use WireWorks Anti-Climb as a platform:

- Communication & Video Cables
- Intrusion Detection / Fiber Optic Cables
- Access Control Wiring
- Conduits
- Anti-Ram Cabling (Stalwart)

FABRICATION & DESIGN

WireWorks is Ameristar’s line of welded wire fence, perfect for projects that require full visibility. This fence system provides unobstructed visibility, aesthetics and security while delivering a value-added fencing solution.
WireWorks Plus is the new standard in welded wire fencing

Each WireWorks Plus panel has been designed with a series of architectural “V” folds, vital to the overall reinforcement and strength of the welded wire fence system, providing:

- Unobstructed visibility
- Aesthetics
- Security

<table>
<thead>
<tr>
<th>WIRE PANELS</th>
<th>V-FOLDS</th>
<th>POSTS</th>
<th>HEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot; x 6&quot; MESH / 6 GA. WIRE</td>
<td>2, 2, 3, 4</td>
<td>2&quot; SQ. x 16 GA.</td>
<td>4', 5', 6', 8'</td>
</tr>
<tr>
<td></td>
<td>(4', 5', 6', 8' HEIGHTS RESPECTIVELY)</td>
<td>2.5&quot; SQ. x 16 GA.</td>
<td></td>
</tr>
</tbody>
</table>

PRIMARY APPLICATIONS

- Commercial Developments
- Parking Facilities
- Self Storage
- Parks & Recreation
- Schools & Universities
- Apartments (Multi-Family)
- Amusement Parks
- Healthcare Facilities
WireWorks Anti-Climb is a unique perimeter security system that maintains visibility while also delaying and deterring an attack. The tightly fabricated welded wire mesh is designed to provide additional protection from intruders on multiple fronts:

- The wire mesh’s tight spacing makes handholds and footholds virtually impossible.
- Minimal spacing between each welded wire strand makes it difficult to cut yet still provides increased visibility.
- This fence solution is groundable and meets IEEE standards.

<table>
<thead>
<tr>
<th>WIRE PANELS</th>
<th>RAILS</th>
<th>I-BEAM POSTS</th>
<th>HEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot; x .5&quot; x 10.5 GA. (8')</td>
<td>2&quot; SQ. x 11 GA. IMPASSE II</td>
<td>3&quot; x 2.75&quot; x 12 GA. (8')</td>
<td>8' &amp; 10'</td>
</tr>
<tr>
<td>3&quot; x .5&quot; x 8 GA. (10')</td>
<td></td>
<td>4&quot; x 2.75&quot; x 12 GA. (10')</td>
<td></td>
</tr>
</tbody>
</table>

WireWorks Anti-Climb®
High Security Welded Wire Mesh Fence

Primary Applications
- Petroleum & Chemical Facilities
- Power Plants & Substations
- Manufacturing Plants
- Military Sites
- Government Facilities
- Airports
- Railway
Matrix products are protected to endure the elements and are maintenance-free.

Matrix products are backed by over 30 years of excellence in the fencing industry.

Ameristar is committed to providing products that meet the Buy American Act.

MATRIX® PRODUCTS
High Security Perimeter Enclosure Grid

MATRIX®
Mesh Infill System

MATRIX HARDENED®
Infill + Pale System

MATRIX ALPHA®
Curtain Wall System

Ameristar Fence Company
1065 E. Brown Road
Tempe, AZ 85284
800-321-8724
www.ameristar.com

Ameristar is committed to providing products that meet the Buy American Act.
DESIGN INTEGRATION

Serving as a raceway for wires and cabling, the Matrix framework creates a smart perimeter platform. The design eliminates the need for costly trenching and boring, saving money without compromising security.

Available on Matrix and Matrix Hardened

The framework houses:
- Communication & video cables
- Intrusion detection/fiber optic cables
- Anti-ram cabling
- Access control wiring
- Conduits

ENGINEERED SOLUTIONS

Designed as a layered solution, Matrix systems exceed expectations and meet strict security standards.

CONFORMS TO IEEE GROUNDING STANDARDS

MEETS ASTM F2781 FORCED ENTRY STANDARD

MEETS ASCE 7-10 EXPOSURE C WIND LOAD

EXPANDABLE TO MEET ASTM F2656 CRASH BARRIER STANDARD

PRIMARY APPLICATIONS

- Power Utilities
- Petrochemicals
- Industrial Storages
- Waters and Wastewaters
- Data Storages
- Sally Ports
- Critical Infrastructures

This innovative fence solution expands to accommodate your level of required security. Multiple mesh options allow you to select the degree of delay and site visibility. Engineered for critical infrastructure, this system unites strength with versatility to protect any asset.
SYSTEM ENHANCEMENTS
Matrix product options to improve deterrence and increase delay.

- ANIMAL MITIGATION SHIELD
- BARBED WIRE ARMS
- TECHNOLOGY POSTS
- SPIKE DETERRENT STRIPS
- ANTI BURROW (not shown)
- BALLISTIC PANELS (UL 752 - Level 8)
With an expandable design, Matrix is built to accommodate multiple mesh infill options. Each infill possesses unique characteristics, allowing you to determine the level of visibility, delay and deterrence for your site.

**COLORS** Refer to color sample for actual color

![Black](image1)

![Gray](image2)

<table>
<thead>
<tr>
<th>RAILS</th>
<th>INFILL CHANNEL</th>
<th>DIRECT BURY/PLATED POSTS</th>
<th>HEIGHTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot; x 11 GA. C-SHAPED</td>
<td>3.5&quot; x .75&quot; ALUMINUM</td>
<td>I-BEAM/TANDEM I-BEAM POSTS</td>
<td>8'-8&quot;, 10'-8&quot;,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12'-9&quot;, 15'-7&quot;,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20'-10&quot;</td>
</tr>
</tbody>
</table>

X-Span® 37% OPACITY
.75" x #9F std. option

X-Span® Modified 75% OPACITY
.5" x #13R (.188 strand) std. option

X-Screen® 94% OPACITY
1.5" x #14 std. option

WireWorks® 8 GA. 36% OPACITY 6 GA. 43% OPACITY
.5" x 3" x 8 GA. std. option
.5" x 3" x 6 GA. std. option
Matrix Hardened combines X-Span® mesh infill grid and Impasse pales to create a heavy-duty security system with increased delay times. Choose from Trident™, Stronghold™ or Gauntlet™.

**COLORS**  
Refer to color sample for actual color

| BLACK | GRAY |

**RAILS**

- 2" x 11 GA. C-SHAPED

**PALES**

- 2.75" x 14 GA.

**DIRECT BURY/PLATED POSTS**

- I-BEAM/TANDEM I-BEAM POSTS  
  - 4" x 2.75" x 11 GA.  
  - 8" SQ. x .25 WALL

**HEIGHTS**

- 9’-9", 11’-9", 13’-10", 16’-10"

**STYLE OPTIONS**

- TRIDENT™  
- STRONGHOLD™  
- GAUNLET™

**PALE SPACING OPTIONS**

- STANDARD SPACING: 3.25"  
  - 62% OPACITY
- ANTI-SCALE SPACING: 1.5"  
  - 81% OPACITY

X-Span®  
.75" x #9F std. option
Galvanized to protect from the elements, the Matrix Alpha fence system is a baseline for perimeter security. Alpha’s curtain wall architecture allows for variable post spacing, yielding reduced installation times.

**FINISHES** Refer to color sample for actual color

- BLACK
- GRAY
- GALVANIZED

---

**RAILS**

- 2" x 16 GA.

**INFILL COVER**

- 3.5" x .50" ALUMINUM

**DIRECT BURY/PLATED POSTS**

- 4" SQ. x 11 GA.
- 3" x 6" x 14 GA. & .1875" WALL
- 6" SQ. x .1875" WALL

**HEIGHTS**


Custom height options available. Standard height options available in 1/2’ increments.

---

**RAIL TO INFILL BRACKET**

- 1" x .125"

---

**X-Span®**

- .75" x #9F std. option

**X-Span® Ultra**

- .5" x #13R Ultra & Modified (.188 strand)

**X-Screen®**

- 1.5" x #14 std. option

**WireWorks®**

- .5" x 3" x 8 GA. std. option
- .5" x 3" x 6 GA. std. option

---

**FINISHES**

- BLACK
- GRAY
- GALVANIZED

**RAILS**

- 2" x 16 GA.

**INFILL COVER**

- 3.5" x .50" ALUMINUM

**DIRECT BURY/PLATED POSTS**

- 4" SQ. x 11 GA.
- 3" x 6" x 14 GA. & .1875" WALL
- 6" SQ. x .1875" WALL

**HEIGHTS**


Custom height options available. Standard height options available in 1/2’ increments.

---

**RAIL TO INFILL BRACKET**

- 1" x .125"

---

**X-Span®**

- .75" x #9F std. option

**X-Span® Ultra**

- .5" x #13R Ultra & Modified (.188 strand)

**X-Screen®**

- 1.5" x #14 std. option

**WireWorks®**

- .5" x 3" x 8 GA. std. option
- .5" x 3" x 6 GA. std. option
GATES
Strength, durability and proven functionality

EXODUS EGRESS
All-in-One Pedestrian Gate Systems

PASSPORT
Steel V-Track Roll Gate Design

TRANSPORT
Engineered Cantilever Gates

STYLES
- Classic
- Majestic
- Genesis
- Invincible
- Trident
- Stronghold
- Gauntlet

COLORS
BLACK   BRONZE   SAND   WHITE

Refer to color sample for actual color
Custom colors also available
EXODUS

Exodus Egress Gates come pre-installed with a specific hardware set. There are various hardware set options available; see product catalog for details. These hardware options include a gate closer, exit device and pull or trim handle set. Exodus Double gates include removable mullion posts and are only available in the flange mounting option.

Hardware set options available to meet California building code.

PASSPORT

Passport is an innovative roll gate system with a robust fabricated design. Its rigid framework enables the gate system to glide effortlessly across its on-grade track, and its V-Track design provides the least amount of space required for a slide gate system.

The reversible design of the PassPort roll gate insures a flawless installation by allowing the gate to be installed on either side of the gate opening.

TRANSPORT

TransPort is a revolutionary cantilever gate system made up of three components: frame, facade and hardware.

The component design decreases the risk of damage during transit and does not require a team of installers or machinery to install the gate system. The cantilever gate can easily be installed with a standard three-man crew in about two hours.
The Exodus Egress all-in-one gate system includes pre-installed hardware and is available in both Single and Double gate models. The non-removable pins and power transfer components produce a secure gate more capable of restricting vandalism and forced entry.

Designed for full functionality out-of-the-box, the Exodus Egress gate combines frame, gate and hardware into a complete system that is plug and play ready.
Exodus Egress Gates come pre-installed with a specific hardware set. There are various hardware set options available; see product catalog for details. These hardware options include a gate closer, exit device and pull or trim handle set. Exodus Double gates include removable mullion posts and are only available in the flange mounting option.

Hardware set options available to meet California building code.

**FEATURES**
- Pre-installed panic hardware
- 18 hardware set options
- Pre-hung gate assembly
- 3 mounting options
- Left- or right-hand swing
- Removable threshold
- Multiple infill options

**INTEGRATIONS**
- Montage II
- Aegis II
- Impasse II
- Matrix
- Matrix Hardened
- Matrix Alpha

**MOUNTING**
**Single Mounting Options**
- Flange
- Plated
- Direct Bury

**Double Mounting Options**
- Flange

**COLORS**
Refer to color sample for actual color

**INFILLS**
Various infills and hardware available. Some options not shown.

PERFORATED METAL
X-SPAN MODIFIED
1" PICKET WITH EXPANDED METAL
1" PICKET WITH PERFORATED METAL
IMPASSE PALE WITH EXPANDED METAL Anti-Scale available
IMPASSE PALE WITH PERFORATED METAL Anti-Scale available
PASSPORT®
Steel V-Track Roll Gates

PASSPORT COMMERCIAL
Matches: Montage Plus, Montage Commercial & Aegis Plus

PASSPORT II
Matches: Montage II & Aegis II

PASSPORT IS
Matches: Impasse II

2” SQ. x 12 GA. uprights & diagonal braces
2” x 4” x 11 GA. bottom rail
(notched & plated for v-track wheels)

PRIMARY APPLICATIONS
- Water Treatment & Storage
- Municipal Facilities
- Government Facilities
- Airports
- Manufacturing Plants
- Petro & Chemical Facilities
- Power Plants & Substations
- Schools & Universities
- Stadiums & Event Centers

PASSPORT GATE HARDWARE
The PassPort roll gate design has been matched with equally superior hardware. The v-track rollers are designed to support more than the recommended load, and provide an effortless balance that glides smoothly across its gate opening.
TRANSPORT®
Engineered Cantilever Gates

TRANSPORT II
Matches: Montage II, Echelon II & Aegis II

TRANSPORT IS
Matches: Impasse II

TRANSPORT ESTATE
Matches: Aluminum Estate Entry Gates

TRANSPORT LINK
Matches: Chain link fence design

TRANSPORT GATE HARDWARE
Unlike other engineered cantilever gates, Transport gates greater than 24’ openings come equipped with 4 internal trollies that distribute the weight of the gate as it is opened and closed.

2" SQ. x .25" wall uprights & diagonal braces
5" x 2" Fast-Trak

PRIMARY APPLICATIONS
- K-12 Education
- Higher Education
- Stadiums & Arenas
- Municipal Facilities
- Data Centers
- Power Utility
- Retail Outlets
- Apartments
- Assisted Living
BOLLARDS & BARRIERS
Perimeter Security Products

BOLLARDS
Fixed, Removable and Retractable (automated or manual)

BARRIERS
Vehicle Wedges, Beams, Drop Arm, and Manual Gate

Refer to Bollards & Barriers Guide for more in-depth information
**BOLLARDS**

Ameristar’s line of fixed, retractable and removable security bollards are available in a variety of styles and crash ratings to fit your project’s needs.

**FIXED BOLLARDS**

- **BULWARK**
  - M30/P1 single bollard
  - M30/P2 three bollard array
  - Eng. M50/P1 single bollard

- **DS22**
  - K12/L3 three bollard array

- **DS25**
  - K4/L3 three bollard array

- **GLADIATOR**
  - M50/P1 five bollard array

- **SP1000**
  - M40/P2 equivalent
  - PAS68 tested - three bollard array

- **SMB**
  - K4/L3 single bollard

**RETRACTABLE BOLLARDS**

- **SP100**
  - PU30/P2 equivalent
  - PAS68 tested at 7700lbs - single bollard

- **TITAN**
  - K12/L3 three bollard array

**BARRIERS**

Ameristar’s line of crash-tested barriers offers exceptional security and access control to defend your facility against vehicular threats.

**ENGINEERED SOLUTIONS AVAILABLE**

- Custom HPU enclosures available (i.e. color, climate controlled, ballistic, etc.)

- HPU with weather resistant enclosures

- Access Control Integration

- Cold Weather Kits

**ACTIVE BARRIERS**

- **PATRIOT** - Rising Beam
  - M50/P1

- **SENTINEL** - Vehicle Wedge
  - K12/L3

- **M530** - Drop Arm
  - M30/P1

- **CITYSCAPE** - Manual Gate
  - M40/P2 equivalent
Why Choose Ameristar?

KNOWLEDGE AND EXPERIENCE
For over 30 years we’ve delivered aesthetically pleasing, high-quality and innovative fencing products with superior design strength and easy installation.

PROVEN CAPABILITIES
Our integrated in-house processes, extensive raw materials and finished goods inventory translate into quality, on-time delivery.

INDUSTRY LEADERSHIP
We continually raise the bar in manufacturing customer-focused solutions. Our high standards produce premium products that go beyond merely meeting minimum industry standards.