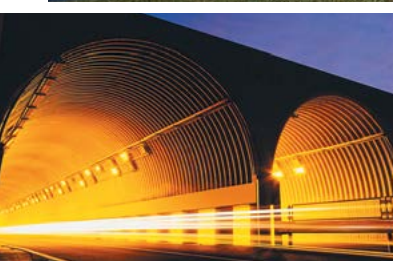


# Innovative Engineered Solutions



BUILD IN VALUE WITH AIL ENGINEERED INFRASTRUCTURE SOLUTIONS.



Atlantic Industries Limited  
**We Support You.**





## Environmentally-friendly.

- ▶ Recycled Steel or Aluminum
- ▶ Minimal Site Impacts
- ▶ Low-Maintenance
- ▶ Fish Passages, Wildlife Crossings
- ▶ Existing Culvert Relines



## Save time. Save money.

Atlantic Industries Limited (AIL) is a world leader in developing innovative engineered solutions in corrugated metal structures, MSE retaining walls, modular steel bridges, and corrugated pipe for the public works, transportation, mining, forestry and development sectors.

AIL's Technical Sales Representatives, Engineers and network of International Partners are well-positioned to ensure your project's success through every phase.

With product innovation, in-house engineering strength and extensive international expertise, AIL provides efficient infrastructure solutions with a difference.

Call a Technical Sales Representative at  
+1-778-355-7000 for more information.



**Atlantic Industries Limited**  
**We Support You.**

AIL has been adding value to the world's most successful infrastructure projects for over 55 years.

### Efficient infrastructure solutions:

- ▶ Strong, lightweight infrastructure solutions
- ▶ Easy to ship and install in all seasons
- ▶ Light equipment, labour requirements
- ▶ Lower material and installation costs
- ▶ Ideal for remote locations without concrete
- ▶ Custom-engineered to site requirements
- ▶ Limited maintenance and site impact
- ▶ Environmentally-friendly

### Proven international partner:

- ▶ Product innovation leadership
- ▶ Complete, value-engineered solutions
- ▶ In-house engineers and technical teams
- ▶ Full design and engineering support
- ▶ Dependable on-site field service
- ▶ Experienced in public/private partnerships
- ▶ Global network of solutions providers
- ▶ Member of The AIL Group of Companies

# AIL engineered solutions are built on a solid foundation of product innovation, field service and support.

## Structural Plate

AIL has been engineering cost-effective plate bridge solutions for some of the world's largest infrastructure applications. Our high-quality products, engineering excellence and innovative designs are key to delivering the best results for our clients. We manufacture a complete range of plate bridges to handle every need and budget:

### Ultra-Cor®

Ultra-deep-corrugated structural steel plate for the largest and most extreme applications.

### Super-Cor®

Premium, galvanized, deep-corrugated, structural steel plate for larger applications.

### Bolt-A-Plate®

Industry-standard, galvanized, corrugated, structural steel plate for medium and small applications.

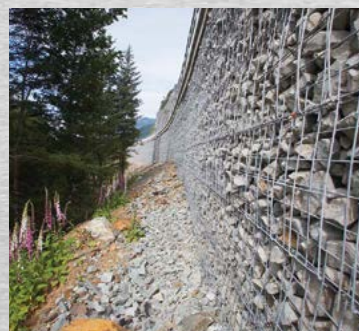
### Dur-A-Span®

Corrosion/abrasion-resistant, solid aluminum alloy, structural plate ideal for saltwater and softwater applications.



## Walls

Specify a fast, economical MSE Retaining Wall System for your next embankment project. These historically-proven, cost-effective systems have favourable equipment and labour requirements and are very fast and easy to install. They adapt well to curves, angles and steps and can reach heights of over 30 m (100').



### Wire Walls

Quick and easy to erect, these walls are easily adapted to curves, angles and steps.

### Precast Panel Walls

Smooth or textured finish, this system is effective for a wide variety of architectural treatments.

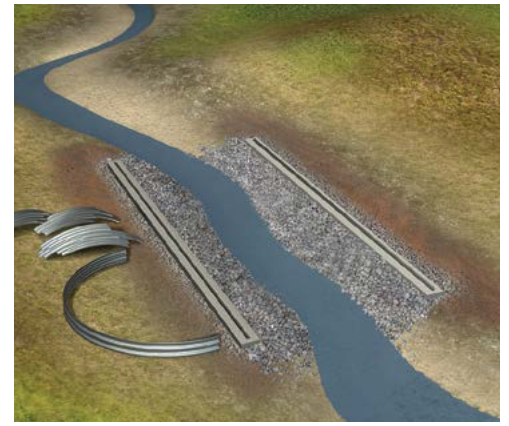


## Easy to ship and install.

Long-lasting and virtually maintenance-free, AIL's corrugated metal structures ship and install quickly and economically, with favourable equipment and labour requirements. Our technical teams will guide you through the complete project to ensure its success.



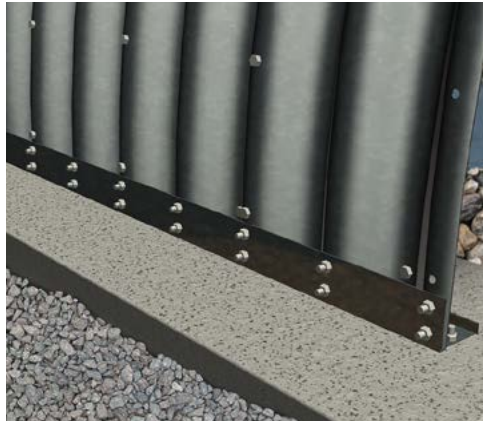
Reinforced concrete footings are cast over the prepared site.



The first arch segment is completely assembled on the ground.



Then, it is lifted into place and bolted to the footings on either side.



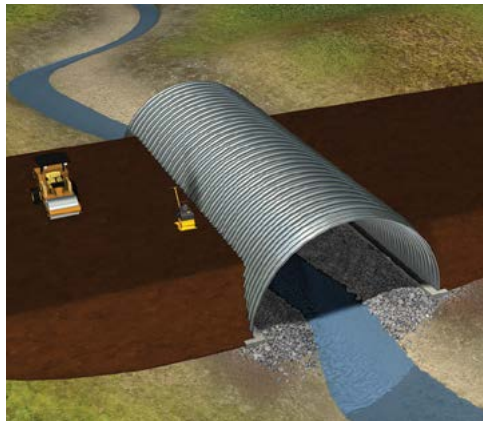
The segments bolt into base channels, integrated into the concrete.



Plates then attach individually to make up other arch segments.



If specified, reinforcement ribs are then added.



Layers of engineered backfill are added in sequential lifts.



Then the completed road surface is added with safety barriers.

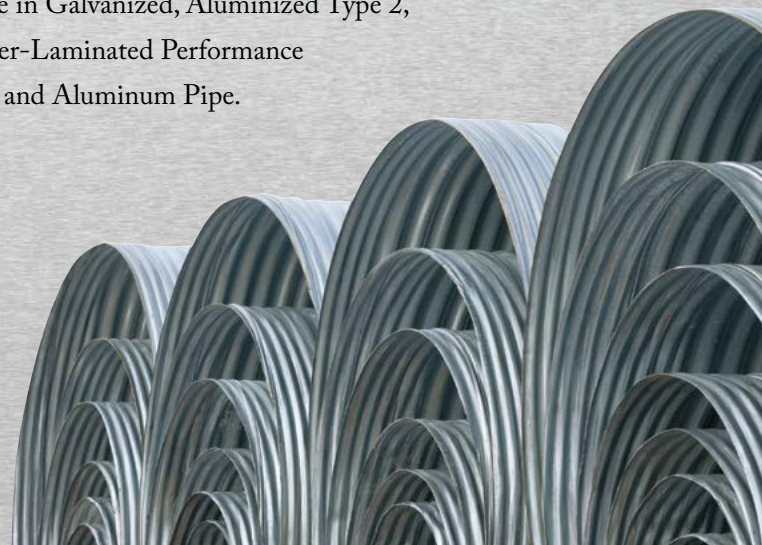
## Bridges

AIL offers a full range of Algonquin Modular Steel Bridge solutions for use in vehicular, detour, pedestrian, trail and golf course applications.

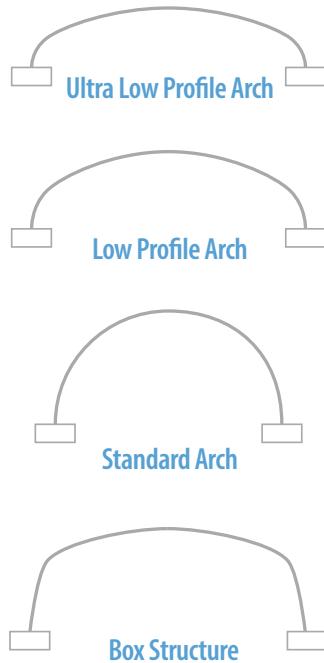


## Pipe

Look to AIL for a wide selection of Corrugated Steel Pipe in Galvanized, Aluminized Type 2, or Polymer-Laminated Performance Coatings and Aluminum Pipe.



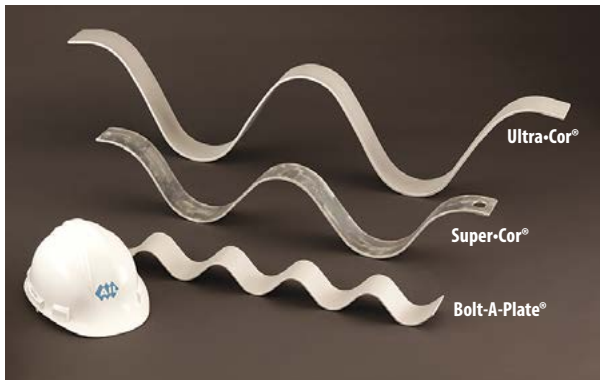
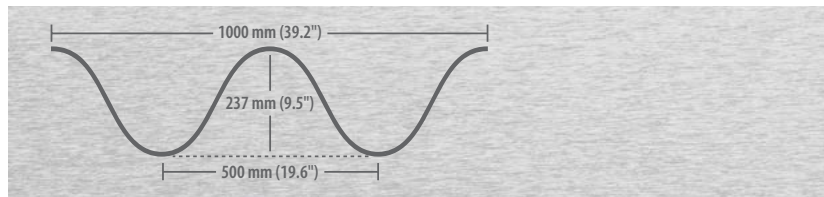




## Recommended for larger applications.

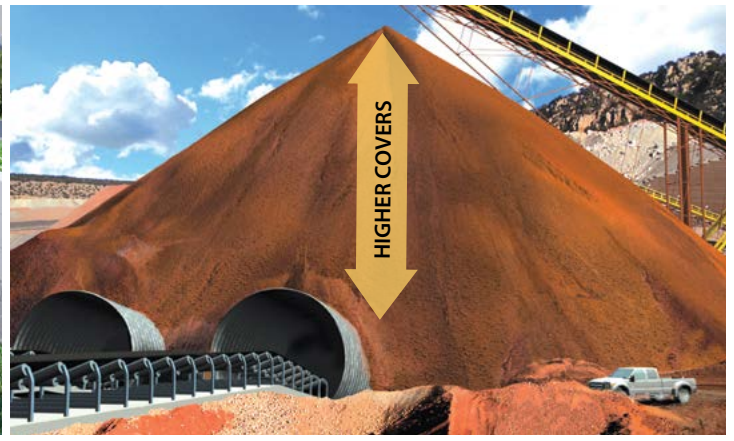
With the introduction of Ultra•Cor®, AIL has taken engineered Buried Metal Bridges to new dimensions in capability and performance. As the world's deepest corrugation profile, Ultra•Cor® combines all the advantages of lightweight construction with previously unheard-of strength and durability to create the largest Buried Metal Bridges in the world today.

With an impressive 500 mm pitch and 237 mm depth, its ultra-large corrugations allow it to reach greater spans and withstand the heaviest of loads. And, just like all AIL engineered solutions, Ultra•Cor® ships and installs easily with minimal equipment and labour requirements.



- ▶ The world's strongest corrugated steel plate
- ▶ Handles extreme loadings
- ▶ Spans can exceed 35 m
- ▶ Stockpile heights can reach greater than 30 m
- ▶ Corrugation profile of 500 mm pitch × 237 mm depth
- ▶ Bottomless designs are environmentally friendly
- ▶ Available with tested and approved protective coating systems
- ▶ Designed and manufactured to National Standards at our third-party quality-certified facility ISO 9001-2015

- ▶ Bridges and Tunnels ▶ Conveyor Covers and Overcasts
- ▶ Culvert Relines ▶ Fish Passages ▶ Grade Separations
- ▶ Heavy Haul Road Crossings ▶ Portals and Canopies
- ▶ Road or Rail Underpasses ▶ Stockpile and Escape Tunnels
- ▶ Storage Structures ▶ Stream Crossings ▶ Underground Structures
- ▶ Utilidor Systems ▶ Vertical Shafts and Vent Raises

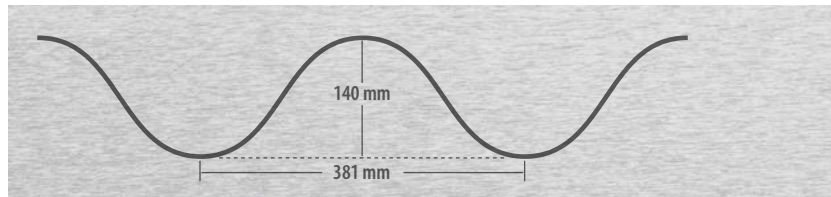




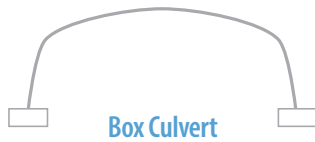


## Premium, hot-dip-galvanized, deep-corrugated, structural steel plate for larger applications, including box culverts

Super·Cor® combines the advantages of lightweight construction with the superior strength and durability of deep-corrugated, galvanized steel to create some of the world's largest corrugated metal structures. The larger, annular corrugations in Super·Cor® provide nine times the stiffness of conventional structural plate, allowing it to withstand the heaviest of loads. Not only is Super·Cor® the most versatile and economical corrugation on the market, it is also the most internationally-accepted and widely-used.



- ▶ Revolutionary alternative to conventional bridges
  - ▶ Handles extreme loadings
  - ▶ Spans can exceed 25 m
  - ▶ Minimum span is 3 m
  - ▶ Corrugation profile of 381 mm pitch x 140 mm depth
  - ▶ Available in: Box Culverts; Standard, Low, Medium, or High Profile Arches; Rounds, and; Ellipses
  - ▶ Bottomless designs are environmentally-friendly
  - ▶ Available with Copolymer Coating
- 
- ▶ **Structural Plate Arches and Bridges** ▶ **Grade Separations**
  - ▶ **Road or Rail Underpasses** ▶ **Stream Crossings** ▶ **Box Culverts**
  - ▶ **Heavy Haul Road Arches** ▶ **Stockpile Tunnels** ▶ **Portals and Canopies**
  - ▶ **Storage Structures**



Box Culvert



Standard Arch



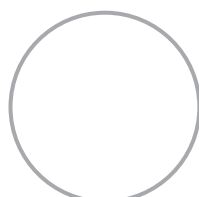
Low Profile Arch



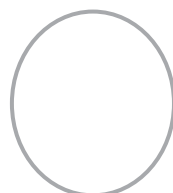
Medium Profile Arch



High Profile Arch



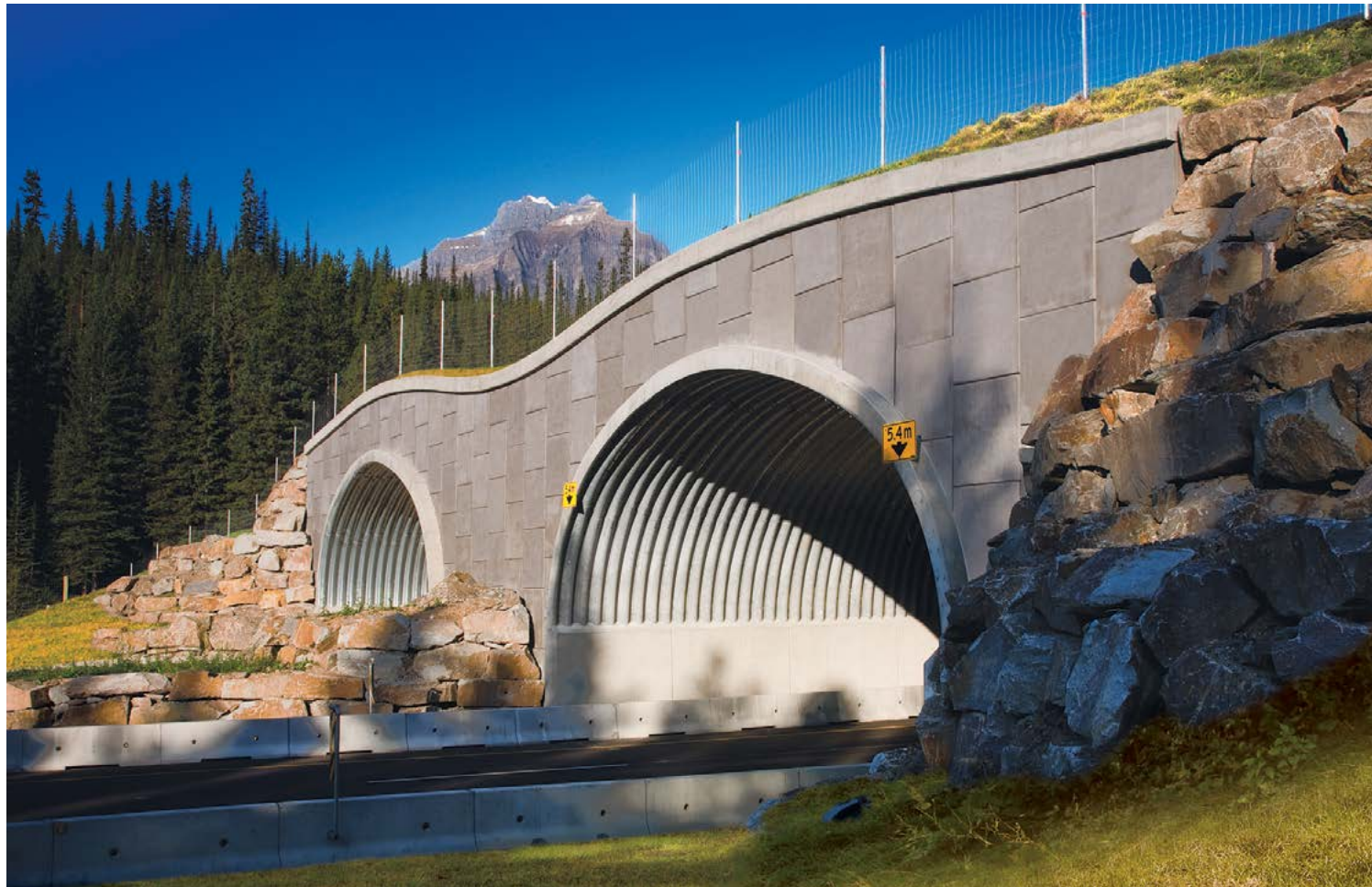
Round



Ellipse

ALL is your single source for a comprehensive engineered package including specifications, drawings, structure, footings, headwalls, wingwalls, fascia finishes and guiderail systems.





Lightweight and super strong, Super-Cor® is the most internationally-accepted and widely-used deep corrugation profile.

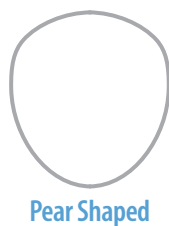
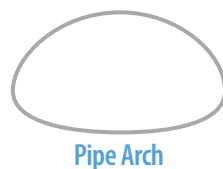
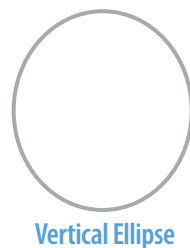
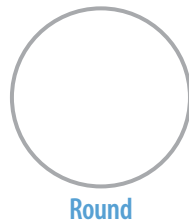


### Polymer Coating on Plate Products

Polymer Coating can be used on all or part of Super-Cor® or Bolt-A-Plate® structures to enhance their performance and extend their design service lives under harsh or corrosive conditions. Ask your AIL Technical Sales Representative for more details.





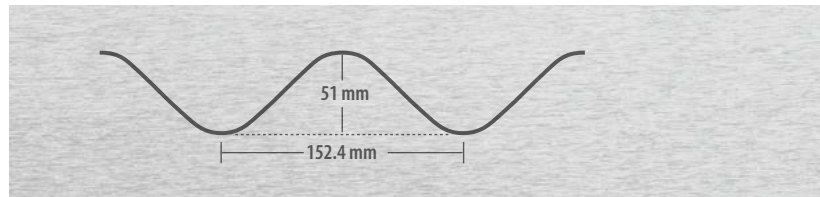


With the widest variety of shapes, Bolt-A-Plate® is suitable for virtually any application.



## Industry-standard, hot-dip-galvanized, corrugated, structural steel plate for medium and small applications

For a strong, effective bridging alternative, Bolt-A-Plate® is the product of choice for its light weight, strength and versatility. Bolt-A-Plate® is available in a wide variety of shapes and sizes. It is perfect for highly economical bridge construction or replacement, as well as many other applications in the transportation, public works, mining and forestry sectors.



- ▶ Spans of 1.5 m to 12 m
- ▶ Corrugation profile of 152.4 mm pitch x 51 mm depth
- ▶ Available in: Standard, Low or High Profile Arches; Rounds; Horizontal or Vertical Ellipses; Pipe Arches, and; Pear Shaped
- ▶ Bottomless designs are environmentally-friendly
- ▶ Can reline older structures
- ▶ Available with Polymer Coating
- ▶ Structural Plate Arches and Bridges ▶ Grade Separations
- ▶ Road or Rail Underpasses ▶ Stream Crossings ▶ Fish Passages
- ▶ Heavy Haul Road Arches ▶ Stockpile and Escape Tunnels
- ▶ Portals and Canopies ▶ Storage Structures ▶ Utilidor Systems
- ▶ Conveyor Covers and Overcasts





Corrugated metal structures ship and assemble easily in all seasons and in remote locations without the need for concrete.

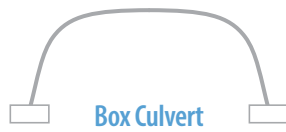


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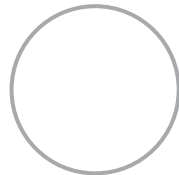
Box Culvert



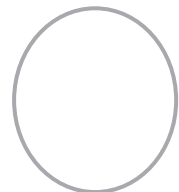
Standard Arch



High Profile Arch



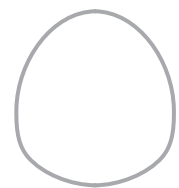
Round



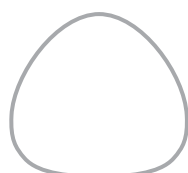
Vertical Ellipse



Pipe Arch



Pear Shaped  
(Pedestrian/Animal)



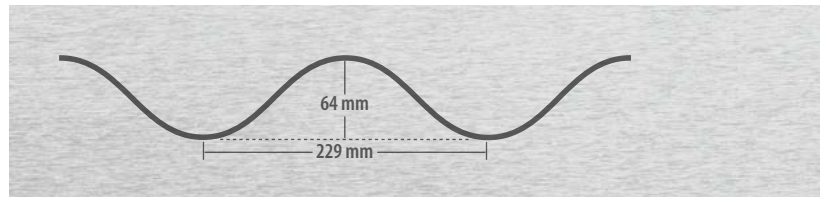
Pear Shaped  
(Vehicular)

With a wide variety of shapes, including Box Culverts, Dur·A·Span® is suitable for many different applications.



## Corrosion/abrasion-resistant solid aluminum alloy structural plate ideal for saltwater and aggressive applications

Lightweight, strong and corrosion/abrasion resistant, Dur·A·Span® goes the distance in over 1,000 structures worldwide – beating the usual heavyweight contenders, like precast concrete, on overall performance and cost. And now, thanks to our innovative reinforcing rib technology, Dur·A·Span® can go even further (and wider) to outperform all challengers.



- ▶ Lightweight
- ▶ Performance proven in over 1,000 installations worldwide
- ▶ Spans can exceed 12.2 m
- ▶ Minimum span of 1.5 m
- ▶ Corrugation profile of 229 mm pitch x 64 mm depth
- ▶ Available in: Box Culverts; Standard, or High Profile Arches; Rounds; Vertical Ellipses; Pipe Arches, and; Pear Shaped
- ▶ Bottomless designs are environmentally-friendly
- ▶ Can reline older structures
- ▶ Stream Crossings ▶ Culverts ▶ Saltwater and Aggressive Applications
- ▶ Road Salt and Other Storage Structures ▶ Fish Passages





Dur-A-Span® structures are virtually maintenance-free  
with a design service life exceeding 100 years.





# MSE

## Retaining Wall Systems

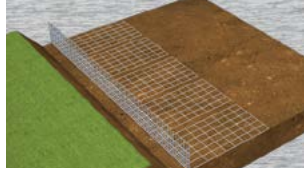
### Wire Walls

Quick and easy to erect, adapt well to curves, angles and steps

Wire Walls are ideal for fast and economical installation using cost-saving wire components and native backfill materials wherever possible in permanent or temporary applications. They easily accommodate curves, angles, or steps and the facing and soil reinforcing mats may be adapted to allow for the installation of culverts, bridge piles, or other site requirements.



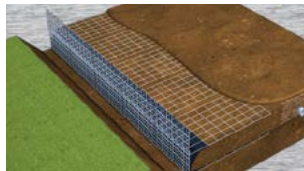
Wire mats on below-grade base.



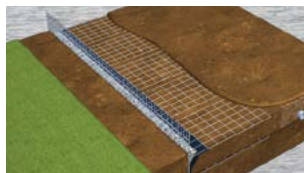
Backing mat, fabric, drainage, first lift.



Next lift, second wire mat series.



Select stone fill added to face section.



Repeat previous steps for other lifts.



Cap mats hook into last face panels.



Mats can be adapted to integrate structures.



Backfill, guiderail and paving added.



- ▶ Economical system for retaining walls, steepened slopes and erosion control
- ▶ Heavy-duty, black or galvanized, steel wire interlocking wall and mat construction
- ▶ Can handle extreme surcharge loads
- ▶ Available finishes: natural, vegetated, shotcrete, precast, cast-in-place
- ▶ Permanent or temporary applications
- ▶ Wall heights can exceed 30 m
- ▶ Height increments are 610 mm
- ▶ Adapts to curves, angles and steps
- ▶ Retaining Walls ▶ Headwalls and Wingwalls ▶ Bridge Abutments
- ▶ Grade Separations ▶ Crusher Ramps/Walls

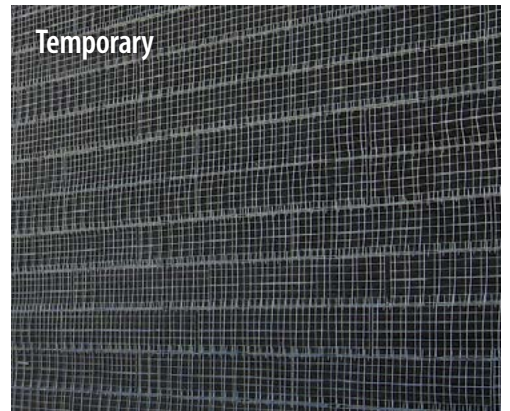




MSE Wire Walls provide fast, flexible embankment protection for a wide variety of infrastructure applications.



Natural Stone



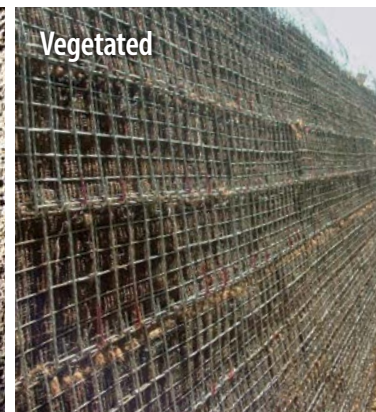
Temporary

### Wire Wall finish options

Wire Walls can be left 'natural', with exposed wire and select rock face or they can be designed to accept a variety of finishes, such as grass, vegetation, shotcrete, or precast concrete panels in a two-stage design. Temporary Wire Walls with black steel and filter fabric at the face are also available.



Shotcrete



Vegetated





# MSE

## Retaining Wall Systems

### Precast Panel Walls

#### An effective system for a wide variety of architectural treatments

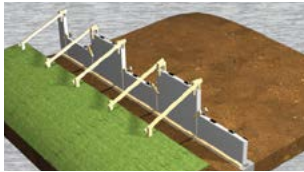
Precast Panel Walls use precast panels with galvanized steel wire mats to reinforce a retained soil mass. This technically-sound and well-proven system is composed of alternating layers of soil reinforcement and select backfill to create an extremely stable reinforced structure that is easily adaptable to meet the structural and aesthetic demands of today's infrastructure projects.



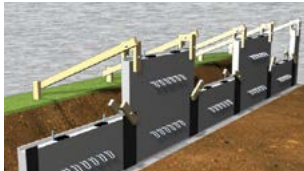
Leveling pad poured in below-grade base.



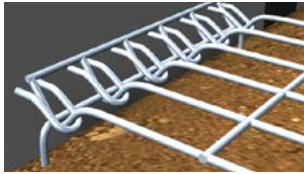
Precast panels, braces and alignment pins.



Loop hooks on back tie into wire mats.



Mats secured to imbeds with connection pins.



Fabric added, ready for the next lift.



Next lift and bearing pads added.



Panels, fill lifts and mats continue.



Coping, rail system and road surface added.



- ▶ Economical system for retaining walls, steepened slopes and erosion control
- ▶ Heavy-duty, galvanized, steel wire interlocking wall and mat construction
- ▶ Can handle extreme surcharge loads
- ▶ Panels available in a variety of sizes, colours, textures and custom designs
- ▶ Wall heights can exceed 30 m
- ▶ Height increments are 762 mm
- ▶ Adapts to curves, angles and steps
- ▶ [Retaining Walls](#) ▶ [Headwalls and Wingwalls](#)
- ▶ [Bridge Abutments](#) ▶ [Grade Separations](#)





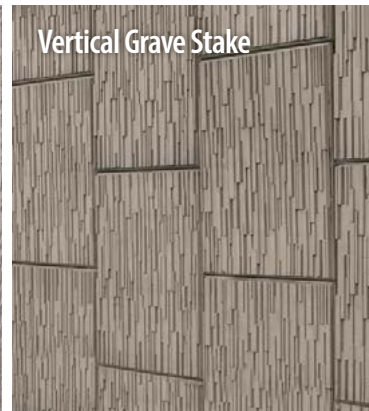
Cost-effective MSE Retaining Walls are fast and easy to install with favourable equipment and labour requirements.



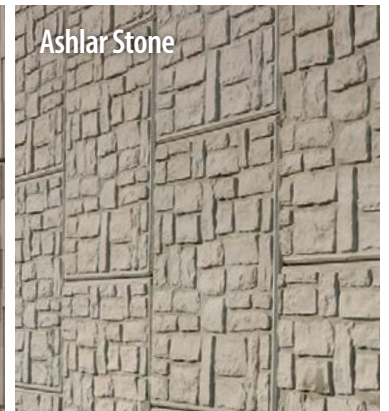
Smooth



Fractured Fin



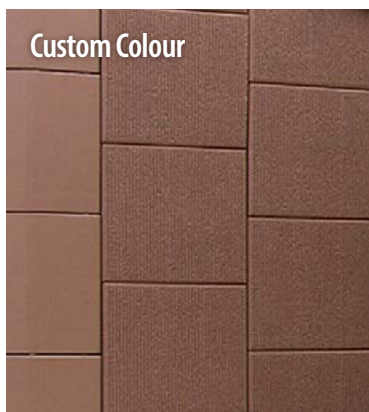
Vertical Grave Stake



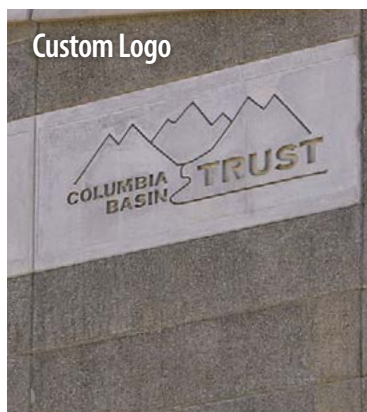
Ashlar Stone

### Precast Panel finish options

Today's precast concrete panels are pushing the boundaries in design and performance. Although many panel types are available, your AIL Technical Sales Representative can also work with your project team to customize colours, textures, shapes, sizes and performance options for all types of applications.



Custom Colour



Custom Logo



Custom Motif



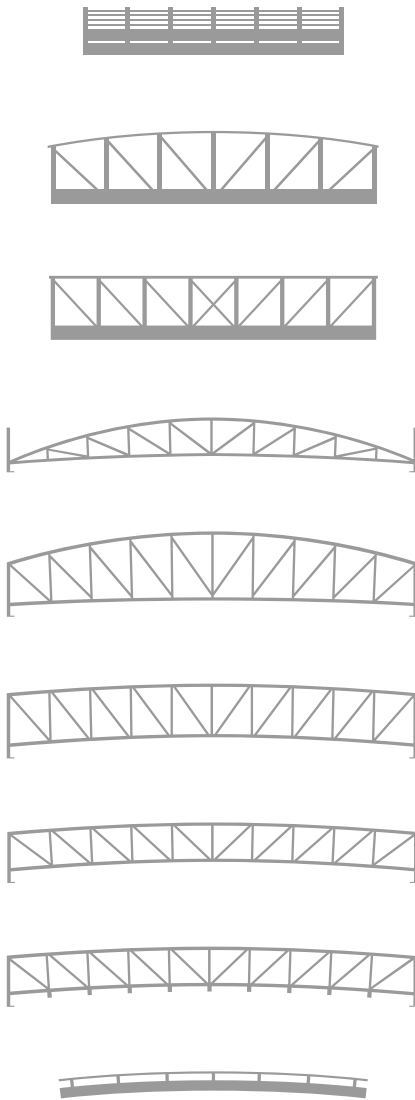
Custom Mural





## Custom design/build bridge solutions that ship and install easily for permanent or temporary applications

Strong, yet lightweight, Algonquin Modular Steel Bridges ship and install quickly (often in several hours) on any foundation type and without the need for poured concrete or specialized bridge construction companies. Their superstructures are pre-engineered and pre-fabricated in the controlled environment of our CISC certified facility. AIL's MSE Retaining Wall Systems are ideal for abutment solutions.



## Vehicular Bridges

- ▶ Strong, able to withstand heavy-duty loading
  - ▶ Variety of widths and spans up to 46 m
  - ▶ 2.44 m wide modules are standard
  - ▶ Variety of deck options, 108 mm deep corrugated steel is standard
  - ▶ Weathering structural steel
  - ▶ Bearing plates and pads
  - ▶ Curb or rail system
  - ▶ Excellent fish passage solutions
  - ▶ Optional hot-dip galvanizing or custom painting
- ▶ Stream Crossings ▶ Road or Rail Overpass ▶ Detour Bridges





Algonquin Modular Steel Bridges install quickly and easily—  
often on the same day they are delivered.





## Corrugated Steel Pipe

Available in a variety of sizes, corrugation profiles, thicknesses and coatings to suit virtually any application

Corrugated Steel Pipe (CSP) is the material of choice for today's infrastructure projects because it offers the optimum combination of strength, flexibility and performance. It will not crack under impact loads or vibrations due to the inherent strength of steel and the flexibility of the corrugated pipe section. The high ring compression of the pipe absorbs and transfers the load to the surrounding soil around the entire circumference. The beam strength maintains the grade and line of the structure by bridging inequalities of the trench bottom and side fill.

### Galvanized Standard service life



Z610 Galvanized steel is the standard finish for all CSP and performs well in low-abrasion conditions.

### Aluminized Service life of 75 years



For more corrosive environments, Aluminized Type 2 coating offers the superior corrosion resistance and surface characteristics of aluminum with the strength and economy of steel.

### Polymer Laminated Service life of 100+ years



Polymer Laminate is a tough, heavy-gauge film that is laminated to both sides of Galvanized steel to produce a corrosion and abrasion barrier for the most aggressive environments.

Choose the coating  
that suits your  
application.



- ▶ Economical, strong, lightweight and easy to install
- ▶ Variety of sizes, thicknesses and materials
- ▶ Complete line of standard and specialized fittings and accessories
- ▶ Available in Round Pipe or Pipe Arch Profiles
- ▶ Can be used to reline existing systems
- ▶ Full engineering support and field service
- ▶ Approved to CSA Standard G401-07
- ▶ Pipes and Culverts ▶ Drainage Systems ▶ Stormwater Systems
- ▶ Fish Passages ▶ Conveyor Covers and Overcasts ▶ Ventilation Systems
- ▶ Utilidor Systems





AIL has been providing innovative corrugated pipe solutions for over 55 years.



### Hi-Flo® Smoothwall Spiral Rib Pipe

Solve your stormwater problems with the improved hydraulics of Hi-Flo® – an innovative flexible metal pipe that combines the proven strength of corrugated pipe with the improved hydraulics of a smooth inner wall. It's economical, strong, lightweight and easy to install, with reduced trench excavation and bed preparation. Hi-Flo® offers the same size, thickness, material, coatings, performance, fittings and accessory options as our Corrugated Steel Pipe.

### Standard and Special Fittings

Standard CSP fittings such as tees, elbows, wyes, reducers and saddle branches are offered for the full range of pipe sizes to meet any normal design criteria. In addition to the standard line of CSP fittings, special fittings including manholes and catch basins are also readily available and can be fabricated for special applications.

AIL pipe features universal annular corrugated ends, so a variety of couplings may be used for the Pipe and Pipe-Arch. Two types of couplers are recommended: Standard Annular Corrugated Coupler, and; Dimpled Coupling Band.

### Aluminum Pipe

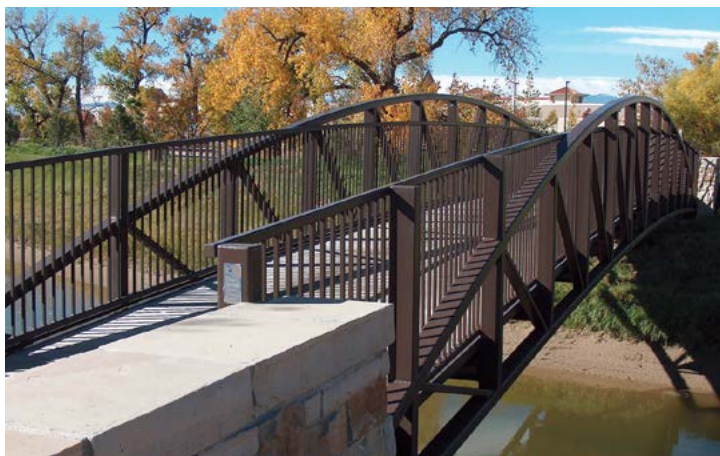
AIL's Corrugated Aluminum Pipe products deliver superior corrosion/abrasion resistance for harsh environments. They have a long history of proven performance with predictable service life expectancies exceeding 75 years when installed in the recommended soil/water environment.





Save time. Save money. Get AIL's innovative engineered solutions working for your better bottom line.

Call an AIL Technical Sales Representative at +1-778-355-7000 or visit [ail.ca](http://ail.ca) for more information.











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**We Support You.**

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