AIL

Atlantic Industries Limited

We Support You.

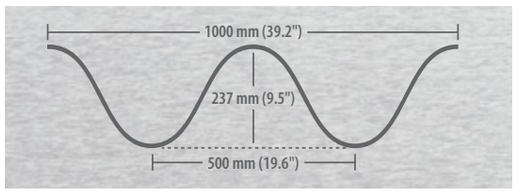
PROUDLY CANADIAN

ULTRA·COR®
Structural Steel Plate

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 (19.6") pitch and 237 mm (9.5") 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 (115')
- Stockpile heights can reach greater than 30 m (98')
- Corrugation profile of 500 mm (19.6") pitch × 237 mm (9.5") 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

Recommended for

- Bridges and Tunnels
- Bridge Rehabs
- Conveyor Covers and Overcasts
- Fish Passages
- Grade Separations
- Heavy Haul Road Crossings
- Portals and Canopies
- Road or Rail Underpasses
- Stockpile and Escape Tunnels
- Storage Structures
- Watercourse Crossings
- Underground Stuctures
- Vertical Shafts and Vent Raises
- Wildlife Crossings

For project assistance, 1-877-245-7473, info@ail.ca
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Innovative Ultra•Cor® creates the world's largest metal buried bridge span: 32.39 m (106.3'), Dubai, UAE.

PLAY ULTRA•COR PRODUCT VIDEO

Watercourse Crossing, CFB Gagetown, New Brunswick

TAKE A 360° VIDEO TOUR

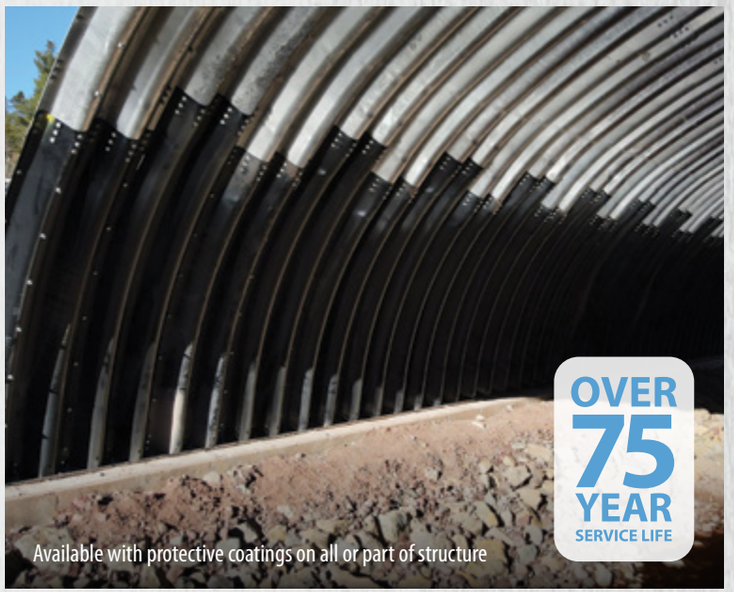
Watercourse Crossing, Kirby Road Extension, Vaughan, Ontario

BEST·KOTE
Buried Bridge Coating

Premium coatings to extend the service life of structures in aggressive environments.

Building on the years of proven performance of polymer-coated corrugated steel pipe, AIL has partnered with some of the world's leading developers of coatings to provide Best•Kote® Buried Bridge Coating. For extended service life of Ultra•Cor® structures, Best•Kote® offers superior protection and long-term durability.

- +75 YEAR service life
- Economical solution for extended service life of structure; ideal for aggressive environmental conditions
- Protects against corrosion, abrasion and inorganic acid, salts or alkali (diluted)
- Can be applied to all or part of a structure
- Special bolts and fasteners maintain integrity of coating during assembly



Available with protective coatings on all or part of structure

Standard Arch Dimensions

Name	Span m (ft-in)	Rise m (ft-in)	Periphery (U)	End Area m^2 (ft^2)
UCA1	22.048 (72'-4")	5.491 (18'-0")	54	97.03 (1044.42)
UCA2	22.016 (72'-3")	6.619 (21'-9")	57	117.16 (1261.1)
UCA3	21.87 (71'-9")	7.683 (25'-2")	60	135.27 (1456.03)
UCA4	22.05 (72'-4")	8.815 (28'-11")	63	153.33 (1650.43)
UCA5	25.05 (82'-2")	6.233 (20'-5")	61	123.73 (1331.82)
UCA6	25.05 (82'-2")	7.499 (24'-7")	64	147 (1582.29)
UCA7	24.951 (81'-10")	8.684 (28'-6")	67	168.97 (1818.78)
UCA8	25.225 (82'-9")	10.085 (33'-1")	72	200.16 (2154.5)
UCA9	27.55 (90'-5")	8.245 (27'-1")	70	175.48 (1888.85)
UCA10	27.543 (90'-4")	9.235 (30'-4")	74	203.25 (2187.76)
UCA11	27.494 (90'-2")	11.017 (36'-2")	78	234.89 (2528.33)
UCA12	30.044 (98'-7")	8.971 (29'-5")	77	211.34 (2274.84)
UCA13	30.037 (98'-7")	10.508 (34'-6")	81	247.18 (2660.62)
UCA14	30.08 (98'-8")	12.035 (39'-6")	85	280.23 (3016.37)
UCA15	33.043 (108'-5")	10.538 (34'-7")	87	276.7 (2978.37)
UCA16	33.084 (108'-7")	11.89 (39'-0")	91	314 (3379.87)
UCA17	36.598 (120'-1")	11.756 (38'-7")	97	345.15 (3715.16)

TAKE A 360°
VIDEO TOUR

Wildlife Overpass, TCH near Canmore, Alberta

Connecting habitats.
Saving lives.

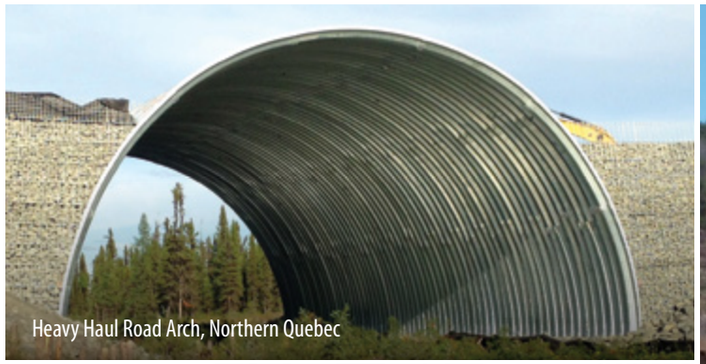
Highway underpass, St. John's, Newfoundland and Labrador

This low-profile Ultra•Cor® arch features two lanes running underneath and four lanes on top in this shallow cover application. The structure also includes AIL's MSE Precast Panel Walls.

Watercourse crossing for a private development, Ladysmith, British Columbia

This Ultra•Cor® project featured our MSE Wire Walls configured with topsoil and fabric at the face to promote vegetation. Twin Bolt-A-Plate Round tunnels connected a recreational trail loop in the area.

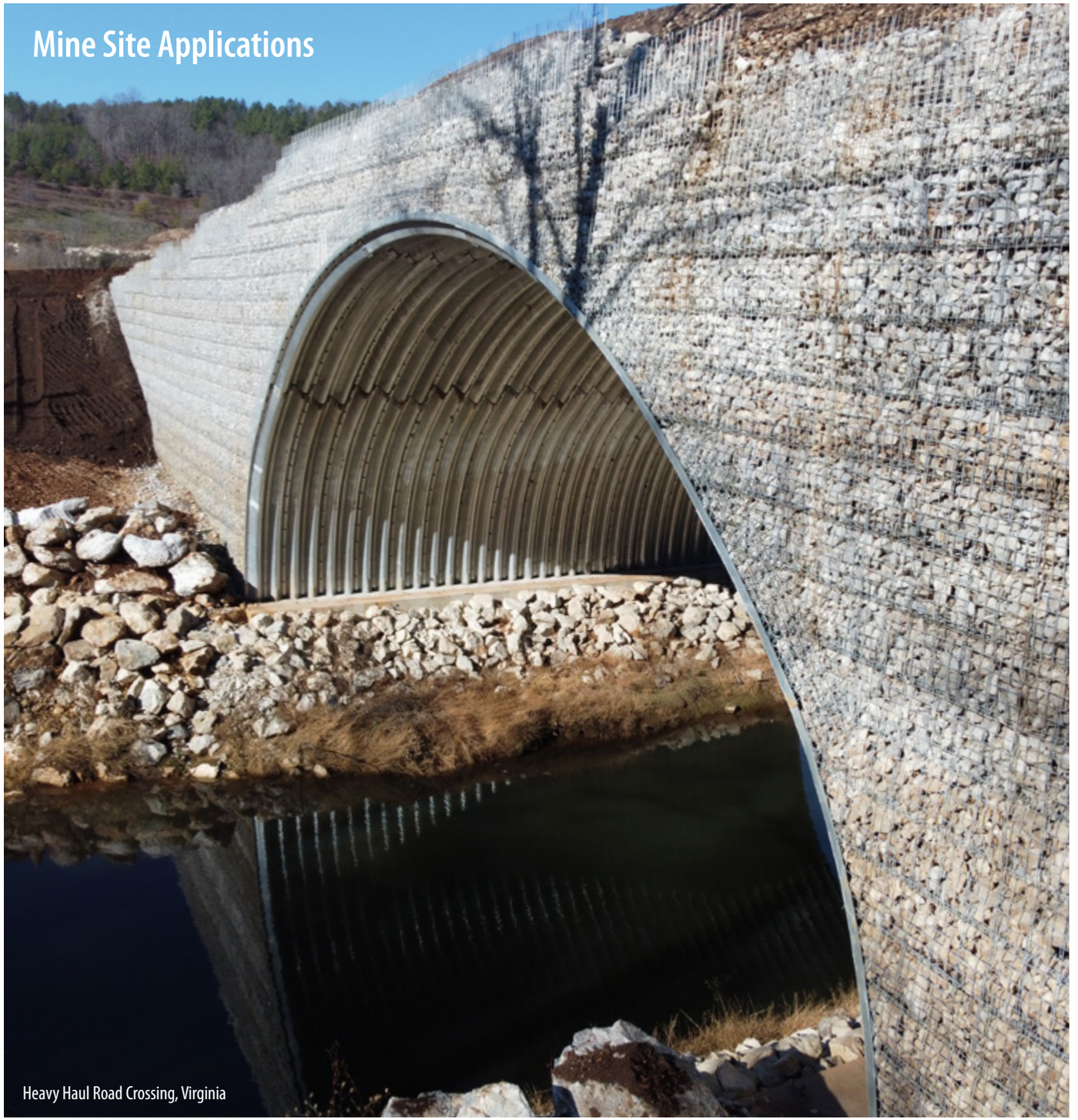
Mine Site Applications



Heavy Haul Road Arch, Northern Quebec

Heavy Haul Road Conveyor Crossing, British Columbia

Build without disruption to watercourses



Heavy Haul Road Crossing, Virginia

Nestable components are easy to ship, store on site and install

Flexible, resilient and sustainable solutions

A tale of two bridges

Choosing an AIL Ultra•Cor® Buried Metal Bridge solution on this grade separation could have provided significant savings on the overall construction and life cycle maintenance costs, while still providing the same functionality — even with a custom precast mural treatment on the headwalls.

Buried Metal Bridge Benefits

SEE ALL BENEFITS

AIL's Buried Metal bridges are ideal for Accelerated Construction.

- Can be built in significantly less time, reducing disruption time and detours and expediting construction schedules
- Lightweight, easy to ship and install with local crews
- Lighter-weight equipment can be used to assemble most structures
- Various construction/staging options available such as building over live traffic or two-stage construction with temporary retaining walls
- Small laydown area required for construction
- Limited on-site concrete work

Buried Steel Bridges have a substantially lower life cycle carbon footprint than concrete beam bridges[1].

- Steel is the world's most recycled material[2]
- Less energy is used in the production and shipping of Buried Steel Bridges than concrete bridges
- Can accept a range of local backfill materials, potentially reducing trucking costs
- Zinc used in galvanizing is a naturally occurring material and is 100% recyclable[3]
- Biodiversity friendlier green headwall options available

1. Third-Party Consultant (2022). AIL Life Cycle Cost Comparison Between a Sample Bridge and Buried Structure.
2. Reference: www.aisc.org
3. Reference: https://galvanizeit.org/hot-dip-galvanizing/is-galvanizing-sustainable/hdg-environmental-advantages

Virtually no maintenance; minimized life cycle costs.

- Ultra•Cor® bridges have a lower life cycle cost compared to a functionally equivalent concrete beam bridge[4]
- Eliminates recurring life cycle costs to maintain and repair bridge decks, expansion joints, bearings, girder fatigue, de-icing agent corrosion issues, concrete durability, fracture issues, approach slabs and freeze/thaw or wet/dry cycles
- No differential settlement "bridge bump" to maintain between decks and approach slabs
- Wider spans eliminate need for bridge piers that restrict hydraulic flow and trap debris
- Open-bottom shapes can offer longer design service life
- Design service life can exceed 75 years with protective coatings
- Structure length can be extended to accommodate future road widening; increased functional service life

4. Third-Party Consultant (2022). AIL Life Cycle Cost Comparison Between a Sample Bridge and Buried Structure.

Safer driving experience than beam bridges.

- No need to narrow roadway at crossing
- Pavement structure is continuous and seamless
- No bridge deck freezing issues
- No freeze/thaw differential with roadway approaches
- Easily adaptable to roads with vertical and/or horizontal curves

More flexible and resilient than concrete structures or beam bridges.

- Unmatched performance, especially in less-than-ideal foundation conditions
- Settlement tolerance is much higher than concrete structures or beam bridges
- Little differential movement, settlement or frost heave between buried bridge and adjacent approach fills
- Works with shallow or deep foundation systems
- Headwalls and wingwalls offer more resiliency in flood events
- Geotextile Reinforced Soil (GRS) backfill technology also increases flood and settlement resiliency

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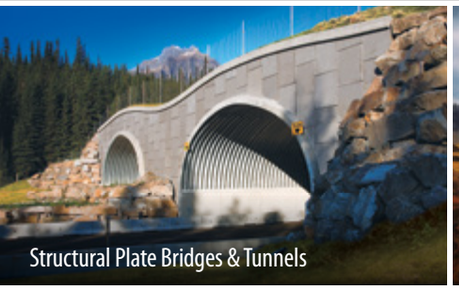
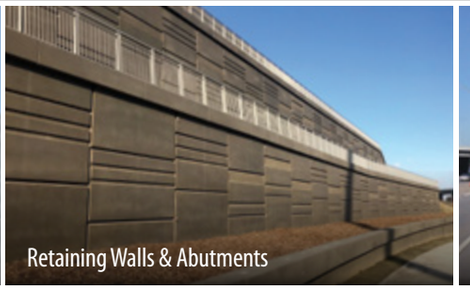
AIL OFFERS A COMPLETE RANGE OF BRIDGE AND INFRASTRUCTURE SOLUTIONS.


Structural Plate Bridges & Tunnels


Prefabricated Bridges


Pipe & Drainage Solutions


Retaining Walls & Abutments


Sound Barrier Walls

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The information and suggested applications in this brochure are accurate and correct to the best of our knowledge, and are intended for general information purposes only. These general guidelines are not intended to be relied upon as final specifications, and we do not guarantee specific results for any particular purpose. We strongly recommend consultation with an Atlantic Industries Limited Technical Sales Representative before making any design and purchasing decisions.

AIL products contain recycled content and are 100% recyclable.

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