



THE AIL GROUP OF COMPANIES

# PROJECT PROFILE



## AIL's innovative Ultra•Cor® used in record-breaking Dubai project

### World's largest metal buried bridge span: 32.39 m

The Shamal Bridge near Dubai, United Arab Emirates (UAE), recently earned a Guinness World Record for having the world's largest metal buried bridge with a span of 32.39 m. The AIL Group is very proud of this achievement for both our Ultra•Cor® Structural Steel Plate and our European Licensee, ViaCon Group.

The Shamal grade separation is part of the UAE's mega RAK Ring Road project that is establishing a more robust transportation corridor between the northern Emirate of Ras Al Khaimah (RAK) and the rest of the Emirates.



AIL Group CEO, Mike Wilson, and ViaCon Group CEO, Leszek Janusz, with Guinness World Record certificate.

#### Project Details:

Project Name: Shamal Bridge  
Location: Ras Al Khaimah, near Dubai, UAE  
Owner: Ministry of Infrastructure Development  
Engineer: Core Engineering Consultancy  
Design and Manufacture: ViaCon Poland (AIL Group Licencee)  
Plate Assembly: ECO, UAE  
Contractor: Top Link Contracting & General Transport LLC  
Sector: Transportation  
Application: Grade Separation  
Product: Three Ultra•Cor® Arches  
Largest Arch Dimensions: Span 32.39 m, Rise 9.68 m  
Cover Depth: 2.81 m

#### Related Resources:

[View 3D Animation / Time-Lapse Video \(2:59\) >>](#)

[View Official Opening Event Video \(1:02\) >>](#)

[Download Ultra•Cor® Brochure PDF >>](#)



## Product developed by AIL's New Brunswick R&D Team

AIL Group CEO, Mike Wilson, attended the official opening and Guinness award ceremony hosted by the UAE's Ministry of Infrastructure Development on March 6, 2019. "I feel this is quite an accomplishment for a product that was developed by our R&D Team in Dorchester and Sackville, New Brunswick," comments Wilson. "As more and more Ultra•Cor® projects are installed overseas, I see a great potential for the product here in North America."

## "Much better than concrete bridges in terms of economic advantages."

His Excellency Dr. Abdullah Bin Mohammed Belhaif Al Nuaimi, Minister of Infrastructure Development addressed the gathered dignitaries and guests. "The Shamal arch steel bridge is much better than concrete bridges in terms of economic advantages," H.E. Abdullah Al Nuaimi remarked. "It has been completed in half the time needed for regular concrete bridges, it can take heavy weights, and it has a lifetime of over 100 years."

The grade separation serves as an interchange to carry road traffic over the new highway. The two larger arches can accommodate up to six lanes of traffic, while the third arch is designed for up to three future rail lines.

## AIL's Engineering Team collaborated with ViaCon on several aspects of this project

During the design process, AIL's Engineering Team collaborated with ViaCon on the technical aspects. These included: construction sequence, shape optimization, soil-structure interaction modelling, geotechnical considerations and structural design. The structure was also instrumented to gain an in-depth understanding of stresses during construction and under operation conditions. The instrumentation results will be utilized by AIL and ViaCon R&D Teams to push the boundaries for future Ultra•Cor® spans.



## PROJECT GALLERY



Beginning of Ultra•Cor® plate assembly.



Completing first ring in Ultra•Cor® plate assembly.



Lifting of first Ultra•Cor® ring assembly.



First Ultra•Cor® rings erected.



Deeper corrugations mean extra strength, wider spans, heavier loads.



Ultra•Cor® assembly completed in half the time as concrete.





The Ultra•Cor® structure was designed and manufactured by ViaCon at their Poland location. The epoxy-coated plates were then shipped to the UAE site in containers. The project itself was led by ViaCon's Turkish team with support from ViaCon UAE. As you can tell by this [time-lapse video](#), much of the construction was able to take place with limited traffic interruption.

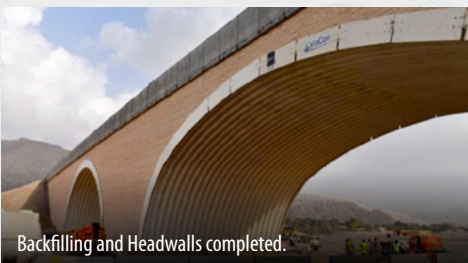
### AIL's Ultra•Cor®: the strongest, deep-corrugated structural plate available

One of AIL's latest innovations, Ultra•Cor® Structural Steel Plate is taking engineered structural plate to new dimensions in capability and performance. With an impressive 500 mm pitch and 237 mm depth, its ultra-deep corrugations allow it to reach greater spans and withstand the highest cover depths and the heaviest of loads.

Available in a variety of Arch geometries as well as Box Culverts, Ultra•Cor® is appealing to DOTs as an economical alternative to short-to-medium span bridges, tunnels, underpasses and river crossings. Mining companies specify it for larger haul road crossings, stockpile tunnels, portals and canopies. Ultra•Cor® is manufactured in accordance with CHBDC, AASHTO, ASTM and AREMA design requirements.



Limited traffic interruption during construction.



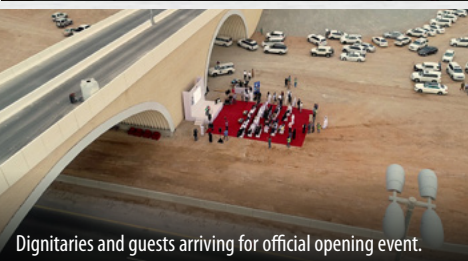
Backfilling and Headwalls completed.



Largest spans can accommodate up to six lanes of traffic.



Deep-corrugated Ultra•Cor®. Wider spans. Heavier loads.



Dignitaries and guests arriving for official opening event.



CEOs Leszek Janusz and Mike Wilson, with ViaCon team.

**ULTRA•COR®**  
Structural Steel Plate



## Another innovation from our New Brunswick R&D Team



Wayne Ford, AIL's VP, Engineering Services, with Mike Wilson. Wayne leads AIL's R&D Team on Ultra-Cor®.

## Learn more about the amazing capabilities of Ultra-Cor®

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 corrugated metal structures in the world today. Learn more about how you can put the Ultra-Cor® advantages to work for a better bottom line on your next infrastructure project.



Contact us for an information package or to arrange a customized Lunch & Learn session for your team: 1-877-245-7473 or [info@ail.ca](mailto:info@ail.ca)

## Ultra-Cor® is also breaking new ground in Canadian infrastructure

Canadian infrastructure project teams are also choosing Ultra-Cor® more frequently. Cases in point: a grade separation on the Trans Canada Highway near Corner Brook, Newfoundland and Labrador; and a heavy haul road stream crossing in a Quebec mine site. Project profiles are available on [ail.ca](http://ail.ca).



Ultra-Cor® in TCH grade separation in Newfoundland and Labrador.



Quebec mine site heavy haul road stream crossing.



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We'd like to thank ViaCon for both their continued partnership with the AIL Group and their great work on the Shamal Bridge project.

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