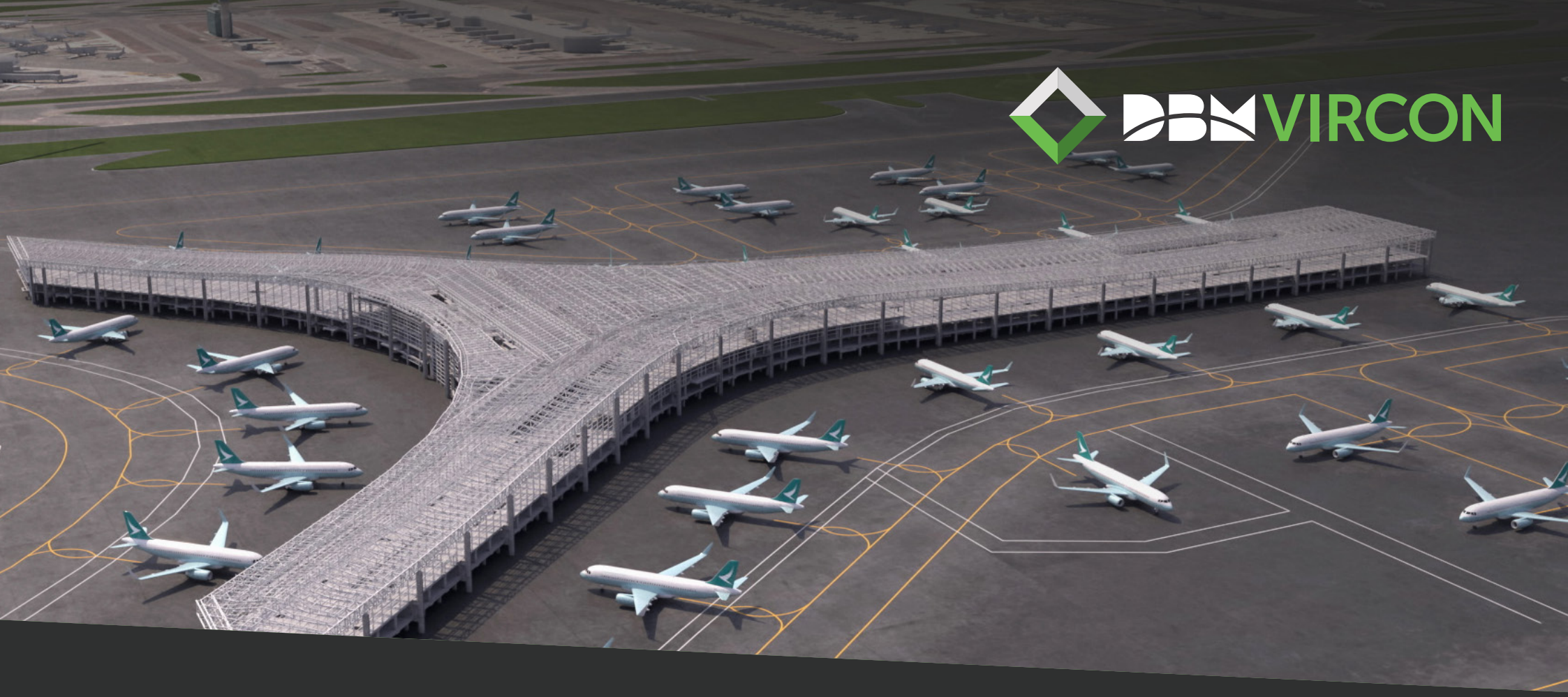


DBM VIRCON

Our Experience in Transportation

Whether it's assisting in the design, providing steel modeling and detailing, or creating a federated model that can be leveraged beyond the construction phase well into an asset's lifecycle, DBM Vircon has the experience and knowledge to make your design constructible, and your asset manageable.

Why DBM Vircon?

Cutting Edge Technology
Innovation in thought and tools are fundamental to our approach, and critical to the accuracy of your project.

Multi-Disciplined Approach
DBM Vircon regularly collaborates in multi-disciplinary teams and environments to deliver the best possible outcomes.

Over 55 Years' Experience
With experience on global projects since 1964 DBM Vircon has the expertise, systems, and capabilities to deliver your entire project.

Global Presence
With offices around the world, we offer 24-hour support – when our Perth office closes, our London office opens. This means we can meet the tightest of schedules and mitigate delays.

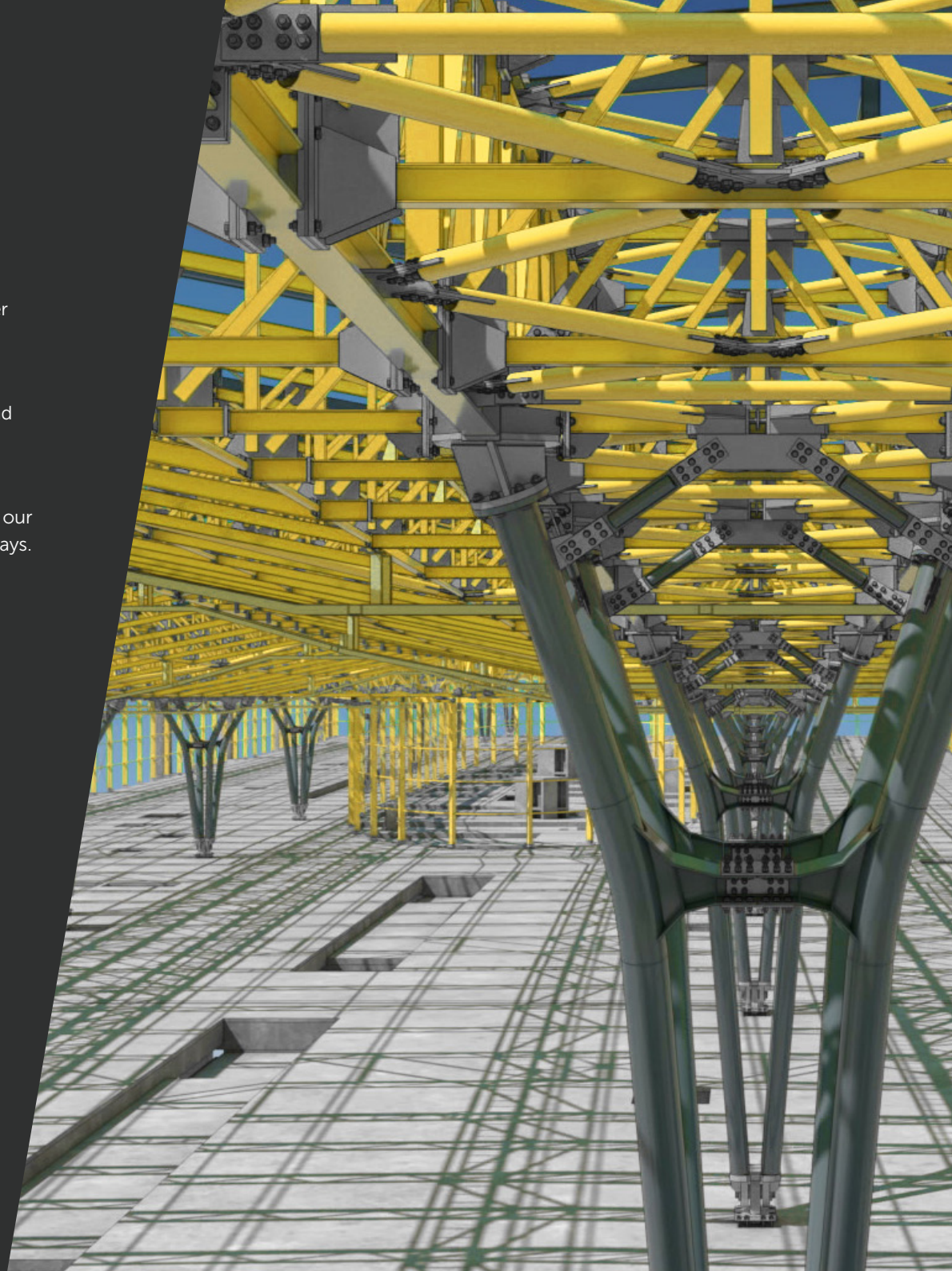
Cost Confidence
By eradicating clashes and design errors early on, rework and delays are significantly reduced, costs are confirmed in advance, and highly accurate quotes by suppliers can be provided without risk of variations.

Schedule Certainty
Our methodology avoids duplication of modeling activities typically experienced in the traditional 2D modeling environment. With a more accurate design completed earlier, schedule certainty is improved and construction commences earlier.

Sophisticated Systems
Boasting global recognition, our custom-built proprietary Job Management System (JMS) is specifically designed to effectively and efficiently manage models, drawings, data, documentation and deliverables for complex projects.

Stringent Quality Control
DBM Vircon utilizes rigorous quality assurance processes. All drawings are checked by our quality assurance system, with queries, variations and changes closed out by the project engineer before delivery to you.

DBM VIRCON

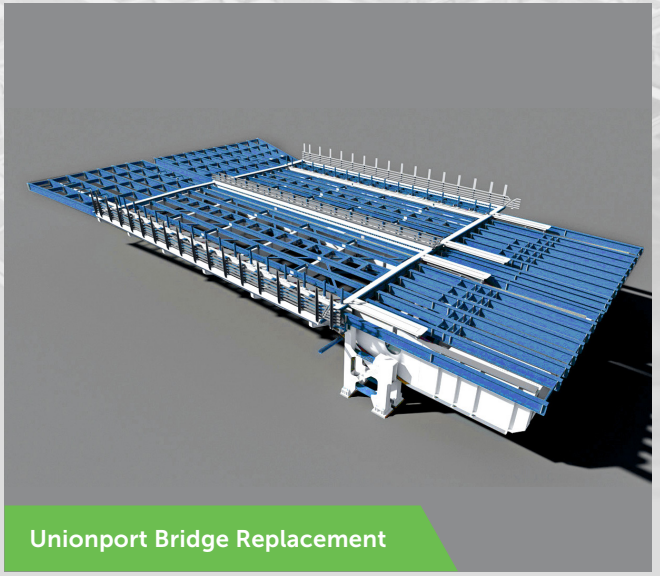


DBM Vircon in the Transportation Sector

As our cities and regions grow, it's more important than ever that communities remain connected through reliable transport networks. Our multi-disciplinary approach and technical expertise has helped deliver major airport, bridge, rail, road, and port projects across the globe. Collaborating with asset owners and government departments, DBM Vircon delivers 3D modelling and millimetre perfect steel, concrete, and rebar detailing for the construction, replacement and refurbishment of:

- National and international airport terminals
- Road and rail tunnels
- Major infrastructure, including expressways, highways and freeways
- Pedestrian, rail and road bridges
- Ports and harbours

Denver Union Station



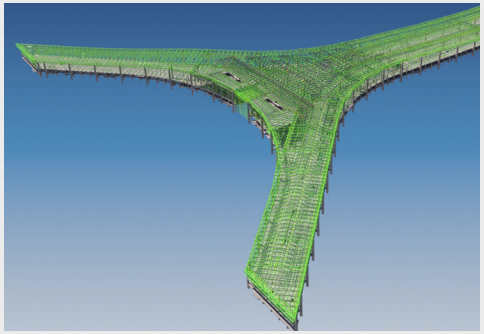
Unionport Bridge Replacement

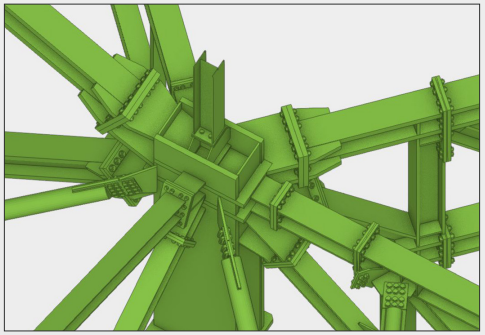
New San Francisco - Oakland Bay Bridge

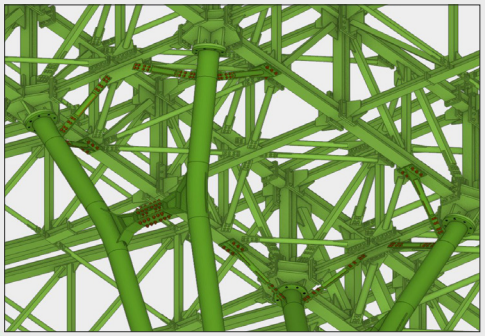
Our Experience in Airports

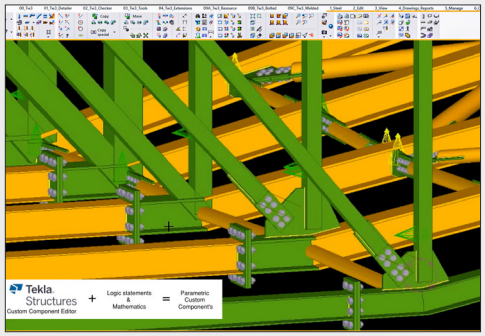
Hong Kong International Airport

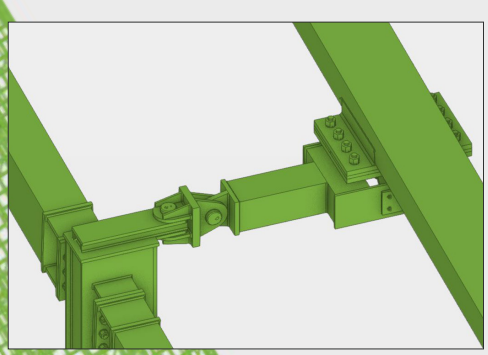
Client: Airport Authority Hong Kong
Location: Hong Kong, China
Expected Completion: 2024

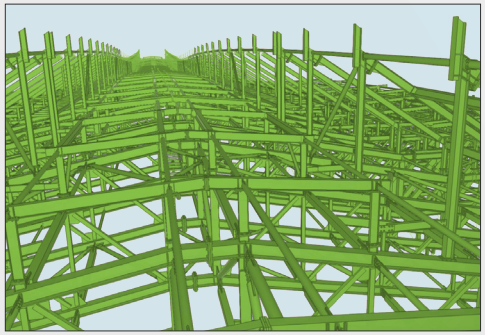












DBM Vircon was engaged directly by the owner, the Airport Authority Hong Kong, to provide specialist modelling services for the new 57 aircraft concourse that will service the existing second runway, and new third runway. Engagement occurred at an early stage to work collaboratively with the project engineer, moving away from the traditional staged silo mentality that is usually associated with delivering a major infrastructure project.

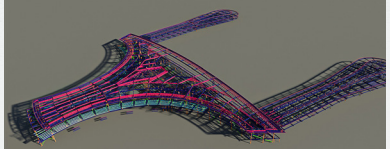
DBM Vircon delivered a fully connected design intent Tekla model for tender and LOC purposes, with the successful contractor then utilizing the model to produce erection methodologies and 2D fabrication deliverables. This way, all the steelwork details will be fully resolved, and the design complete at the time of contractor engagement. As such, the Airport Authority Hong Kong will be able to significantly de-risk the project by removing any assumptions or unknowns within the engineers' traditional 2D design, which traditionally translate into fabricator claims and delays to the project.

Watch our feature video about our work on the Hong Kong Airport

DBM VIRCON

Our Experience in Airports

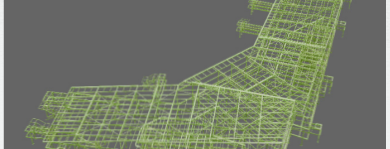
NOLA International Airport



Client: **Hirschfeld Steel**
Location: **New Orleans, LA**
Completed: **2019**

The scope included framing for the new terminal, concourses, canopies consisted of 6,900 tons of steelwork, 1371 embeds and approx. 10,000 shop assembly drawings. The detailing scope also included the secondary structure for the curved glass curtain walls which framed three sides of the terminal. This secondary structure consisted of curved transoms, trusses and rods which tied back to the main concrete columns. Significant effort was spent coordinating with other trades including steel joists, floor and roof decking, elevators, escalators, metal stairs and MEP.

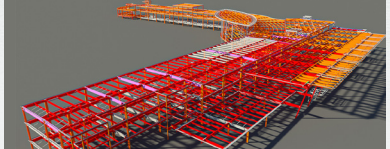
LaGuardia Airport Renewal



Client: **Walters, Inc.**
Location: **New York City, NY**
Completed: **2016**

DBM Vircon's scope of work included the 3D BIM modeling and shop detailing of the structural steel. This is a significant piece of infrastructure in the US so security and confidentiality were paramount. The team utilized Tekla model sharing, enables the team to collaborate in the cloud, synchronizing changes globally while model data was safely stored locally.

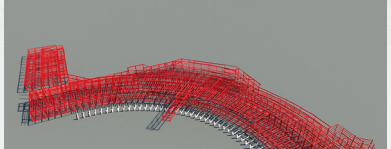
San Diego Airport Expansion



Client: **Schuff Steel Company**
Location: **San Diego, CA**
Completed: **2013**

DBM Vircon was engaged to supply fabrication shop drawings for the structural steelwork on the project. The successful outcome for this project was a result of a proactive and collaborative approach to provide certainty to both quality and the schedule demands.

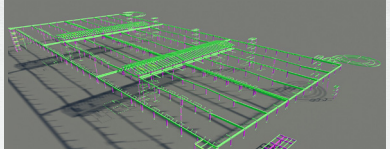
San Francisco Terminal 1 Center Redevelopment



Client: **Herrick Steel**
Location: **San Francisco, CA**
Completed: **2018**

DBM Vircon's scope of work included the shop detailing of 9,000 tons of structural steel work. The project was challenging due to the extreme volume of project growth and design revisions. Originally the structure was ~6,800 tons and became in excess of ~9,000. DBM Vircon received 4 full design package revisions. As this project is a renovation to an existing airport DBM Vircon was faced with construction sequence revisions from the client along with 'Verify in Field' items that surveyors had limited access too.

Salt Lake City International Airport



Client: **ADF Group Inc.; Schuff Steel Company**
Location: **Salt Lake City, Utah**
Completed: **2018**

DBM Vircon's scope of work with ADF included the 3D BIM modeling and shop detailing of 16,000 tons of structural steel of the terminal, south concourse west and south concourse east. DBM Vircon also worked with Schuff Steel on 3D BIM modeling and shop detailing of 1,800 tons of structural steel work on the parking garage and central utility plant (CUP).

DBM VIRCON

Our Experience in Roads and Rails

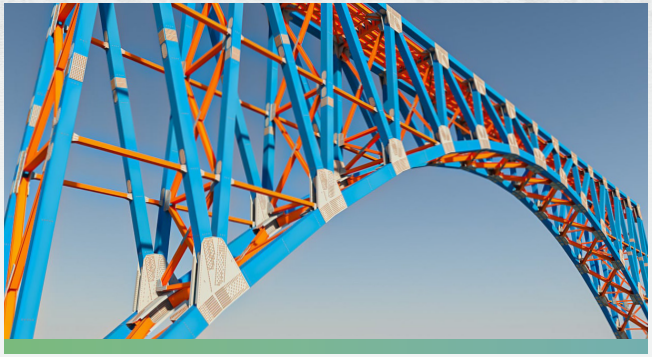
Kosciuszko Bridge Phase I - Eastbound

Client: **High Steel Structures**
Location: **Brooklyn and Queens, New York**
Completed: **2016**

DBM Vircon's scope on the project included 3D modeling and shop detailing of approximately 2,700 tons of structural steel including floor beams, edge girders, pipe anchors and a full-length traveler system 46,000 shop attached studs

Modeling of the cable supports and finalizing geometry occurred while the project was still being designed, and DBM Vircon coordinated with the design team as the job was released in design unit portions.

Portageville Arch Railway Bridge



Client: **Canam Bridge**
Location: **Portageville, New York**
Completed: **2017**

DBM Vircon provided structural steel modeling and detailing services for the Portageville Railway Arch in Letchworth State Park in New York. The Norfolk Southern railway bridge has a single track and replaces the existing bridge built in 1875.

- 483-foot arch span with three 80-foot approach spans
- It stands more than 235-feet above the Genesee River
- Now allows industry standard 286,000-lb cars, up from the current 273,000-pound limit
- Trains can also move across the bridge at 30 mph, up from 10 mph on the old span
- This bridge was modeled and detailed with minimal RFI's due to detailed design drawings by bridge engineering firm Modjeski and Masters.

Edmonton Valley Line LRT

Client: **A&H Steel**
Location: **Edmonton, Alberta, Canada**
Completed: **2021**

DBM Vircon was responsible for providing the rebar detailing on various structures and bridges on the new corridor. Specifically, our scope included detailing of resilient track work, elevated guideways, portals, abutments, tunnel, bridges (including diaphragms, deck slabs, barrier walls, track plinths, etc.), approaches, support structures, and miscellaneous site work. DBM Vircon's meticulous detailing and checking efforts were required due to the curved and super-elevated geometry of the track lines. Despite many site conditions and priority changes, the DBM Vircon team managed to keep the customer on schedule.

DBM VIRCON