**Case study**
Latrobe Valley GovHub
July 2021

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# Massive façades showcase design versatility of light gauge steel framing

**Project Details:**
**Project:** Latrobe Valley GovHub
**Location:** Morwell, VIC
**Client:** Victorian Government
**Architect:** WMK Architecture
**Principal Steel Products:**
– **Façade modules:** TRUECORE® steel
**Builder:** Castlerock Property
**Façade Cladding:**
Industry Cladding and Roofing
**Steel Fabricator:** Dynamic Steel Frame
**Sources:**
– Peter Blythe, Managing Director, Dynamic Steel Frame (PB)
– Steve Tillinger, Director, WMK Architecture
– Adam Bronts, Director – Business Development, Castlerock Property (AB)

THE INNER STRENGTH

# Light, yet strong and dimensionally accurate, the massive façades of the Latrobe Valley GovHub showcase the design versatility of light gauge steel framing made from TRUECORE® steel

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**Project Goal:**
The architectural expression of Morwell's industrial history was realised with the design and prefabrication of eighteen 'façade modules'.

**Key Benefits Delivered:**
*Design Versatility:*
– Frames made from TRUECORE® steel have an impressive strength-to-weight ratio which allowed the scale and design intent of this project to be delivered. (PB)

*Lightweight yet Strong:*
– Precision-engineered frames, made from TRUECORE® steel managed the stresses of the crane lift without distortion, ensuring that there was no damage to the cladding material. (PB)

*Straight and True:*
– Prefabricated and dimensionally accurate, framing made with the inner strength of TRUECORE® steel meant that no onsite adjustment was required to the façade modules and the quality of the build could be regularly assessed prior to installation. (AB)

*Efficient to Install:*
– The façade modules made from TRUECORE® steel were efficient to work with and install. (PB)

*Improved Time and Safety Management:*
– Prefabrication of the façade modules minimised disruption at the build site and improved the ability to manage safety and the construction timeline. (AB)

**Summary:**
With the aim of creating job opportunities in regional areas, the Victorian Government committed $266 million to a project to build three government department office hubs, referred to as "GovHubs".

This office building located in Morwell, in the Latrobe Valley, was the first of such GovHubs, with two others planned for the cities of Ballarat and Bendigo. The design and construct contract was awarded to Castlerock Property, who appointed WMK Architecture to design the building[1].

WMK Architecture Director and lead architect on this project, Steve Tillinger said, "We always knew the design would be different from a traditional office building. The inspiration for the building's unique roof and protruding façade shapes came from seeing a remnant of an old bucket wheel dredge, during a visit to the Morwell Power Station".

Throughout Morwell's rich industrial past, these bucket wheel dredges were a common feature seen in the region for generations[2]. "They are quite an impressive piece of machinery. The bucket wheel dredge remnant resonated with me, for its significance to Morwell's industrial past and for its potential to be transformed into architectural expression," elaborated Mr Tillinger. This idea evolved into the distinctive volumetric shape of the external façades and saw-tooth styled roofing.

With the design concept finalised, Castlerock Property then focused on the significant challenge of delivering the project with minimal disruption to the local community and within the timeline. Castlerock Property quickly identified that light gauge steel was the best way to build the eighteen façade modules that would be fixed to the exterior of the building.

Industry Cladding and Roofing (ICR), the façade cladding fabricator, was appointed and worked with Dynamic Steel Frame (DSF) in the design and construction of these huge modules. "Given their scale, these protruding façades would have been very heavy if designed using concrete and structural steel. Light gauge steel was the lightest, strongest, most rigid material to build these frames", said Managing Director of DSF, Peter Blythe.

The original plan was for each façade module to be made up of four parts that would be craned into position, secured to the building, and then clad. However, to achieve greater efficiency onsite, prefabricated modules were transported to site in four pieces, fully assembled and clad on the ground, and then craned and secured into their final position.

Utilising approximately 3km of TRUECORE® steel and weighing close to 7.2 tonnes once the external cladding was installed, the lightweight yet strong framing managed the stress of the crane lift without damaging the cladding material.

Adam Bronts, Director – Business Development at Castlerock Property, was impressed by the assembly of the façade modules. "The accuracy of the design, and the manufacturing of the façade modules was vitally important," said Mr Bronts. "By using prefabricated light gauge steel framing, we were able to obtain the quality of the build, while minimising disruption and safety issues on site." He continued, "The dimensional accuracy of frames made from TRUECORE® steel ensured that the modules clipped into position on the first attempt without requiring adjustment."

Architect, Mr Tillinger closely watched the construction of the building and couldn't have been more pleased with the outcome. "This was a fusion of art and science coming together. We always knew the inherent benefits of light gauge steel, but its use in this project has really changed our perception of what it can actually do."

The Latrobe Valley GovHub opened in early 2021.

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1. https://www.rdv.vic.gov.au/grants-and-programs/victorian-govhubs/latrobe-valley-govhub. 2. https://www.themandarin.com.au/112895-designs-released-for-govhub-that-will-house-200-new-public-sector-jobs/. The content of this case study is based on statements made by the sources listed above and is a reflection of their views and experience. Same/similar results are not guaranteed for each user and outcomes may vary across projects. 