



JANEZ MIKEC
STRUCTURAL ENGINEER
CURRICULUM VITAE

JANEZ MIKEC CV



PROFILE

Janez is a highly motivated structural engineer with experience in residential, commercial, and industrial design as well as seismic restraint of building components. His four-year career has spanned across New Zealand and Slovenia.

When it comes to delivering a project, Janez's technical ability, enthusiasm for communicating, and collaborating are key for the successful outcome. He works effectively in a team and seeks innovative and pragmatic solutions to every challenge that presents itself.

Janez has a proven experience in site supervision and construction observation. Clients and contractors have noted the additional value added during the construction phase of the project.

QUALIFICATIONS

BEng – Bachelor of Civil Engineering,
University of Ljubljana 2014

Member of Engineering New Zealand
(MEngNZ)

CAREER HISTORY

2017 – Present, Structural Engineer –
Structus Consulting Limited

2014 – 2017, Graduate Structural Engineer –
Knowles Consulting Limited

2013 – 2014, Compulsory internship, Fibran
Nord

MANAGEMENT SKILLS

- Comprehensive knowledge of New Zealand Design Standards and Codes
- Excellent communication skills, allowing him to work well with multiple disciplines within project teams, meeting deadlines and moving with agility to capture coordination items and deliver continued quality
- Understands clients' needs and project drivers through a thoroughly fleshed out scoping process resulting in successful delivery of projects
- Leadership of small and large teams on single discipline and multi discipline projects

TECHNICAL SKILLS

- Experienced in the design of structural steel, timber, masonry, precast and insitu reinforce concrete buildings
- Proficient in the use of engineering software such as SAP2000, Risa, Space Gass, and Etabs
- Ability to apply engineering knowledge to complex problems and provide practical solutions
- Constructions supervision experience, including the ability and willingness to investigate and provide alternative solutions to complex problems faced during construction

PROJECT EXPERIENCE

GOVERNMENT PROJECTS

Justice Precinct Emergency Services Building, Christchurch, 2015-2017, >\$300m

Engaged by Fletcher Construction, the new partition wall seismic design and suspended ceiling seismic design for all five buildings (>40,000 square metres) was undertaken under Janez's supervision. At construction time Justice Precinct was the biggest construction site in New Zealand. An extraordinary design required extensive liaising with the main contractor, architects, and all the subcontractors. Besides the coordination process, Janez's role was to design seismic restraints for the new suspended ceilings, seismic and gravity design for all the steel beams on ground floor holding the ceiling structure (>8,000 square metres), checking the steel shop drawings, and carrying out the site inspections on a fortnightly basis for almost two years. The design complied with NZS4219: Seismic Performance of Engineering Systems in Buildings, AS/NZS2785: Suspended Ceilings

Design and Installation, AS/NZS1170 Structural Design Actions, and NZ3404: Steel Structures Standard. The project faced coordination challenges for the ground floor part of the ceilings, which was built below the base isolation level. Weekly BIM coordination meetings were held in Christchurch to resolve clashes. During the construction phase more than 300 additional required details were provided. Janez used Aconex to deal with subcontractor queries and coordinate documentation changes with other consultants and architect.

COMMERICAL AND RETAIL PROJECTS

ISA Highbury Shopping Mall, Auckland, 2018

An initial seismic assessment for the Highbury shopping mall has been completed by Janez. The project consists of 7 no. different building blocks that are seismically isolated from each other. Janez completed the investigation based on two site inspections and desktop study of Auckland Council property files. The concept seismic strengthening options were also provided to the client.

Keith Andrews, Manukau, 2016, \$15m

Keith Andrews truck showroom in Manukau. Janez provided the complete civil and structural design for this project. The building consists of portal frames in one direction and precast panels along two adjacent sides with a mezzanine floor inside the building. Janez worked closely with the architect to achieve client's expectations.

Keith Andrews, Te Rapa, 2016, \$20m

Janez designed portal frames for the Te Rapa project that were spanning more than 30m, and provided answers and missing details to RFI's from a shop detailer. He worked in a team with two other engineers.

Countdown Hornby, Christchurch, 2017

An unexpected settlement was causing cracking of the precast panels along one side of the building. Janez analysed cracks on the precast panels and provided a cost effective solution for remedial works of precast panels and foundations.

Countdown Fraser Cove, Tauranga, 2016

Additional drainage penetrations through an existing post-tensioned slab. Janez used RAFT software to analyse the existing post-tensioned slab for new penetrations and additional loads from the roof structure.

Pallet Racking Design – multiple projects, 2017-present

Design of pallet racking presents unique challenges in New Zealand due to the high seismic forces. Structus has worked closely with Pallet Racking Solution to develop design software and processes for the design of these racks. This included laboratory testing of structural components in order to develop ductile seismic systems, which led to safer and more cost effective designs. Multiple racking design projects nationwide.

INDUSTRIAL PROJECTS

El Kobar and Underwood 2500 Units, Auckland, 2018 - present, \$20m

New high specification warehouses – 3 no. for the El Kobar project and 1 no. for the Underwood 2500 project – with associated two storey offices for each warehouse, constructed on high profile sites along Highbrook Drive. The warehouses typically contain large spans for the hot rolled and welded beam section portal frames and spine beams to create large open warehouse space. There are canopies to each warehouse. Site retaining walls required to

overcome the site topography. Hard stand paving throughout the development for heavy vehicles. Structus are engaged for structural engineering design and construction monitoring from concept through construction. Janez's key role was to design warehouses and retaining walls located on site.

5-11 Selwood Road, Auckland, 2017 - present, \$20m

New high specification warehouses – 7 no. in total – with associated single storey offices, constructed in a constrained site with challenging site conditions. Warehouses typically consist of steel braced roof delivering the lateral loads into either steel braced walls or precast panels. Some warehouses contain large spans for the Steltech portal frames or steel rafters on precast concrete panels. Precast panels are forming a part of lateral system, and are retaining soil at the same time. Number of retaining walls have also been designed throughout the site. Most of the warehouses were found on piled foundation. Janez provided the complete structural design for this project.

EDUCATION PROJECTS

Hauraki School, Auckland, 2018 – present, \$6m

A new 10 classroom block is currently being designed by Janez. A two-storey structure consists of light-weight roof and composite floor decking on Level 1. Portal frames are resisting lateral loads in one direction with braced frames located in perpendicular direction. The project includes civil design and demolition of two blocks with a total of 4 no. teaching spaces and resource areas to allow the construction of the new 10 classroom block.

RESIDENTIAL PROJECTS

39 Flat Bush School Road Terraced Apartments, Auckland, 2018-Present, \$25m

68 no. new 3 storey terraced housing as Stage 1 of a larger urban development. There are 4 no. typical apartment types. The slab system is precast concrete rib and timber infill spanning onto the walls. The lateral system consists of steel sway frames in the along direction and precast concrete panels in the across direction. Janez was the main engineer on this project.

Miro Apartments, 2016, Auckland, \$30m

Janez carried out pre-pour site inspections for the Miro Apartments project Level 1 to 4. In situ walls along the building were heavily reinforced, therefore construction faced many issues on site. Janez worked closely with the contractor to ensure work was done according to the structural drawings. Part of the slab was erected as flat slab, with a portion as a post-tensioned slab. In addition, a number of architects' and construction queries had to be resolved during the construction phase. Janez was also involved in designing outstanding items from the architects, internal reviews of the cantilever balconies, and solving part the roof structure that was connected to the cantilever balconies.

Low-Rise Residential Projects, 2015-2017

Multiple one to two-storey residential projects have been undertaken by Janez, including seismic/wind bracing design, gravity design outside scope of NZS3604, foundation beam designs, pipe bridging designs, portal frames, retaining walls, etc.

HEALTHCARE PROJECTS

Northshore Hospital

Preliminary analysis of the existing structure to resist the loads of the new CT scanners. Additional strengthening was required under the existing concrete flooring to carry the loads.

TEMPORARY WORKS PROJECTS

Anzac Ave Students Accommodation, Auckland, 2017

Janez was the structural design engineer on the project, which involved the design of reinforced concrete pad and piles for one of the two cranes, and analysis of the steel framed gantry to resist both static and moving loading requirements from the second crane. Steel frame that was cantilevering over the footpath was modelled and analysed in SAP2000.

Wynyard Quarter Temporary works, 2017

Janez provided the design for temporary propping of precast panels that had no gravity support. The design included checking the existing slab to resist the load from moving cranes, and inspecting erection of precast panels on levels 1 to 3.

ROAD PROJECTS

Transmission Gully Culverts, 2017, Wellington

Janez completed peer reviews of several culvert designs along Transmission Gully Motorway in Wellington. The design complied with NZTA Bridge Manual 3rd Edition, and AS5100.2 Bridge Design Part 2: Design Loads. Rigid wall assumptions according to RRU 84 (Seismic Design of Bridge Abutments and Retaining Walls) were considered to determine seismic earth pressures. All culverts were modelled in SAP2000. Response2000 was used to evaluate crack widths in slabs.

