

## Reference Project

## Bridge Construction

This 106m long suspension bridge across the Manganui Gorge on Taranaki Mouna

<b>Location</b>	Mt Taranaki, Stratford ski field.
<b>Date</b>	May 2024
<b>Client</b>	Department of Conservation
<b>Consultant</b>	DC Structures Studio

This significant structure crosses the hazardous gorge and provides access to the mountain trails and the ski field. At 1300m elevation and set in volcanic rock it required a unique design and a challenging construction project. DC Structures provided the unlimited load and high wind capacity design. Abseil Access won the tender for the build.

### The work included:

- Installation of 22 load tensioned rock anchors up to 11m deep
- All materials flown in by helicopter including mast sections at 1300kg, all hanger frames and decking.
- Construction team living on site at the ski lodge.
- Twin sets of 24mm galfan spiral strand main cables for 50 year life
- FRP decking for alpine environment
- 20mm spiral strand wind catenary cables tensioned to 85kN
- 12m<sup>3</sup> of alpine grade concrete poured by helicopter
- 10 artistic stainless steel laser cut art panels and mast decoration including a taniwha and touch stone all designed by local Iwi Ngati Ruanui

Our highly skilled construction team stayed at the nearby ski lodge for 6 months of construction. The weather work window being late spring to early autumn. Close collaboration with DoC, Dan from DC structures, Pace engineering, MidWest helicopter, Beck Helicopters, Rock Control and Shaws wire ropes was required to successfully execute the build safely and efficiently.

