



Canti-Traveller

Profile and Data Sheet

August 2024





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Introduction

McConnell Dowell's 'Canti-Traveller' is a purpose-built temporary mobile platform that facilitates fast, safe, low-impact construction of piled marine jetties and piers.

The innovative system, designed and fabricated by our in-house team, can drive vertical and raker piles with speed and accuracy. Fastest in a straight run, it also has a system for changing jetty direction.

It provides a safe working platform for installation of headstocks (concrete or steel) and other permanent elements of the jetty or pier, such as the jetty deck.

One of the primary advantages of the Canti-Traveller is its minimal ecological impact, not touching the land or seabed except for the permanent piles it drives. Removing the need for marine-borne plant, it also operates independently of marine conditions or through shallow waters, offering significant program and cost certainty.



Traveller System Overview

The Traveller System consists of two (2) 70.6m long steel box beams supported on three (3) bents.

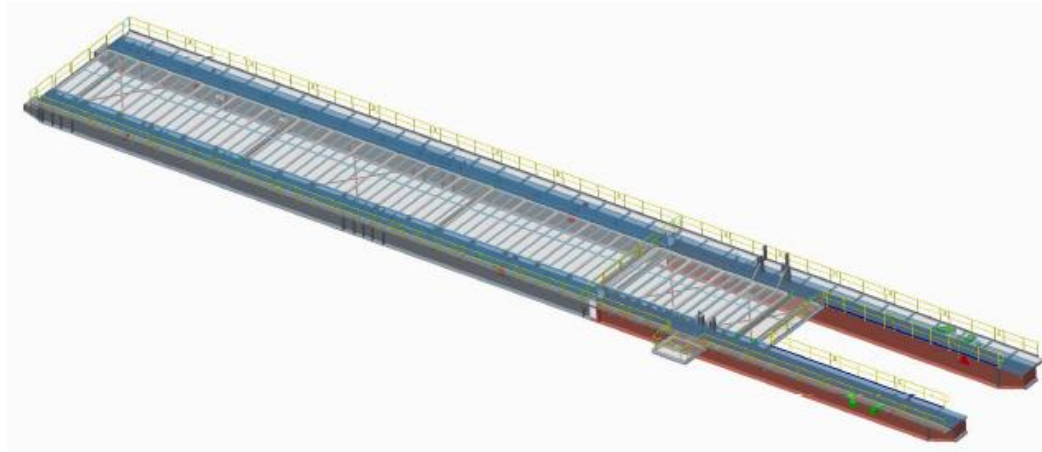
The steel box beams are braced with steel members and the central area filled with gridmesh modules finishing flush with the box beam top flanges. All access areas on the Traveller System are protected with handrails.

A piling gate fixed to the front of the Traveller allows pitching and driving of piles in a vertical position. If required it can be used to install raking piles using the gate's hydraulics. The piling gate also provides a working platform for cutting piles and welding headstocks.

The Traveller Systems is equipped with a hydraulic launching system that enables the Traveller to launch forward and back along the jetty on roller assemblies fixed to headstocks. The launching system is controlled by a central hydraulic control station.

Crane Beams and Traveller Facilities

The Traveller crane beams are specifically designed and fabricated to span across 3 no. headstocks at all times. The front end of the crane beams will cantilever the piling gates up to 27m from the supporting headstocks to allow piling and headstock installation on the subsequent bent. Crane beams are braced through the centre with bracing beams. Drop in gridmesh modules fill voids through the centre of the beams. Gridmesh modules are rated at 2.5 kPa or maximum of 3t spread across one module. There are no gridmesh modules installed through the centre of crane beams at the front to allow jacking Beams to be installed.



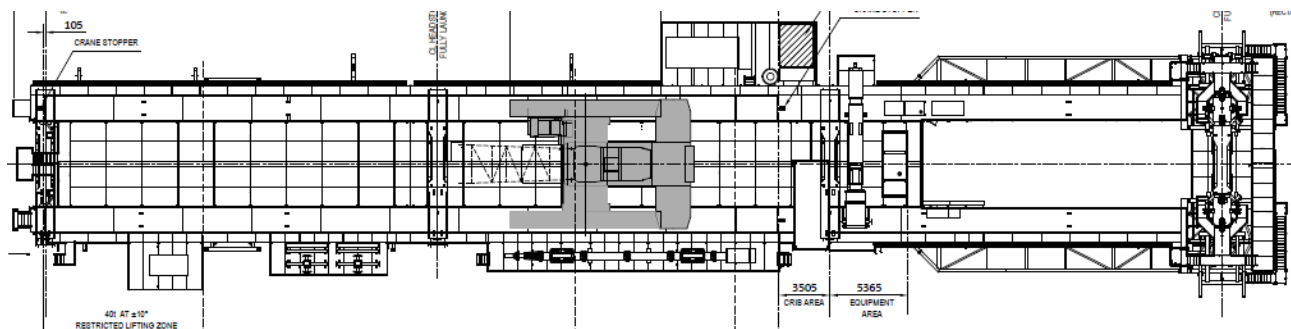
Isometric View of Traveller Crane Beams & Gridmesh Modules

Traveller crane beams have hardwood timbers laid and locked down with steel angles along the crane tracking zone. 600mm wide gridmesh walkways run along the length of both crane beams on the outside to provide access from back to front.



Traveller Facilities

The area in front of the crane tracking zone houses a storage container, generator, hydraulic power pack, piling hammer, and hammer power pack. On the side decks are the ablutions block, drill compressor, drill strings and painting compressor. On the level deck is office and crib room.



Layout of Facilities

Crane Assembly Platform

The Traveller crane beams also support a crane assembly platform. The crane assembly platform provides jacking points for crane pedestals to lift the crane carbody and rotating body to install and remove the tracks during assembly and dismantle of the crane respectively.



Roller Assembly Pin Connection 2571-MD-TW-0431



Piling Gates

Piling gates are positioned at the front of the Traveller. The gates are bolted to the front of the Traveller crane beams allowing them to be removed if required. The piling gates are reversed, which allow the gates to release the piles following driving as the Traveller launches forward to subsequent bents.

Piling gates serve the following purposes:

1. Position and restrain piles during pile driving.
2. Provide safe access for pile cut off and welding headstocks.
3. House welding sets and power tools required for general steel works.

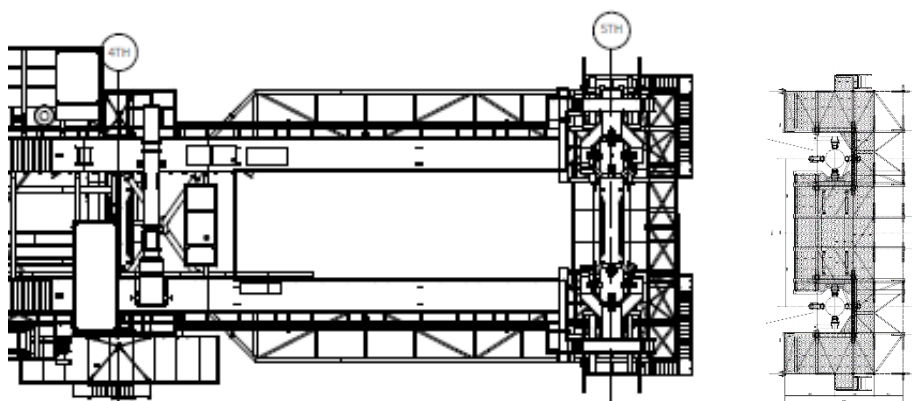


Figure 5.0.1 – Piling Gates – plan view

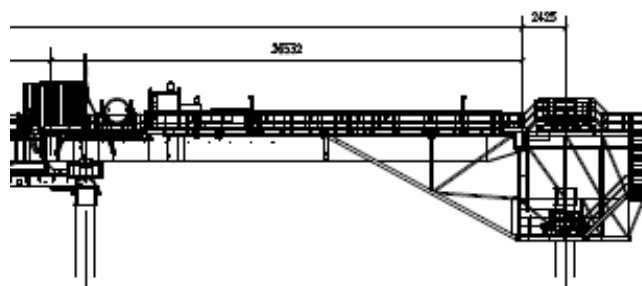


Figure 5.0.2 – Piling Gates – profile view

Additional Information

Additional technical information, including specifications on ancillary equipment, gangway access, and traveller operations, is available upon request.