

# How we'll build the rail bridge

The Victorian Government is removing 27 dangerous level crossings and building 17 new stations, making the Frankston Line level crossing free by 2029 and improving safety, reducing congestion and allowing more trains to run more often.

We're removing the level crossings at Warrigal Road, Mentone and Parkers Road, Parkdale by building a rail bridge over the roads and a new Parkdale Station.

The boom gates will be gone and the new Parkdale Station will open in spring 2024.

We will build the new 1.1 kilometre rail bridge with 44 concrete columns to support the long concrete bridge sections, with retaining walls and a support structure at each end.

Frankston Line trains will continue to run express through Parkdale Station on the temporary rail track until spring 2024 while we build the new rail bridge.

Read overleaf for more information on how we'll build the rail bridge and what to expect during construction.

## Did you know?

**By building the rail bridge over the roads, we are creating a greener rail corridor with new open space and recreational facilities, including community gathering places, a nature-based playground, basketball half-court and an open-air gym.**

**Pedestrians and cyclists will also benefit from improved connections between Como Parade East and Como Parade West, with the rail line no longer presenting a barrier.**

## Why these level crossings need to go



About **20,000** vehicles travel through these crossings each day



Boom gates are down for up to **44 minutes** of the morning peak

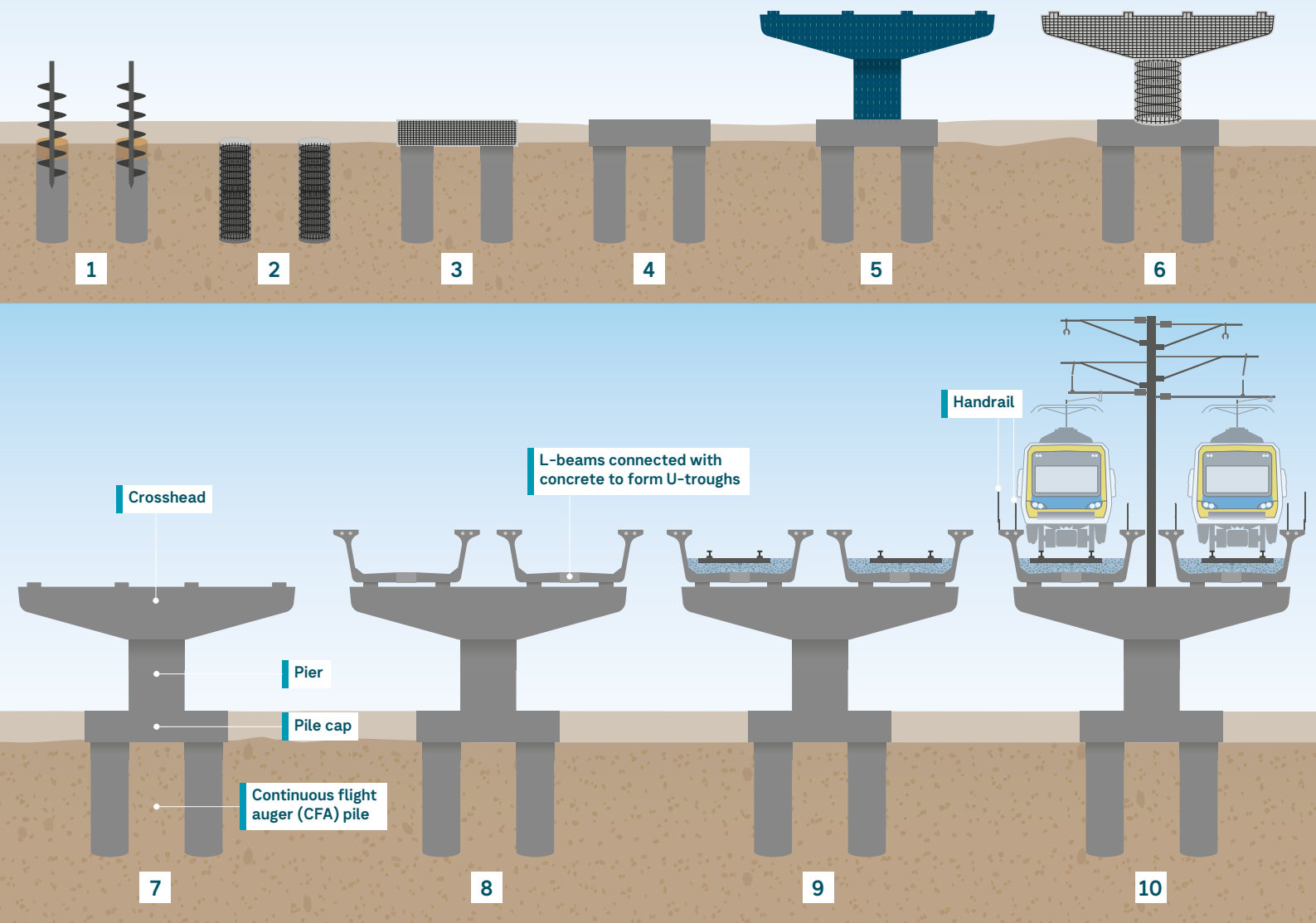


**34 trains** run during the morning peak



*New Parkdale Station and open space. Artist impression, subject to change. Vegetation shown at 3-5 years maturity.*

Diagram not to scale.



## Building the rail bridge, one step at a time

1. Foundation works, known as piling, start by drilling six holes for each pier into the soil up to 30 metres deep. The holes are then filled with concrete as the drill is retracted to prevent the hole from collapsing.
  2. A cylindrical, steel reinforcement cage is inserted into each hole.
  3. A steel reinforcement cage is then placed on top of each pile.
  4. The reinforcement cage is filled with concrete and left to set.
  5. A mould is placed around the reinforcing cages with additional prefabricated reinforcement placed inside.
  6. Steel reinforcing cages are placed on top of each pile and concrete is poured into the mould and around the reinforcing cages. This forms the skeleton for the pier column and crosshead segments at the same time.
  7. Once the concrete has set, the mould is removed and the pier is complete. The piers support the large concrete beams, known as U-troughs, that form the rail bridge.
  8. U-troughs comprise of two L-shaped concrete beams, which are joined with concrete to form a U-shape. These concrete
  9. The rail tracks, sleepers and ballast are laid within the U-trough to enable trains to travel over the bridge.
  10. Signalling, communications and overhead power equipment are attached to the rail bridge to control and power the trains as they travel over the rail bridge.
- beams will be delivered to Parkdale and installed into place throughout February to May 2024 during night times to minimise disruption to the community.

# What makes up the rail bridge?

## Piles

Piles are deep underground foundations that support the rail bridge and new station. Piling rigs drill six holes for each pier that are reinforced with steel and filled with concrete. The piles will be up to 1.2 metres in diameter and up to 30 metres deep. Once piling is complete, the rest of the bridge and elevated station structure will take shape above ground for the community to see.

## Piers

Bridge piers are the upright concrete columns that hold up the bridge structure. At Parkdale, you will see 44 piers and 37 crossheads installed to support the structure of the rail bridge.

## L-beams and U-troughs

L-beams vary between 25 to 31 metres long. Two L-beams will be lifted by large cranes into place on top of the piers and connected with concrete to form a U-trough. This will form the base where we lay the train tracks and ballast to enable trains to travel over the bridge.

These structures will be supplied from two casting yards in Kilmore and Laverton. At Parkdale, 152 L-beams will be joined to form 76 U-troughs.

## Super Ts

Super Ts are large pre-fabricated concrete beams.

These beams will be installed in the station area and will act as the elevated platforms at the site of the new Parkdale Station. A total of 12 super T-beams will be used at Parkdale.

## Retaining walls

Retaining walls hold compacted soil in place to support the rail line as it rises from the ground at each end of the bridge. At Parkdale, we'll build the rail bridge retaining walls using over 132 reinforced concrete wall panels.

## Abutments

The bridge will have a support structure at each end of Como Parade East and Como Parade West known as an abutment. The abutments will support the load of the bridge horizontally and vertically as it returns to ground level and also act as retaining walls. They will be made from concrete.

We will install 12 piles at the western abutment towards Mentone and 12 piles at the eastern abutment towards Mordialloc. They will play an integral role in ensuring the walls surrounding the rail infrastructure are solid and secure.

## What to expect



Deliveries and installation of concrete beams during night times



Excavation and construction machinery on site



An increase in noise, dust and vibration in the area



Lane and road closures



Detours in the area



Traffic management



Visit [levelcrossings.vic.gov.au/parkdale-disruptions](https://levelcrossings.vic.gov.au/parkdale-disruptions) to view up-to-date disruptions.



*New shared use path from Como Parade West, looking towards Warrigal Road. Artist impression, subject to change. Vegetation shown at 10 years maturity.*



## Stay up to date

The best way to stay up to date with the project is to:

- Sign up to email updates at [levelcrossings.vic.gov.au/subscribe](https://levelcrossings.vic.gov.au/subscribe)
- Register for SMS updates by texting **PARKDALE** to **0429 839 892**
- Call us on **1800 105 105**
- Email [contact@levelcrossings.vic.gov.au](mailto:contact@levelcrossings.vic.gov.au)



Warrigal Road level crossing removed. Artist impression, subject to change. Vegetation shown at 10 years maturity.



Parkers Road level crossing removed. Artist impression, subject to change. Vegetation shown at 3-5 years maturity.

## Project timeline



### 2021

- Project announcement



### Mid 2022

- Early concept designs released
- Community engagement sessions
- Open Space Advisory Panel meetings continue
- Site investigations continue



### Late 2022

- Updated designs released
- Community engagement sessions
- Stakeholder liaison group nominations



### Early 2023

- Start of works
- Liaison group meetings begin



### Mid-late 2023

- Major construction begins
- Final designs released



### 2024

- Level crossings gone
- New Parkdale Station open



### 2025

- Project completion

\* Timeline subject to change.

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