

City & Southwest



Main image: Central Electric Building with new ticket gates underneath. Inset: Artist impression of the remodeled Central Electric Building.

Improved access from Eddy Avenue forecourt

Work in the lower Northern Concourse at Central Station includes the provision of new Opal ticket gates and improving access to the station from the Eddy Avenue forecourt. Seven new ticket gates have been installed under the Central Electric Building near the base of the escalators and stairs from the upper Northern Concourse.

To make this new thoroughfare possible, part of the support structure of the Central Electric Building has changed. The original concrete support walls underneath the south side of the building have been replaced with a steel beam that will be clad in sandstone. These changes will make It easier for customers to enter the station and access the new metro platforms in the future.

Temporary scaffolding has been installed around the Central Electric Building so that the original parts of the building can be cleaned. While sandstone cleaning takes place, access to the station remains available at the end of the Eddy Avenue forecourt. Sydney Metro is Australia's biggest public transport project. Services started in May 2019 in the city's North West with a train every four minutes in the peak. Metro rail will be extended into the CBD and beyond to Bankstown in 2024. There will be new CBD metro railway stations at Martin Place, Pitt Street and Barangaroo and new metro platforms at Central.

In 2024, Sydney will have 31 metro railway stations and a 66 km standalone metro railway system – the biggest urban rail project in Australian history. There will be ultimate capacity for a metro train every two minutes in each direction under the Sydney city centre.

Laing O'Rourke is delivering the new Sydney Metro platforms under Central Station as well as the landmark Central Walk - a new underground pedestrian concourse to help customers get around Sydney's busiest railway station.



Artist impression of Central Walk.

Architectural finishes in Central Walk

As part of the Sydney Metro works at Central Station, ongoing activity is happening underground to shape and build the new landmark Central Walk pedestrian concourse.

As the highly complex mined excavation sequence nears completion, the team has already started the architectural fit out of the concourse.

Among the first elements to be installed are the Glass (fibre) Reinforced Cement (GRC) panels. The wet ingredients are mixed and sprayed into moulds where they harden to form the complex shapes. Once the materials have hardened, they are ready to be bolted into place on the galvanised structural steel frames.

A real challenge has been how to install the steelwork and diamond shaped GRC panels underneath the operational

suburban platforms and tracks in a timely fashion. To do this, the 3D coordination model has been vital to ensure success, along with multiple coordination workshops and varied lifting techniques.

With over 3,000 panels to install across the station, the team has some work ahead before it looks like the artist's impression.



GRC installation taking place.

Groundwater explained

Managing groundwater is an important consideration to successfully operate the underground metro services at Central Station. To do this, the walls of the metro box have been waterproofed and groundwater will be directed to drainage channels under the base-level floor. Water will flow through these channels to large tanks installed beneath the metro box. These tanks have a combined capacity to hold over 500,000 litres of water.

After reaching the tanks, water will be pumped to ground level, where it will be treated and either reused or sent into the existing storm water network. This system allows Sydney Metro to ensure that passengers and important operational equipment remain dry on the metro platforms at Central.



A drainage trench in the Metro box.



Three-month lookahead

	Activity (subject to change)	July	August	Sept
1	Constructing concrete slabs within the metro site	•	•	
2	Installation of precast metro platforms	•	•	•
3	Building construction at 20-28 Chalmers Street	•	•	•
4	Services installation in Randle Lane		•	•
5	Excavating for Central Walk's northern escalators to Platforms 16-23	•	•	•
6	Drilling underground from the Railway Institute Driveway	•	•	•
7	Tiling in the Northern Concourse	•	•	•
8	Installation of new lift In the Eastern Suburbs Railway Concourse	•	•	•
9	Platforms 16-23 re-leveling, concreting, and retiling works	•	•	•
10	Building new Customer Service Attendant and stand-by guard rooms on Platforms 16-23	•		



Over 75,000 new floor tiles will be installed as part of the works at Central Station.



The new feature roof over the Northern Concourse expands over **2,240 square metres** – about **half an acre**.



The new roof intergrating with the Station Masters Office.

Architectural Heritage at Central Station

Central Station is the largest station and transport interchange in NSW, as well as the busiest in Australia. The station area includes the site of the original Sydney Railway Company grant where the first Sydney station opened in 1855. The site now represents over 160 years of railway operations – making it the oldest continuously operating rail yard in Australia. Central Station highlights the evolution of NSW railways from the steam age, through to the electrification of the network, and now the addition of metro services.

Working within a valuable heritage site, the Sydney Metro works have been designed to enhance, complement, and protect the architectural heritage of the precinct, with considerations such as:

- Integration of the new feature roof over the Northern Concourse with the existing Grand Concourse canopy and Central Electric Building. The new roof improves the visual relationship with the existing heritage buildings by making them more visible to customers within the station.
- Finishes in the new parts of the station and metro platforms include precast modular panels that

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The new roof looking from West to East.

reference the structural Hawkesbury sandstone of Central Station.

• Construction vibration has been carefully monitored and limited to protect the existing buildings from damage.

Construction of the new metro platforms at Central Station, as well as Central Walk, the Northern Concourse upgrades and the new Chalmers Street entrance will form the latest evolution in railways and railway technology in Sydney and add to the significance of the precinct.

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