

Falsework

The future of LAX is looking UP!

The Automated People Mover's guideway, stations and pedestrian walkways will be elevated 50 to 75 feet above grade to preserve right-ofway for both train and roadway users.

This grade separation, recommended by the Los Angeles Department of City Planning in the Mobility Plan 2035, reduces the potential for delays and/or collisions and increases ontime performance and reliability.

Falsework construction makes the elevated guideway, stations and pedestrian walkways possible. Keep looking up as APM construction progresses! Falsework refers to a construction technique in which temporary structures are erected to support a permanent structure until its construction is sufficiently advanced to support itself.

How will falsework be used on the Automated People Mover?

Falsework will be used to support the formwork while the Automated People Mover's (APM) concrete structural elements are cast-in-place. Concrete is placed in the formwork to construct the platforms that will create the elevated APM guideway, stations and pedestrian walkways. Once the cast-in-place structural element is strong enough that it no longer needs the formwork or the falsework to support it, the formwork and falsework are disassembled and moved to the next area or section under construction.

Falsework Components

Falsework components, which include the bents, stringers and decking, are constructed out of steel and lumber. Materials are reusable and recyclable.







Bents: The elements of falsework that allow for elevated construction are called bents, which will be constructed using steel pipe and beams. In some cases, lumber may be used in place of the steel pipe. These are preconstructed on-site then lifted into place with the use of a crane.

Stringers: The steel I-beams used as the horizontal elements connecting and supporting the falsework bents are called stringers.

Decking: Decking, comprised of 4x4 lumber and plywood, is laid across the bents to create a walking platform and the surface that will support the formwork.





250k

Weight in pounds that the falsework is designed to support

6 Approximate weeks, time it takes to erect

a section of falsework

Approximate pounds of steel used for APM falsework

Falsework Erection Process



After carpenters fabricate a falsework bent from pipe and beams...

- 1 The bent is lifted to a vertical position by crane operators.
- 2 Stringers are added after the bents are guided into place.
- 3 Decking and formwork are added.

What happens after the falsework erection is complete?

Once the falsework is erected and formwork is in place, concrete is placed in the formwork via a concrete pump truck and allowed to cure until it reaches the prescribed strength. Falsework is then carefully disassembled to preserve the materials and reused at the next location. The entire process, which includes falsework erection, formwork, concrete placement, curing and falsework disassembly, takes approximately 6-7 months per section. Pedestrian and vehicular thru traffic will be maintained as much as possible.

About the Automated People Mover

The Automated People Mover (APM) system will bring convenience and time-certainty for guests traveling to or from Los Angeles International Airport. During peak hours, driverless trains will arrive at stations every two minutes. The trains will have wide doors for easy access with luggage, large windows for viewing, plenty of hand holds, and seats for those in need. Station platforms are open-air, light-filled and have escalators and elevators for quick, convenient access to the terminals. The APM is the centerpiece of LAX's Landside Access Modernization Program (LAMP), which also includes a Consolidated Rent-A-Car (ConRAC) facility, Intermodal Transportation Facilities and associated roadway improvements. The APM will reduce vehicle congestion in the Central Terminal Area, provide a connection with L.A. Metro's regional transportation system, create new locations for passenger pick-up and drop-off, reduce emissions and provide reliable access to the terminals.

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