

fabricated in four-metre-high sections on the ground and dropped vertically into the excavations.

The final two metres of the cages are being added in place by threading individual bars into the prefabricated sections.

Mechanical couplers and splicing devices are being used to accomplish this portion of the operation.

Epoxy-coated rebar is also playing an important part on the Harbourfront LRT project in the tunnel sections. Concern about excess water and salt from vehicles on the roadway above, prompted designers to go for the extra protection afforded by epoxy coating.

**Owner:**  
Toronto Transit Commission  
**Engineers:**  
Toronto Transit Commission  
**General Contractor:**  
G. Torno Engineering Inc.

## TILT-UP CONSTRUCTION AN ECONOMICAL ALTERNATIVE

Tilt-up construction is a method of construction which involves casting concrete wall panels horizontally on top of an already cast floor slab and tilting them up.

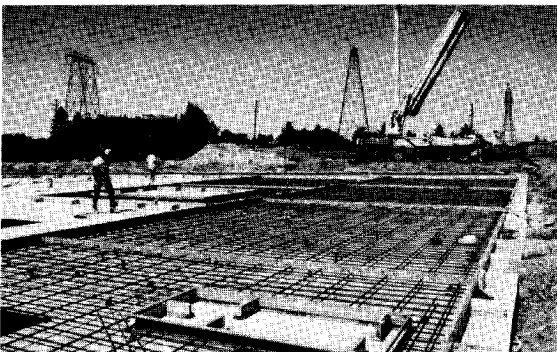
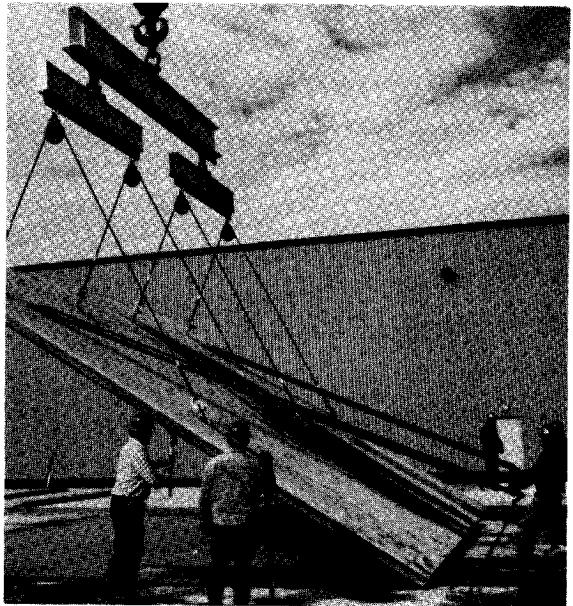
A wide variety of surface finish, colour and texture options allows architects to win contracts with unique and attractive fire-resistant buildings.

Typically the building method is suited for the warehouse, terminal, and light industrial markets when the building is one or two stories and in excess of 1 000 sq. metres.

Reinforced concrete tilt-up wall panels can serve as shear walls and are also capable of supporting roof loads, thereby minimizing the need for columns. When extended below grade they can act as grade beams in poor soil conditions.

Tilt-up buildings are economically competitive with current building methods for these structures and have many advantages before, during and after construction.

Contractors can build tilt-up concrete buildings on time and on budget with locally available materials.



They are easy to place, cure and finish since tilt-up panels are produced at ground level without expensive skilled labour.

tenance costs and lower insurance rates due to reinforced concrete buildings' inherent resistance to fires, and weather damages.

In addition to lower construction costs and earlier occupancy, building owners will appreciate the reduced energy consumption, main-

Tilt-up construction enjoys great success in British Columbia and Nova Scotia, and is currently making inroads in Ontario.