

VICTORIA PARK TUNNEL

How Auckland's first road tunnel is being built

A 450-metre motorway tunnel is being built through Victoria Park, next to the Victoria Park viaduct. When it is completed in 2012 the tunnel will carry three lanes of traffic north, while the viaduct will carry traffic south.

The Victoria Park tunnel is a cut-and-cover tunnel, which is really just a very large trench with a roof over the top. Once the roof is on, the park will be put back on top. This way, the size of the motorway is being increased to take more cars, without taking away our precious green space.



The cut and cover tunnel construction steps are:

1



Surveyors mark out the route the tunnel will take and, in particular, the lines the tunnel walls will take.

2

Services like water pipes and electricity and communication cables are moved away from the tunnel route.



3



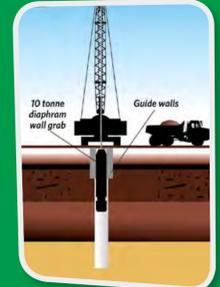
Drilling rigs, cranes and excavators arrive on site and build the walls of the tunnel. There are two ways the walls are being built:

3.1



Secant pile walls
Large round holes (piles) are bored into the ground along the line of the walls and then filled with steel reinforcing and concrete.

3.2



Diaphragm walls
A trench is dug, using a 'clam shell' grab that scoops out the dirt and rock. The trench is then filled with reinforcing steel and concrete.

4



The roof beams are installed between the walls, to hold them in place.

5



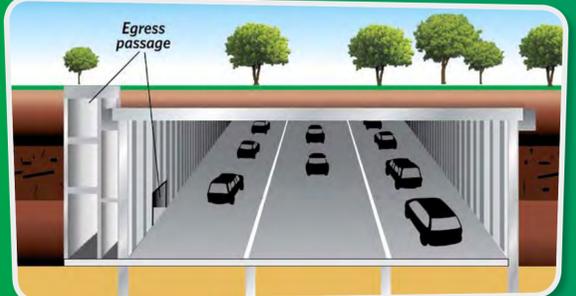
Excavators remove the dirt and rock from between the walls.

6



The floor of the tunnel is built, and anchored into the bedrock below.

7



The tunnel services are installed. These include lights, fire protection systems, emergency exits and ventilation fans.

8

The park is put back on the top of the tunnel.

9

The tunnel is opened to traffic.

