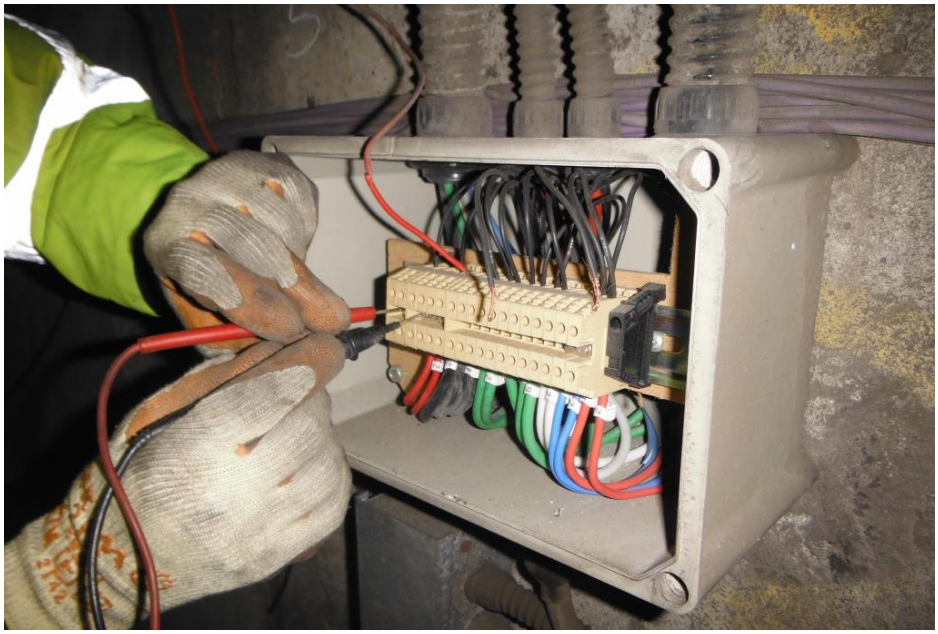
Project: Clyde Tunnel Refurbishment, Glasgow



Client: Glasgow City Council

Project Description: Clyde Tunnel was opened in 1963 (Northbound tunnel) and 1964 (Southbound tunnel) and crosses beneath the river Clyde in Glasgow, Scotland. Two parallel tunnel bores connect the districts of Whiteinch to the North and Govan to the South in the West of the city, each carrying two lanes of traffic as part of the A739 road. The tunnels are each 762 metres (2,500 feet) long with a gradient approaching 6%.Repairs were carried out on the RC deck slab in 1994 and in addition, the immediate area of the joints received cathodic protection (CP) in 1994 and 1996.
Aecom were commissioned to carry out a principal inspection of the reinforced concrete portal frame and provide an independent review of the impressed current cathodic protection (ICCP) system. Refurbishment options have been presented to the client and aim to provide an optimised ICCP solution to reduce project costs.

Technical Details: The detailed design stage of the project will include:

a) Design the ICCP system upgrade to current standards and regulations to improve reliability and monitoring facilities. As a minimum this will require replacement of all four transformer rectifiers units and the existing computer system used for monitoring.

b) Prepare concrete repairs contract documents. Include repair of leaking drain pipes. Consider altering detail of vents to prevent water ingress from road spray. Consider implementing additional corrosion management systems.

c) Programme the construction showing sequence of main activities.

d) Liaise with the client and other parties and attend meetings as required.

e) Prepare the design detail drawings and associated schedules.

f) Check and certify the design.

g) Produce a works cost estimate.