



**CABLE ROUTE HEC CONTRACT NO. 93/8012
KENNEDY ROAD TO SHEUNG WAN
SUBSTATION**

The HEC's 275 KV Cable Route was designed to provide a link between the Kennedy Road Substation and Sheung Wan Sub Station on Hong Kong Island.

Bachy Soletanche Group provided a total of 30 directional drillholes of 355 mm diameter for the installation of 250 mm diameter FRP cable pipes between the 17 July 1995 and 30 March 1996.

The total length drilled was some 2,258m formed in enclosed working conditions and represents an example of precision directional drilling and cable placement in Hong Kong (see plate 4 and 5).



DRILLING DESIGN

The works were designed to be completed in three stages:

Stage 1 - a 75 mm diameter pilot hole was drilled using NQ wireline corebarrel. The direction of the drillhole was surveyed using the Reflex Maxibor equipment and controlled using the Devico Vic Drill-Head.

Stage 2 - on completion of Stage 1 the 75 mm diameter pilot hole was over-reamed to 165 mm diameter. Down The Hole Hammer (DTHH) drilling was performed using Sandvik SD5 hammer and 165 mm diameter convex button bit with a special 60 mm diameter guide 'nose' attachment.

Stage 3 - on completion of Stage 2, the 165 mm diameter hole was over-reamed to 355 mm (final diameter). DTHH drilling was carried out using Sandvik SD8 hammer and 355 mm diameter convex button bit with a special 159 mm diameter guide 'nose' attachment.

The directional drilling and formation of the cable holes were achieved in difficult ground conditions consisting of fractured volcanic tuff (predominantly moderately strong to strong), in places interlayered with soft decomposed rock zones which were grouted and re-drilled as required to maintain the integrity and direction of the drillholes.

