

## **Durability Design Method of Cut and Cover Tunnels Based on the Field Data**

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The durability is important in the performance-based design of the cut and cover tunnels. This paper describes the investigative result of the assessment method of durability based on the field data. About chloride attack, the field data shows that the area within about 50m from the tidal river could be in corrosive environment. The area is predicted by underground density flow analysis. About carbonization, the field data shows that the bleeding occurs at the members of cut and cover tunnels the same as viaducts. In the prediction of the carbonization depth, the prediction result obtained under the same environmental conditions as dry surface structures falls in the field data range of the carbonization depth of the cut and cover tunnel. About cracks, the field data shows that the coefficient  $k_4$  is smaller than the value for viaduct's design.