

Proposed Method for Calculating Extent of Bridges and Viaducts Damaged by Surface Fault Displacement

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Near an active fault, a surface fault displacement caused by an earthquake may cause serious damage to a railway structure, but the extent of railway structures damaged by surface fault displacement is unknown. Therefore, in this study, a simple calculation method for surface fault displacement is developed taking into account the effects of sedimentary layers, and used this method to calculate the surface fault displacement by changing the magnitude of the earthquake and the distance from the fault. From these results, it became possible to easily evaluate the extent of railway structures damaged by surface fault displacement.