

Test research regarding the upgrading earthquake resistant design of road bridge abutments

[Point]

We examined assessment methods of dynamic bearing force and deformation performance for upgrading earthquake resistant design of reinforced concrete abutments and steel abutments. We clarified regarding reinforced concrete abutments, effect of load history on bearing strength and deformation performance, and proposed assessment method of enhancing accurate estimation of ultimate horizontal displacement by accurately estimating rotational deformation caused by length of plastic hinges and axial reinforced concrete footing stretch. In addition, regarding steel abutments, we clarified the relationship between buckling parameters and ultimate strain, as well as proposed a ultimate displacement estimation formula.

Keyword : R C abutment, steel abutment, ultimate horizontal displacement, plastic hinge