Seismic Design of Retaining Wall and Bridge Abutment Considering the Dynamic Response Characteristic

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Under the current design standard, conventional type retaining wall and bridge abutment are classified under same category as a retaining structure and same seismic design procedure is applied. However, dynamic response characteristics and application of these structures are quite different. In this study, therefore, we performed a series of shaking table model tests in order to evaluate the dynamic response characteristic of each structure. The experiments revealed that external forces such as inertia force and seismic earth pressure acting on these structures during shaking were quite different. Based on these test results, we proposed new seismic design procedures for each structure considering the foregoing response characteristic.