

**Health-monitoring System for Bridge Pier Foundation
by Micro-tremor Measurement**

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Bridge pier foundations occasionally become unstable due to scouring around piers under flood conditions. Operational restrictions imposed according to water level are practical methods to secure safe train operations. We have developed a prototype of monitoring system in order to evaluate integrity of bridge pier foundation quantitatively and easily by micro-tremor measurement. However, the system has some problems in terms of accuracy and reliability in application to evaluation of soundness of bridge piers in practical environment. Therefore, it is required to improve electrical functions and control program of the system. This paper reports the outline of study executed on upgrading of functions and principal specifications of the developed system for monitoring stability of bridge pier foundation.