

Study on the Land Subsidence Causes and Control Measures for Central and
Southern Section of Taiwan High Speed Rail

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Abstract

Taiwan High Speed Rail (THSR) began the construction from 2000 and completed the project in 2007 which provides a great convenience for Taiwan's north-south transportation. However, central and southern section of THSR has serious land subsidence that will cause severe subsidence of bridge structure and endanger the structural safety. The excessive pumping of groundwater and adverse soil and water conservation are key factors for this subsidence problem. Monitoring subsidence, controlling groundwater well pumping, planning land protection management, strengthening bridge column piling and continuing education advocacy were the control measures proposed by this study. This may slow down or eliminate the phenomenon of land subsidence and ensure the sustainable operation of THSR.

Keyword : Taiwan High Speed Rail; Land Subsidence; Control Measures