

## A Case Study of the Ground Collapse Due to Excavation Using Non-Destructive Testing

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**Abstract :** A ground collapse can be caused by natural and artificial factors. Ground collapses that have occurred frequently in Korea were observed and classified into different types by the main contributing factor. In this study, ground collapse induced by groundwater level disturbance in an excavation site was analyzed. Also, ground loosening region around the excavation site was detected and analyzed using non-destructive testing, such as GPR (Ground Penetrating Radar) survey and Electrical Resistivity. The result of the surveys showed that the ground was loosened widely over the surrounding area of the excavation due to groundwater discharge.

**Keywords :** electrical resistivity, ground collapse, groundwater level, GPR (ground penetrating radar)

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