**Locational and Detectability Accuracies Calibration Test Site for Urban Underground Infrastructure Mapping**

Siow Wei JAWand Mazlan HASHIM

Institute of Geospatial Science & Technology, Universiti Teknologi Malaysia,

81310 UTM Johor Bahru, Johor Darul Ta’zim, Malaysia.

Tel: +6(0)-7-555-7698; Fax: +6(0)-7-555-7662

E-mail: swjaw@yahoo.com; mazlanhashim@utm.my

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**ABSTRACT:** Underground infrastructure mapping is an engineering practice that often used for acquiring the as-built information of the infrastructure that buried in the underground land, particularly at the urban and suburban areas. It is crucial to acquire the as-built information of these underground infrastructures as this information is constructive for sustainable development of the urban underground land, especially when there are increasing demand of housing and infrastructure in the urban and suburban areas in today’s era. As a result to this circumstance, the majority of the urban underground land has been expropriated to different categories of buried infrastructures (e.g.: utility features, tunnels, transportation, etc.) as a final frontier for urban development. Securing the as-built information of these underground infrastructures is hence substantial for the urban infrastructure planning in the future. Therefore, the aim for this paper is to demonstrate the usefulness of a calibration test site for analyzing the locational and detectability accuracies for urban infrastructure mapping. In achieving this, the design of the calibration test site is incorporating the needs and requirements of the mapping industry for better practice of mapping in the current engineering sectors. All the details of the design and implementation of the calibration test site for analyzing the locational and detectability accuracies are specified in this paper. Due to its well-designed structures, including the arrangement and alignment of the buried utilities, this calibration test site can serve as the medium for correlating the underground infrastructures with the real world geophysical anomalies which practical and profitable for geotechnical and applications, civil and environmental engineering studies, mining exploration as well as archaeological surveys. Thereby, such testing site is certainly has the potential to provide unlimited contributions to the advancement of engineering sectors in the future, particularly in the field of underground infrastructure mapping for ensuring the sustainable development of urban underground land.