

Lands Department
Survey and Mapping Office
Geodetic Survey Section

Suggested Procedures of GPS-RTK Survey using Network RTK Data of Hong Kong SatRef System for the Provision of Levels

Office Preparation

1. Identify the project survey area and select suitable height model control points for generating the localized height transformation parameter file (*For Leica GPS equipment, please refer to the document called "Suggested Procedure of Using Leica LGO Software for Transforming GPS Surveyed Height (Ellipsoidal Height) to Local Height (Height above HKPD) within a Small Local Area" for details*)
2. Import the localized height transformation parameter file into the GPS rover for real-time coordinate and height transformation

Field Procedures

1. Check the GSM Network Coverage of the survey area
2. Determine to use the Network RTK data of SatRef System via GSM communication or set up own GPS reference station for RTK survey via radio communication
3. Check the configuration settings of the GPS receiver (Rover)
4. Measure at least one control point with known HK80 grid coordinates and known height above HKPD for checking before conducting the survey
5. Start to survey each point when quality indicator shown on the GPS rover reaches the acceptable level
(e.g. For Leica equipment, Hori. CQ ≤ 0.02 & Vert. CQ ≤ 0.03)
6. If necessary, re-survey the known control point(s) per each hour for periodical checking

7. Apply independent checking on the surveyed points
(e.g. Double/Triple Shots for each 15 minutes, Tie Measurements between shots, and other appropriate methods)
8. After the survey, re-survey the known control points for final checking

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Prepared by : Geodetic Survey Section, SMO, Lands Department
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