

[ITT2] B8 - Topographical Survey

Scenario

1. Background

TfL are proposing to remodel the road layout, station access and fully upgrade Old Street Station.

The station is beneath the Old Street roundabout, spread over 3 main levels, ticket hall, Northern line concourse and platforms and Network Rail platforms.

2. Requirement

The survey must be related to London Survey Grid and height datum using GPS baselines (parameters for conversion from WGS 84 to LSG exist in an LU Standard). A control network is to be established linking street level with the concourse, Northern Line and Network Rail.

Full topographical detail is required at street level extending 500m down each road leading from the roundabout, showing the outline of properties bounding the roads. Detail to include kerb lines, street furniture, lamp posts, road markings, grid of levels at 5m intervals as well as break lines (suitable for producing a DTM). Elevations of 2 buildings are also required.

The outline at floor level of all publicly accessible areas of the booking hall including retail outlets needs to be detailed.

The escalator shaft needs to be surveyed to show its maximum internal width at passenger level.

The Northern Line concourse and platform areas should be detailed at 'floor' level and maximum internal width (in tube sections). Detail should be limited to inspection covers, structural elements, platform edge, running rails and pit. The Northern line survey should extend into the running tunnels to cover the footprint of the street level survey. Rail and spot levels are required to be shown on the drawing.

Network Rail platform areas should be detailed at 'floor' level and maximum internal width (in tube sections). Detail should be limited to inspection covers, structural elements, platform edge, running rails. The running tunnel survey should extend to cover the footprint of the street level survey. Rail and spot levels are required to be shown on the drawing.

3. Deliverables

1. 3D CAD model or models with spot heights and text for a plot scale of 1:100.
2. CAD & PDF drawings in sheet form at A1 (covering plan and elevations).
3. Survey report describing method and equipment used, traverse report and control witness diagrams.
4. If scanning used as survey method, point clouds and 'scalable images' viewable in a web browser should be delivered.

4. Response

To demonstrate your competence please describe the process and activities you would undertake in support of the above project scenario in no more than 1500 words contained in a maximum of 4 sides of A4 (pictures, diagrams etc. may be included in the sides of A4 limit):

Your response should consider, but not be limited to, the following:

- Proposed resources of key personnel giving evidence of appropriate skills, knowledge and experience. Please ensure this reflects a realistic project team that you would expect to put in place for a project of this scale.
- Outline of access and safety arrangements that would need to be put in place to allow the survey work to be undertaken.
- Details of your proposal for establishing the control network to London Survey Grid.
- Your proposed methodology for surveying the railway and street assets and the format they will be delivered in.
- Details of data processing and CAD modelling method
- Please also supply a high level programme detailing the estimated duration for delivery of the works.

Note:

Bidders must not cite examples of previous completed works within their response as this formed the basis of the SSQ evaluation and as such references to completed case studies will not be subject to evaluation.

Bidders are encouraged to structure their submission by clearly setting out their response against each of the competencies via specific headings for each competency; the headings will not be included in the word count limitations.