

Special Condition

1. Job work will be executed at site with Gedo Vorsys Trolley system or similar.
2. Primary GNSS reference point: To be established with continuous 48 hrs observations with DGPS receiver and processed with RTX post process centre point correction service. Coordinates shall be submitted with WGS 84 in latitude and longitude and UTM grid coordinate to be provided for drawing purpose.
3. Reference point establishment at alternate OHE or 150 meter maximum interval with 10mins DGPS observations of 3mm +/- 0.1ppm in horizontal and 3.5 +/- 0.4 ppm in vertical.
4. Measured reference points to be submitted in UTM coordinate system.
5. Pre-measurement for tamping:
 - ❖ To measure horizontal shift, vertical lift, cross level & gauge for pre measurement with Gedo trolley at track centre with 3m interval:
 - ❖ To measure horizontal & vertical offset from reference point with total station trolley and to initialized optical chord between two reference points. After chord initialization prism trolley will move towards the instrument trolley and measure and store gauge cross level chainage, shift and lift value at every 3m interval along the track. To measure obligatory points like level crossing, bridge start and end point etc. Measurement to be done with or without block.
6. Data downloading and processing of measured data.
 - ❖ Reference points in UTM coordinate to provide N, E, Z coordinates along the track at 3m interval the track centre left and right rail data should be exported in CSV file with detail N, E, Z coordinates on each rail gauge cant.
7. Instrument trolley should support Indian Railway gauge 1676mm, gauge measurement accuracy +/- 0.3mm, cant measurement accuracy +/- 0.5mm (static), insulated from two rail and weight trolley should be light weight (less than 20 Kg)
8. Design Alignment: To construct design/target alignment with the good points of existing pre measurement track centre line data in design software. During the design horizontal vertical & cant alignment parameter as per the section sheet to be considered.
9. Data to be exported in ALC format with target alignment and to provide track adjustment file with *.ver extension and also provide *.geo Geometry file at 5m interval. To provide text file with slew and uplift at every 5m interval for tamping machine operator reference during reference.
10. Before start of measurements in each block section Contractor and Railway representative will do the joint site visit to identify physical location for Reference points.
11. If fix structure is not available to mark as Reference point at site then the Railway will arrange the availability of fixed reference point.
12. Primary DGPS Reference point Dimensions if required to build are of 400mm x 400mm x 600 mm with provision of plate to mark Survey point will be provided by Railway.
13. Secondary DGPS Reference point Dimensions of control pillar if required to build are of 300mm x 300mm x 500 mm with provision of plate to mark Survey point will be provided by Railway.

Suprv.
SSE/DRG.

Ground
Adm/TS

Head
SSE/TP



14. Reference points at 150m interval required will be mark with nail / screw foundation of OHE or Dimensions of control pillar if required to build are of 200mm x 200mm x 400 mm with provision of plate to mark Survey point.
 15. Agency shall depute his own person to collect field details of existing track parameters during survey/measurements. (Existing transition point and recording obligatory points)
 16. In absence of ALC tamping machine, Contractor provide track adjustment text file and Railway will write data on sleeper within 2 days so that tamping may start within schedule time.
 17. Concern official of Railway will advise on location for good points during design of alignment.
 18. Contractor will depute experienced survey team consisting of two surveyors with total Station trolley and two surveyors at prism trolley.
 19. The execution of Job will be done by block section wise.
 20. Preparation of Alignment and Level Profiles
 - ❖ The existing track structure profile and the proposed/target track alignment and level profile should also be prepared in AutoCAD format.
 21. Joint Verification with Field Officials
 - ❖ A joint discussion must be held with the concerned Sectional ADEN and SSE/P.Way Incharge of the section to:
 - In comparison with the existing profile and target profile.
 23. Approval and Record
 - ❖ The AutoCAD drawing and associated data should also be authenticated with signatures from:
 - Sectional ADEN
 - SSE/P.Way Incharge
 - ❖ Signed copies shall be:
 - Retained in the site file for execution reference
 - Submitted to the divisional track planning office for records
24. This protocol is mandatory to ensure proper coordination between design and field execution teams, and to maintain traceability of decisions taken during alignment finalization.

Supriya.
SSE/DRG

Guad
10/07/17

10/07/17
SSE/DRG