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MODEL CLAUSES FOR CIVIL ENGINEERING WORKS

SECTION 125 BRIDGE INSTALLATION BY THRUST BORING

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SECTION 125

INSTALLATION BY THRUST BORING

Method statement to be submitted with the Tender

125.001

Further to NR/SP/CPR/008, an outline method statement for the installation of an asset (such as a bridge or culvert) by thrust boring shall be submitted with the Tender. The outline method statement shall include the following:

- (i) an outline description of the proposed method of installation including details of the proposed temporary shield and loading imposed on the Permanent Works by the shield, proposals for fixing the shield to the structure, and removal of the shield on completion of the thrust boring,
- (ii) details of the specialist contractor proposed to carry out the installation including the contractor's relevant experience and successful usage of the proposed system of installation,
- (iii) any work proposed to be carried out to the Permanent Works and the proposed method of making good,
- (iv) proposals to ensure that the design parameters listed in Section 120: General Requirements for Bridge Installation Methods and Temporary Works are not exceeded,
- (v) the division of the excavated face - stating the maximum area of unsupported face and the proposed method of excavation,
- (vi) the means of maintaining the stability of the unsupported excavated face, including contingency proposals should an unexpected collapse of the excavated face occur,
- (vii) the means of maintaining the stability of the surrounding railway formation and adjacent structures at all stages of the installation, including details of the material used to fill any voids between the thrust bore and the surrounding ground,
- (viii) the method of monitoring the level and alignment of the thrust bore,

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- (ix) where relevant, proposals for inspecting and maintaining the track and monitoring the level and alignment of the track, including proposals for action to be taken to limit the movement of the track to the specified values in Appendix 125/1. The Contractor shall meet the requirements of NR/BS/LI/045, and have contingency plans in place to protect rail traffic in case the limits defined in that Letter of Instruction are exceeded during the thrust boring operations.
- (x) details of the organisations proposed to carry out the design and design check,
- (xi) where relevant, the proposed method of protecting the waterproofing to the structure during thrust boring,
- (xii) the means of filling voids in the ground generated by the method of installation,
- (xiii) the jacking arrangement, including details of the base that provides the reaction to the jacks,
- (xiv) the proposed method of supporting the ground and any track formation above the structure during the thrust boring operation, including details of any anti-drag system and anchorages used to reduce disturbance to the track formation,
- (xv) predictions of embankment deformation (both laterally and vertically) resulting from the proposed method of thrust boring,
- (xvi) the communication systems to be used,
- (xvii) the method of controlling installation jacking forces, and also for adjusting the line and level of the structure during the thrust boring operation,
- (xviii) where the depth of installation is relatively shallow, the means of support to any buildings, tracks and adjacent services - such as signal cables, troughing, points rodding, signal posts, electrification masts and other associated equipment,