Third parties completing under track bores and excavating on V/Line leased land

It's a V/Line requirement that all under track crossings cross the railway tracks at 90 degrees and that all temporary and permanent pits are not located on the V/Line lease. All third parties excavating within the V/Line lease boundaries are liable for any ground settlement once works are complete. If ground settlement occurs, contractors must correct and re-instate the ground to V/Line's satisfaction or V/Line will rectify and pass on all associated costs. In all circumstances V/Line strongly suggests that the contractor contacts V/Line to discuss construction methodologies.

As a minimum all under track bores must be completed in accordance with AS4799 and all V/Line standards.

All under track bore holes less than 100mm diameter can be completed during train running. We require the rail safe-working necessary for the particular site.

V/Line's preference is that all bore holes over 100mm diameter be completed under the condition of no trains running. The applicant must be able to demonstrate and meet the standards outlined in the following sections.

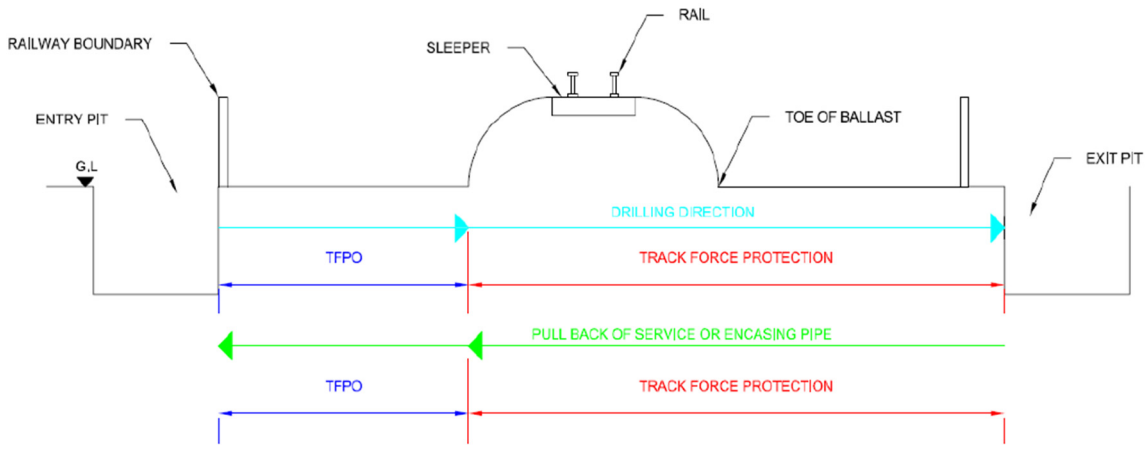
1. HDD – Holes greater than 100 mm diameter

1.1. Encasing pipe

A track force protection co-ordinator (TFPC) must be on site as soon as the bore head enters the rail reserve. Track protection shall be in place from the time the bore commences to travel from the toe of the ballast on one side of the track. The protection shall remain in place until such time as the encasing pipe has been installed from the exit pit back to the entry pit at the toe of the ballast and the grouting between the borehole and encasing pipe has been completed. If a construction shift ceases prior to completing the encasing pipe installation and grouting, track protection shall remain in place until after the passage of the last train and be back in place before the passage of the first train.

1.2. No encasing pipe – Service pipe

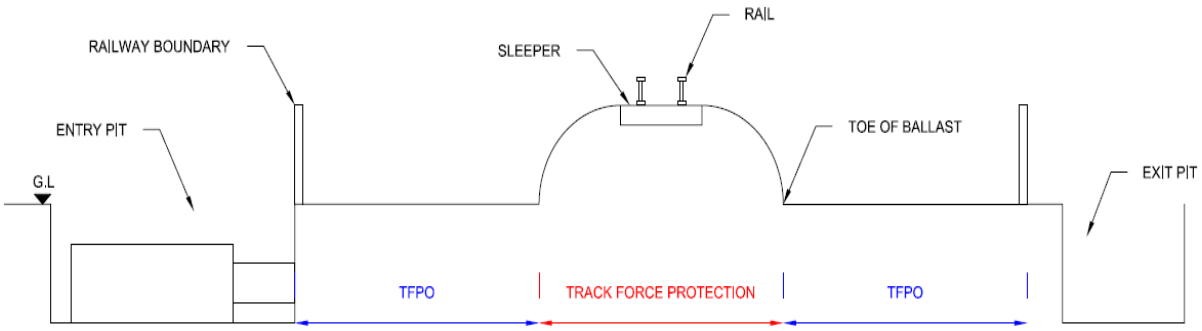
A TFPC must be on site as soon as the bore head enters the rail reserve. Track protection shall be in place from the time the bore commences to travel from the toe of the ballast on one side of the track. The protection shall remain in place until such time as the service pipe has been installed from the exit pit back to the entry pit at the toe of the ballast and the grouting between the borehole and service pipe has been completed. If a construction shift ceases prior to completing the service pipe installation and grouting, track protection shall remain in place until after the passage of the last train and be back in place before the passage of the first train.



2. Holes greater than 100 mm diameter (Other than HDD - pipe jacking, micro-tunnelling etc.)

2.1. Encasing or Service pipe

A TFPC must be on site as soon as the cutter head enters the rail reserve. Track protection shall be in place from the time the cutter head commences to travel from the toe of the ballast on one side of the track until it reaches the toe of the ballast on the other side of the track. If a construction shift ceases prior to completing the installation from one side of the toe of the ballast to the other side of the ballast, then the encasing or service pipe must be pushed right up to the cutter head to ensure there is no void between the pipe and the cutter head, and at this point the track protection can cease. Once drilling continues the track protection must be in place again until it reaches the opposite side of the ballast and from this point onwards a TFPC will be sufficient. If the annulus between the borehole and encasing/service pipe needs to be grouted, then it must be grouted with track protection in place.



3. Track monitoring requirements for all under track bores greater than 100 mm diameter

The track must be monitored at all times during all under track bores and grouting works to ensure that the geometry of the track is not compromised. The third party must make arrangements to have a competent person monitor the rail to V/Lines track geometry standard NIST 2706 and demonstrate how they will do so. The monitoring must occur 20 meters either side of the bore (40 meters in total) at 2 meter intervals. The survey must be recorded at regular intervals and must be available to V/Line upon request. If a construction shift ceases prior to completing the installation of the encasing pipe or service pipe, track monitoring shall remain in place until after the last train and be in place prior to the first train passes.