

East Central Railway

Office of the
General Manager/S&T
Hajipur

No.ECR/S&T/SIG/Policy

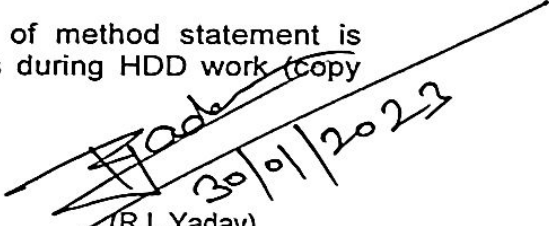
Dated: 30/01/2023.

PED/Sig/RVNL/NDLS
DRM-DNR/DHN/DDU/SEE & SPJ
CSTE/Works/ECR
CSTE/Con/South & North/ECR

Sub;- Method Statement for Horizontal Direction Drilling (HDD) in
Yard & Automatic Signalling Section.

There are frequent cable cutting incidences are happening during execution of work by various agencies using HDD method. Recently, a similar type of incidence was happen in DHN division, which hits the several Passenger and Goods trains.

To overcome such incidences procedure of method statement is introduced to avoid damage to Signalling Cables during HDD work (copy enclosed).


(R.L.Yadav)
Chief Signal Engineer

Copy to-

- PCSTE/ECR - for kind information please.

Method statements for HDD in the Yard & Automatic Signalling Section-

For any HDD in the Station / Auto Section, an application is to be submitted to Sr.DSTE by executing agency along with HDD Route Plan having following details:

- i. Name of Station/Section
- ii. Locations of HDD (KM No.)
- iii. No. of Lines involved.
- iv. Length of bore.
- v. Depth of proposed boring.
- vi. No. of bores.
- vii. No. of cables.

Once application is received from executing agency, Sr.DSTE should order for Joint Survey of the site.

(A) Joint Site Survey of the proposed location of HDD;

1. Based on HDD Route Plan submitted by executing agency, site verification is to be done by SSE/Sig, SSE/Tele and SSE/PWay.
2. Select the crossing route to keep it to the shortest reasonable distance. Proposed site is to be selected based on Cable Route Plan.
3. Number of cables and depth to be verified with Cable Route Tracer.
4. Apart from Cable Route Plan and use of Cable Route Tracer, physical verification of Cables is necessary by manual excavating across the Cable Route. Number of manual excavation across the route to be done as per site requirement.
5. HDD is to be kept atleast 0.1 Meter below existing cable depth. However it is to be kept in mind at high embankment area where cable depth may be more due to earth filling.
6. Approx 3.00 to 5.00 Meters length of suitable depth as per cables at site, to be surveyed at both sides of track. This area of 3.0 to 5.0 meter for angular pit should be free from Cables and made part of final approved HOD Route Plan.
7. Final HOD Route Plan shall be approved by Sr.DSTE and sent to Sr.DEN for signature, if not included in approved Cable Route Plan.


30/01/2023

(B) Precautions to be taken during the HDD work:

1. An angular pit of Approx.. 3.0 to 5.0 meter length of suitable depth, as was surveyed, to be made at both side of track. Cutter/Drill tool of HDD machine should pass in this angular pit only. At exit end the Cutter/Drill tool should come out of angular pit of same depth as in entry side.
 2. Supervisor (JE/SSE) of executing agency should be available at VDU to watch HDD process and taking last minute decision in case of any cable etc.
 3. Signalling Cable Core Plan should be available with JE/SSE Sig of executing agency.
 4. Work should be done in presence of Open Line Signal & Telecom staff.
 5. A cable jointing and OFC jointing team shall be kept at site by executing agency for immediate restoration in case of damage of cables.
 6. OFC Route Plan is to be available with executing Supervisor (JE/SSE).
 7. In case of any damage in cable during HDD work segregation of external Power. Supply is to be ensured by switching off the external power supply modules in coordination with SM.
 8. HDD should be done by an experienced team.
 9. Observe and avoid above-ground structures, such as power lines, which might limit the height available for HDD machine.
 10. Volumes of drilling fluids must be pumped away from Track formation.
- (C) Obtain "as-built" drawings based on the final course followed by the reamer and the laid duct.**


(R.L. Yadav)
Chief Signal Engineer