

NOTES:

- ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE STATED.
- IN CASE OF WATER PRESENCE, A DRAINAGE AND PUMPING SYSTEM MUST BE DONE IN THE LOWEST ZONES OF THE PIPELINES.
- IN AREAS WHERE CLAY LAYERS, ROCK, HARDPAN, OR OTHER UNYIELDING MATERIAL APPEARS AT THE BOTTOM OF THE EXCAVATION, THE CONTRACTOR SHALL REMOVE AND REPLACE IT WITH APPROVED FILL MATERIAL FOR THE FULL TRENCH WIDTH, FOR A DEPTH OF AT LEAST 0.50 m.
- THE EXCAVATION BELOW GRADE SHALL BE BACKFILLED WITH GRANULAR MATERIAL, UP TO 12% FINE MATERIAL, IN LAYERS NOT OVER 0.20 m, LIGHTLY COMPACTED TO PROVIDE AN UNIFORM BUT YIELDING FOUNDATION AND AN ADEQUATE SUPPORT FOR THE PIPE, ALWAYS IN STRICT CONFORMANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS (SPECIALLY IN CASE OF SWELLING CLAY MATERIAL).
- MATERIAL FOR BACKFILLING OF THE TRENCH PIPELINE, FROM 0.30 METERS ABOVE THE TOP OF THE PIPE, SHALL BE ACCORDING TO STANDARD AWWA M45 SOIL CLASSIFICATION SC2, I.E. FINE LOCAL SAND, UP TO 12% PASSING SIEVE #200. THE FILL SHALL BE COMPACTED IN LAYERS OF 20 CM TO A DENSITY OF 98% MODIFIED AASHTO AND BACKFILL MATERIAL SHALL NOT CONTAIN PARTICLES LARGER THAN 75 mm.
- BACKFILL TO DRAINAGE PIPE AND MANHOLE TRENCHES SHALL BE FREE FROM RUBBISH, LUMPS OR STONES, AND WILL BE AS HOMOGENEOUS AS POSSIBLE. ARE NOT ACCEPTABLE AS FILL HIGHLY PLASTIC CLAYS, ORGANIC MATTER, FROZEN SOIL OR ANY OTHER MATERIAL THAT MAY BE HARMFUL (PHYSICALLY OR CHEMICALLY) FOR PIECES. COMPACTION WILL BE PERFORMED WITH LIGHT MEANS BY AN APPROVED METHOD, IN LAYERS NOT EXCEEDING 200 MM THICK WITH A DEGREE OF COMPACTION OF 98% MODIFIED AASHTO DENSITY (ASTM D-1557, AASHTO T-180).
- THE SLOPES OF EXCAVATIONS WILL BE CONDITIONED ON THEIR EXECUTION BEHAVIOUR. THEREFORE THESE SLOPES MUST BE EVALUATED DURING EXECUTION ACCORDING TO THE GEOTECHNICAL REPORT, AND IN CASE OF INSTABILITY OR WATER PRESENCE GIVEN SLOPES MUST BE LESS STEEP.
- WHEREVER A VEHICULAR TRAFFIC IS FORESEEN MANHOLE COVERS AND GULLY GRATES SHALL BE MINIMUM CLASS D400 ACCORDING TO EN124.
- LEAN CONCRETE PROJECTION AS PER CONSTRUCTION REQUIREMENTS.
- CONCRETE GRADE C30/37, W/C RATIO 0,55, 300Kg/m³, AGGREGATE SIZE 20mm COVER: MIN 75mm. EXPOSURE CLASS: XA1.
- REINFORCEMENT: GRADE STRENGTH OF REINFORCING STEEL TO 460 B CONFORMING TO BS4449:2005. SCHEDULING, DIMENSIONING, BENDING AND CUTTING TO BS 8666.
- CONCRETE DESIGN TO EC 2: BS EN 1992-1-1:2004.
- REINFORCED CONCRETE ENCASEMENT TO BE PROVIDED GENERALLY FOR PIPES LESS THAN 700mm COVER. BUT IN WADI REINFORCED CONCRETE ENCASEMENT SHOULD BE PROVIDED FOR PIPES LESS THAN 2000mm COVER ALSO REINFORCED CONCRETE ENCASEMENT SHOULD BE PROVIDED FOR PIPES OF WITH MORE THAN 6000mm COVER AS INDICATED ON DRAWINGS.