

The width of the trench shall be ample to permit the pipe to be laid and jointed properly, and to permit the backfill to be placed and compacted as specified. Bell holes shall be provided at each joint to permit the jointing to be made properly.

The trench shall be excavated to the depth required and shall provide uniform and continuous bearing and support for the pipe. Any part of the bottom of the trench excavated below the specified grade shall be corrected with thoroughly compacted material. The bedding shall be prepared accurately by means of hand tools.

Where the soil at the bottom of the trench is not uniformly good, and stones, dry clay, hard pan, shale or cemented gravel are exposed, the trench shall be excavated to at least 3 inches and not more than 6 inches below the specified grade and shall be backfilled to grade with approved material which shall be compacted in layers not to exceed 3 inches loose depth. The bedding shall be finished by means of hand tools so as to provide a uniform and continuous bearing and support for the pipe.

Where the bottom of the trench at grade is found to be unstable or to include ashes, cinders, all types of refuse, vegetable or other organic material, the Contractor shall excavate and remove such unsuitable material to the width and depth ordered by the Engineer. The trench shall be backfilled to grade with approved material in 3-inch layers loose depth. Each layer shall be thoroughly tamped and the bedding shall be finished by means of hand tools so as to provide a uniform and continuous bearing and support for the pipe.

Where the bottom of the trench at grade is found to consist of material which is unstable to such a degree that, in the opinion of the Engineer, it cannot be removed and replaced with suitable material to support the pipe properly, the Contractor shall construct a foundation for the pipe, consisting of piling, timbers or other materials in accordance with the Plans or as directed by the Engineer.

Where excavation is made in rock or boulders, the rock shall be removed to provide a clearance of at least 6 inches for pipe 24 inches in diameter or smaller and at least 9 inches for pipe larger than 24 inches, below and on each side of all pipe, valves and fittings. The trench shall be backfilled to grade with approved material in 3-inch layers loose depth. Each layer shall be thoroughly tamped, and the bedding shall be finished accurately by means of hand tools to provide a uniform and continuous bearing and support for the pipe.

All excavated material shall be piled in a manner that will not endanger the work and will not obstruct sidewalks and driveways. Fire hydrants under pressure, valve boxes, service stop boxes, fire and police call boxes, or other utility controls shall be left unobstructed and accessible until the work is completed. Gutters shall be kept clear or other satisfactory provisions made for drainage, and natural water courses shall not be obstructed.