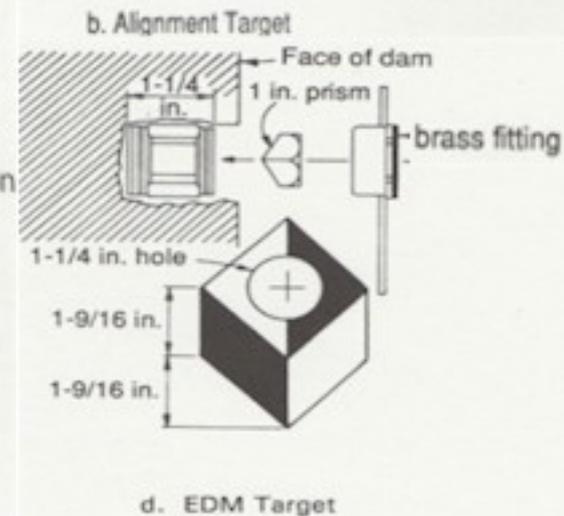
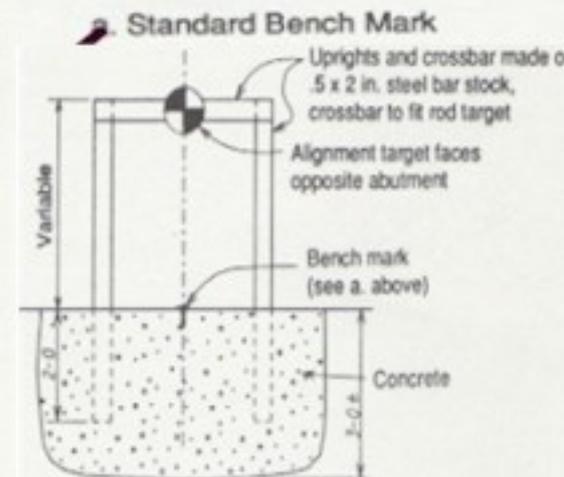
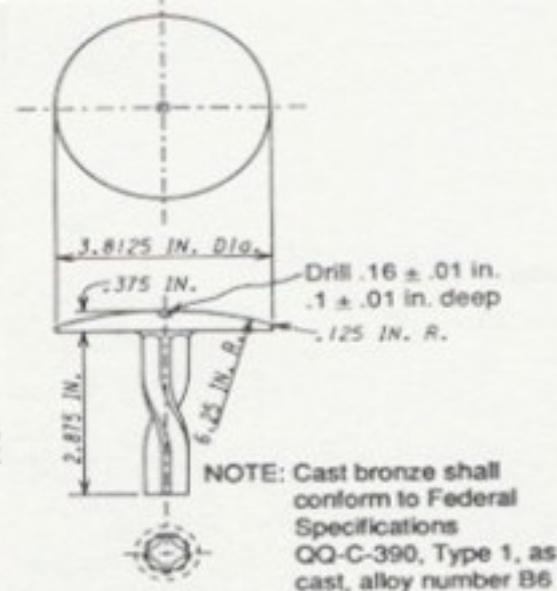
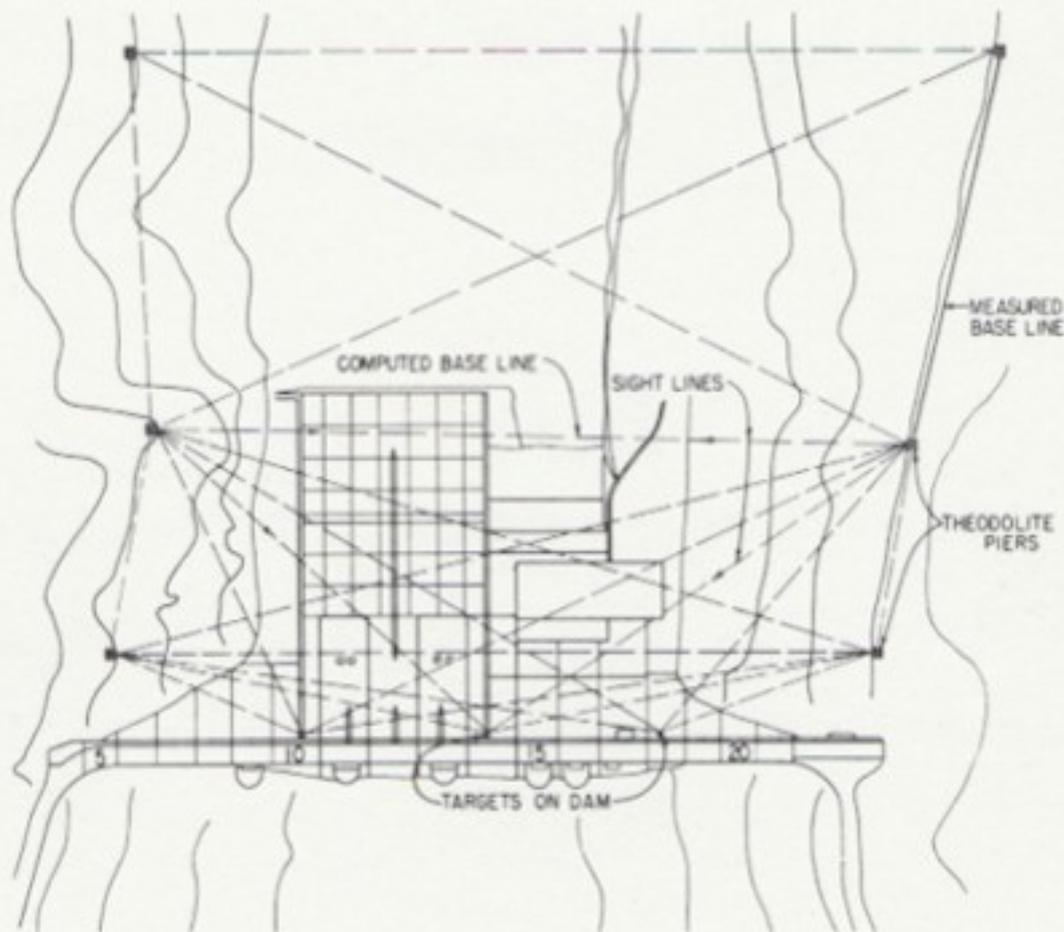


Figure IV-41. Typical Triangulation Network



PRECISION LEVELING

Vertical movements of concrete dams are usually measured by precision leveling techniques from known benchmark elevations to various points on the dam. When such observations are made at relatively regular time intervals, the rate of movement and the total movement can be determined.

A measuring rod is placed at the measurement point, and a survey instrument is used to direct a level beam at the rod. Various leveling devices may be used, including conventional engineer's levels, tilting levels, self-leveling devices, and optical-tooling levels.