SECTION 02150

Sheeting, shoring, and bracing

# GENERAL

## DESCRIPTION

### This section provides specifications for sheeting, shoring, bracing, or other excavation supports.

## QUALITY ASSURANCE

### Design Requirements

#### In accordance with Section 6500 of the Labor Code, the Contractor is required to obtain a permit, for the excavation of trench which is five feet or more in depth and into which a person is required to descend, from the Division of Industrial Safety.

#### The Contractor shall furnish all labor, equipment, and materials required to design, construct and remove all sheeting, shoring and bracing or other equivalent method of support for the walls of open excavations required for the construction of this project.

#### Excavation of any trench or structure 5 feet or more in depth shall not begin until the Contractor has received approval from the Engineer for the Contractor's detailed plan for worker protection from the hazards of caving ground.

#### Such plan shall be submitted at least 5 days before the Contractor intends to begin excavation and shall show the details of the design of shoring, bracing, sloping or other provisions to be made for worker protection during such excavation. No such plan shall allow the use of shoring, sloping or a protective system less effective than that required by the Construction Safety Orders of the Division of Industrial Safety, and if such plan varies from the shoring system standards established by the Construction Safety Orders, the plan shall be prepared and signed by an Engineer who is registered as a Civil or Structural Engineer in the State of California.

#### Prior to the beginning of excavations requiring shoring, the Contractor shall designate in writing to the Engineer, someone whose responsibility is to supervise the project safety measures and someone whose responsibility is to supervise the installation and removal of sheeting, shoring and bracing.

#### In addition to shoring the excavations in accordance with the minimum requirements of the Industrial Safety Orders, it shall be the Contractor's responsibility to provide any and all additional shoring required to support the sides of the excavation against the effects of loads which may exceed those derived by using the criteria set forth in the Industrial Safety Orders. The Contractor shall be solely responsible for any damages which may result from his failure to provide adequate shoring to support the excavation under any or all of the conditions of grading which may exist, or which may arise during the construction of the project.

#### No change will be made in the amount to be paid under this item of trench safety and shoring of excavation as a result of required revisions in the trench support details due to a type of soil encountered which requires a method of trench support different from that approved.

# PRODUCTS (Not Used)

# EXECUTION

## GENERAL

### The design, planning, installation and removal of all lagging, sheeting, shoring, sheet piling, and bracing shall be accomplished in such a manner as to maintain the undisturbed state of the soils adjacent to the trench and at and below the excavation bottom.

### The use of horizontal strutting below the barrel of a pipe or the use of a pipe as support will not be permitted.

### Sheet piling and timbers in trench excavations shall be withdrawn in a manner so as to prevent subsequent settlement of the pipe or additional backfill loadings which might overload the pipe. Trench sheeting below the top of the pipe shall be left in place.

**END OF SECTION**