Shoring and Sloping of Excavations

400 Series

All excavations are to be shored or sloped *if* there is ANY danger or a *possibility* of caving.

Figures (1) and (2) show the type of shoring required on any trench. Figure (1) shows sheet piling added with first depth complete. Figure (2) shows shoring full depth. Figures (1) and (2) are to be used on all depths exceeding 4'6", *except* where the Area Engineers* signify otherwise. Figure (3) and Figure (5) show the types of shoring to be used in all cases less than 4'6", except where the Area Engineers* signify otherwise. Figure (4) shows the way excavations are to be sloped when type of work and location permits. All sides are to be sloped 1 to 1 and spoil banks are to be kept at a minimum of 3'0" from edge of excavation.

In all cases additional precautions by way of shoring and bracing must be taken when excavations are made in locations subject to vibrations from railroad or highway traffic, the operation of machinery or other sources of vibration and after heavy rain.

Figure 1—401 Figure 3—403
Figure 2—402 Figure 4—404
Figure 5—405

KEY

A—Maximum of 4'0".
B—4" x 4".
C—2" x 12".
D—If possible, spans should not exceed 4'0". Under no circumstances are spans to exceed 6'0". For spans 4'0" to 6'0", 4" x 6" walers must be used.
E—4" x 4" if width of trench is 1'0" to 3'0".
E—4" x 6" if width of trench is 3'0" to 6'0".
E—6" x 6" if width of trench is 6'0" to 8'0".
E—Suitable trench jacks may be used in place of timbers in Figure 5.
F—2" x 6".

*Assume full responsibility.

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