

Circular #3.

MEMORANDUM.

Messrs. Farnham,
Emory.

In order that the estimating on the New York, Pittsburgh & Chicago Railway, that is being done in this office and in the field, may be uniform, please observe the following:

- a. For underpasses: minimum cross section of 14' clear height and 24' width. These are the State of Pennsylvania Highway Commission requirements.
- b. On all work west of the Allegheny Mountain Tunnel use 20% swell for rock excavation deposited in embankments, and 30% east of the mountain.
- c. Commence tunnels under normal conditions at a 75' cut, this height being the assumed point when ordinary tunneling is cheaper than open cut.