



## MATERIALS ENGINEERING AND RESEARCH LABORATORY

### CONCRETE MIX RULES OF THUMB

#### ADDING ONE GALLON OF WATER TO ONE CUBIC YARD OF FRESHLY MIXED CONCRETE WILL:

Increase slump about one inch

Decrease compressive strength about 200 to 300 psi

Increase shrinkage potential about 10%

Waste as much as 1/4 bag of cement

#### IF FRESHLY MIXED CONCRETE TEMPERATURE INCREASES 10 DEGREES FARENHEIT:

About 1 gallon of water per cubic yard maintains equal slump

Air content decreases about 1%

Compressive strength decreases about 150 to 200 psi

#### IF THE AIR CONTENT OF FRESHLY MIXED CONCRETE:

Increases 1%, then compressive strength decreases about 5%

Decreases 1%, then yield will decrease about 1/4 cubic foot per cubic yard

Decreases 1%, then slump decreases about 1/2 inch

Decreases 1%, then durability decreases about 10%