



PREVENTION MANUAL

FIRE ALARM SYSTEMS

407.11 FIRE ALARM SYSTEM VOLTAGE DROP CALCULATIONS

EFFECTIVE: OCTOBER 14, 2013

SCOPE

Fire alarm voltage drop calculations.

PURPOSE

The purpose of this policy is to clarify the Department's requirements related to fire alarm system voltage drop calculations.

BACKGROUND

As noted in the California Fire Code shop drawings are to be submitted to the authority having jurisdiction (AHJ) for review and approval. Included in these drawings are to be voltage drop calculations. Standard engineering guidelines, and Underwriters Laboratories Standard 864 note that as batteries age, their performance degrades, and this must be accounted for when completing voltage drop and battery calculations.

REQUIREMENTS

Based upon the identified risks, the Department has determined that:

The starting voltage for all voltage drop calculations shall be 20.4 volts or a reduction of 15% of system voltage, whichever is greater.

NOTE

These requirements apply to both required and voluntary systems.