

Cost Differences Among Fire Separations in Multiunit Residential Buildings

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Abstract:

This paper presents a method with which anyone can estimate differences in cost among (1) 1 hour fire resistive construction, (2) 2 hour fire resistive construction, and (3) 2 hour noncombustible construction for separating units in multiunit low rise residential buildings for any selected time and geographic location in America. Six common configurations of stacked one-story units and two-story units were selected as examples that cover at least 80 per cent of multiunit low rise residential buildings. A Lotus 1-2-3-spreadsheet provides a matrix for input data and formulas to calculate values for variables that depend upon input data. Input variables include labor wage rates, materials prices, key labor productivities, and design dimensions. An alternative format is provided by worksheets on which manual calculations can approximate the calculations of the Lotus spreadsheet. By inserting current, local prices and hourly wages for 8 materials and 3 crafts into half-page worksheets, users can calculate in 20 minutes the comparative costs relevant for their geographic areas.

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