

Introduction

The following two papers address ways in which distinct building systems are assessed in relation to the service life of existing structures. Case studies include building facades of masonry and stone (Thomasen and Searls) and framed wood floors (Fischetti).

Thomasen and Searls present a method for the assessment of building facades constructed of masonry and stone. The investigative tools described range from basic to sophisticated. The importance of having a grasp of basic knowledge of the history of the technology behind the facade system to be evaluated is stressed. In addition, an understanding of the factors that affect the condition as well as the durability of the assemblages within the system as they conform to modern criteria is discussed. Material analyses and weathering tests that are performed in the laboratory to determine durability are described. Monitoring techniques used to obtain a measure of facade movement behavior in the field are also described.

Fischetti places the task of meeting building code requirements in an economic context through case studies of rehabilitated timber frame buildings. The author describes the dilemma of depth of intervention to extend the service life in contrast with tax credits. The comparative case studies deal with two examples of structures similar in age, construction, and function; the first in which the interior structural system is replaced with an alternate system and the second in which the existing system is strengthened. The method of the investigative process with emphasis on laboratory testing of materials is described.