Subject: Installing New Systems in Historic Buildings

Applicable Standards:
2. Retention of Historic Character
5. Preservation of Distinctive Features, Finishes, and Craftsmanship
6. Repair/Replacement of Missing or Deteriorated Features

**Issue:** In rehabilitating historic buildings, HVAC systems often need to be updated. In most old apartment, office, and retail buildings, such mechanical systems historically were installed so that either the distribution network was concealed or designed to appear built in. Later retrofits of forced air-handling systems typically continued in this tradition, concealing new ducts within existing walls or new chases, or placing new ductwork below existing ceilings with a dropped ceiling installed to conceal it.

A dropped ceiling can change the appearance of a historic space. It might obscure a decorative ceiling or cornice, change the proportions of a room, cover door transoms, and/or cut across windows. Such changes can alter a building's historic character and do not meet the Secretary of the Interior's Standards for Rehabilitation.

**Application (Compatible treatment):** Constructed in 1918, this five-story bank building retained many of its historic features and materials despite years of abandonment and water damage. Historically, the ground floor lobby contained the customer service area, while the top four floors were offices. By the early 1970s, the original steam heating system which utilized room radiators was replaced with a central forced-air HVAC system that relied upon a network of ceiling distribution ducts. As a cost-cutting measure, the main distribution ducts were run along the corridors, below the existing ceiling, and branched off into the individual offices. Rather then cutting through the walls to add the necessary room vents, the vents were installed through the transoms above the office doors. The very low suspended ceiling that was added to conceal the ductwork also obscured the transoms and cut across the windows in the corridors. This dropped ceiling dramatically and negatively impacted the historic appearance of the corridors.

In the current rehabilitation, the design team took an alternative and very sensitive approach to provide climate control in the office spaces. The new HVAC ductwork was routed along the building’s perimeter walls at floor level.
These bulletins are issued to explain preservation project decisions made by the U.S. Department of the Interior. The resulting determinations, based on the Secretary of the Interior’s Standards for Rehabilitation, are not necessarily applicable beyond the unique facts and circumstances of each particular case.

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