

CHAPTER 6 DUCT SYSTEMS

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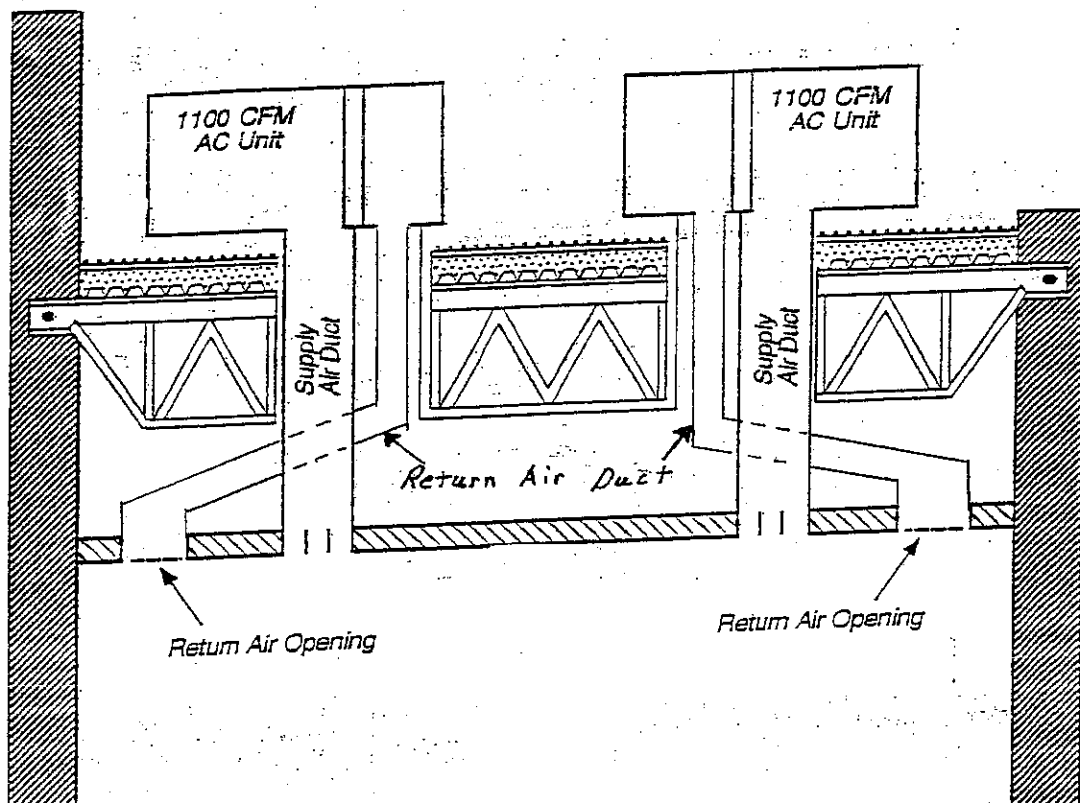
606.2.1 Return air systems. Smoke detectors shall be installed in return air systems with a design capacity greater than 2,000 cfm (0.9 m³/s), in the return air duct or plenum upstream of any filters, exhaust air connections, outdoor air connections, or decontamination equipment and appliances.

Exception: Smoke detectors are not required in the return air system where the space served by the air distribution system is protected by a system of area smoke detectors in accordance with the International Building Code. The area smoke detector system shall comply with Section 606.4.

Q: The attached drawing shows two air-conditioning units with a design capacity of 1100 cfm each with a separate return air system for each unit. The two air conditioning units serve a common area. Section 606.2.1 of the 2000 *International Mechanical Code* requires a smoke detector in return air systems with a design capacity greater than 2000 cfm.

Are smoke detectors required in the return air ducts or plenums where the supply air and the return air are ducted separately to each air conditioning unit?
 See Attachment Drawing # 1.

A: No. Smoke detectors are not required in the return air ducts per the attached drawing. The capacity of the two air conditioning units is only added together when the units share a common supply duct, return air duct or plenum.



Attachment Drawing # 1