

NFPA®

221

Standard for
High Challenge Fire Walls,
Fire Walls, and Fire Barrier Walls

2021



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NFPA® 221

Standard for

High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls

2021 Edition

This edition of NFPA 221, *Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls*, was prepared by the Technical Committee on Building Construction. It was issued by the Standards Council on March 15, 2020, with an effective date of April 4, 2020, and supersedes all previous editions.

This edition of NFPA 221 was approved as an American National Standard on April 4, 2020.

Origin and Development of NFPA 221

The Technical Committee on Building Construction undertook a project to develop a new document to govern fire walls in 1991. At the time, no standard existed to assist code authorities, architects, or engineers on the criteria that were necessary to properly design and construct a fire wall. The first edition of NFPA 221 was issued in 1994. It contained information on various types of fire walls, including basic design criteria, proper protection of penetrations, and special design practices for exterior protection features.

The 1997 edition of NFPA 221 contained several changes, including the addition of specific criteria for treatment of seismic separation assemblies, additional criteria for proper protection of raceway penetrations, and the addition of several suggested protection schemes for properly protecting an egress door located in a fire wall.

The 2000 edition addressed specific testing criteria for performance of rated assemblies that included expansion, seismic, and control joints in fire wall and fire barrier wall assemblies. In addition, a second test protocol was recognized for tests of through penetrations.

The 2006 edition introduced two distinct types of fire walls. Presented in Chapter 5, the “high challenge fire wall” requirements evolved from the fire wall requirements in the 2000 edition of NFPA 221, while the “fire wall” requirements presented in Chapter 6 were based on the requirements in the 2003 edition of *NFPA 5000®*, *Building Construction and Safety Code®*. Chapter 4 of this document contains extracts from *NFPA 5000*, Chapter 8, on topics such as analytical methods, duct and air-transfer openings, joints, opening protectives, and penetrations. Please note: These extracts were adjusted to reflect this document’s exclusive focus on walls by eliminating references to floors, floor-ceiling assemblies, smoke dampers, and partitions.

The 2009 edition was updated to reflect changes to Chapter 8 of *NFPA 5000*. Other changes included recognition of the new criteria used to determine building height and grade geometries, further clarifications as to where a provision applies to a particular type of wall, and the addition of a requirement concerning horizontal exits served by bridges between buildings.

The 2012 edition was a reaffirmation of the previous edition, with updated references to reflect changes in UL and ASTM documents.

For the 2015 edition, extracts from *NFPA 5000* were removed. *NFPA 5000* now extracts material from NFPA 221. Definitions and referenced documents also were updated.

The 2018 edition clarified design load requirements. A new section was added to allow the performance-based design of walls method from ASCE 7 to be used. Annex material was added to provide testing options in areas where there is potential for hydrocarbon fuel fires. Other changes included reference document updates. ASCE definitions are reprinted with permission from ASCE.