Fire-Resistance Rating Requirements for Exterior Walls Based on Fire Separation Distances. The IBC, as far as exterior wall protection is concerned, operates on the philosophy that an owner can have no control over what occurs on an adjacent lot and, therefore, the location of buildings on the owner’s lot must be regulated relative to the lot line. In fact, the location of all buildings and structures on a given piece of property is addressed in relation to the real lot lines as well as any assumed or imaginary lines between buildings on the same lot. The assumption of imaginary lines is discussed with other exterior wall provisions in Section 705.

The lot-line concept provides a convenient means of protecting one building from another insofar as exposure is concerned. Exposure is the potential for heat to be transmitted from one building to another under conditions in the exposing building. Radiation is the primary means of heat transfer.

The code specifically provides that the fire separation distance be measured to the center line of a street, alley, or public way. As the code refers to public way, this would also be applicable to appropriate open spaces other than streets or alleys that the building official may determine are reasonably likely to remain unobstructed through the years.

The regulations for exterior wall protection based on proximity to the lot line are contained in Table 602. The IBC indicates that the distances are measured at right angles to the face of the exterior wall (see definition of “Fire separation distance” in Section 202), which would result in the fire-resistive requirements for exterior walls not applying to walls that are at right angles to the lot line. See Figure 602-1. In order to properly utilize Table 602, it is necessary to identify the fire separation distance, the occupancies involved, and the building’s type of construction. As the fire separation distance increases, the fire-resistance rating requirements are reduced, based on the occupancy group under consideration. Figure 602-2 illustrates the application of exterior wall protection where the exterior walls of the building are parallel and perpendicular to the lot line. In this case, the illustration assumes that the building is one story of Type VB construction and used for offices (Group B). Referring to Table 602, it is noted that
exterior walls less than 10 feet (3,048 mm) from the lot line must be of minimum 1-hour fire-resistance-rated construction. Several footnotes to the table address modifications to the general requirements. Footnote a repeats a previous requirement that load-bearing exterior walls must comply with both Tables 601 and 602. Footnote b refers the user to Section 406.1.2 for exterior wall requirements for Group U occupancies. Where used solely for the parking of private motor vehicles, a Group U garage or carport is regulated by either Item 1 (mixed-occupancy building) or Item 2 (building only contains the Group U) of Section 406.3.2 rather than by Table 602.

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