Wood Light Frames, Small Residential W1	These buildings are detached one- or two-family dwellings one to three stories high with plan areas on each level less than or equal to 3,000 ft^2 (280 m^2) and a total plan area less than or equal to 6,000 ft^2 (560 m^2). Floor and roof framing consists of wood joists or rafters on wood studs spaced no more than 24 in. (61 cm) apart or wood post-and-beam construction. The first-floor framing is supported directly on an at-grade foundation or slab-on-grade or directly on concrete or masonry basement walls or is raised up on cripple studs and post-and-beam supports. Seismic forces are resisted by wood framed and sheathed diaphragms and shear walls. Floor and roof diaphragms consist of straight or diagonal lumber sheathing, tongue-and-groove planks, oriented strand board, plywood, or other materials. Shear walls consist of straight or diagonal wood sheathing, plank siding, oriented strand board, plywood, stucco, gypsum board, particleboard, fiberboard, or similarly performing materials.
Wood Frames, Large Residential, Commercial, Industrial, and Institutional W2	These buildings are one- and two-family dwellings that exceed the criteria for W1 buildings; multiunit residential buildings or commercial, industrial, or institutional buildings. Elevated floor and roof framing consists of wood or steel trusses, glulam or steel beams, and wood posts or steel columns. Ground or basement floors generally consist of concrete slab-on-grade. Seismic forces are resisted by flexible diaphragms and exterior walls sheathed with plywood, oriented strand board, stucco, plaster, or straight or diagonal wood sheathing; or walls are braced with various forms of wood bracing, such as knee-braced or cantilevered columns. Bracing with materials other than wood is considered a mixed system and is subject to the requirements in Section 3.5.1.2.2. Wall openings for storefronts and garages, where present, are framed by post-and-beam framing. In some cases, these building may be located over a podium level structure with concrete or masonry shear walls and can be evaluated as a mixed system subject to the requirements in Section 3.5.1.2.2.2.
Steel Moment Frames S1 (with Stiff Diaphragms)	These buildings consist of a frame assembly of steel beams, joists, open web joists, and/or trusses, and steel columns. Floor and roof diaphragms consist of cast-in-place concrete slabs or steel deck with reinforced structural concrete fill supported on the steel framing and are stiff relative to the moment frames. Seismic forces are resisted by steel moment frames that develop their stiffness through fully restrained or partially restrained beam–column connections.
S1a (with Flexible Diaphragms)	These buildings are similar to S1 buildings, except that diaphragms are bare steel deck or steel deck with fill other than reinforced structural concrete and are flexible relative to the frames.
Steel Braced Frames S2 (with Stiff Diaphragms)	These buildings consist of a frame assembly of steel beams, joists, open-web joists, and/or trusses, and steel columns. Floor and roof diaphragms consist of cast-in-place concrete slabs or steel deck with reinforced structural concrete fill supported on the steel framing and are stiff relative to the braced frames. Seismic forces are resisted by steel braced frames that develop their stiffness through bracing action of the diagonal members resisting axial loads. Three variations in the configuration and design of braced frames exist. These variations are as follows: • Concentrically braced frames: Component work lines intersect at a single point or at multiple points such that the distance between intersecting work lines (or eccentricity) is less than or equal to the width of the smallest component connected at the joint. • Eccentrically braced frames: Component work lines do not intersect at a single point, and the distance between the intersecting work lines (or eccentricity) exceeds the width of the smallest component connecting at the joint. Some of the members are subjected to shear and flexural stresses because of that eccentricity. • Buckling-restrained braced frames: Special types of concentrically braced frames where the steel bracing members are encased within a rigid casing that is intended to prevent buckling of the steel brace.

S2a (with Flexible Diaphragms)	These buildings are similar to S2 buildings, except that diaphragms consist of wood or cold-formed steel framing, bare steel deck, or steel deck with fill other than reinforced structural concrete, and they are flexible relative to the braced frames.
Metal Building Frames S3	These buildings use transverse steel moment frames and sometimes contain wall panel shear elements or braced frames at the ends of the building. Lateral forces in the longitudinal direction typically rely on wall panel shear elements or rod bracing. The buildings are one story high, but they sometimes have mezzanines. The transverse moment frames typically consist of beams and columns that are either web-tapered or prismatic built-up sections with thin plates. The frames are built in segments and assembled in the field with bolted or welded joints. The roof and walls consist of lightweight metal, fiberglass, or cementitious panels. Diaphragm forces are resisted by bare steel deck, roof panel shear elements, or a system of tension-only rod bracing located in the plane of the roof framing.
Dual Frame Systems with Backup Steel Moment Frames and Stiff Diaphragms S4	These buildings consist of a gravity frame assembly of steel beams, joists, open-web joists, and/or trusses, and steel columns. The floor and roof diaphragms consist of cast-in-place concrete slabs or steel deck with reinforced structural concrete fill and are stiff relative to the vertical elements of the lateral system. Seismic forces are resisted primarily by either steel braced frames or cast-in-place concrete shear walls in combination with backup steel moment frames. The steel moment frames interact with the steel braced frames or concrete shear walls and resist seismic forces in proportion to their relative rigidity.
Steel Frames with Infill Masonry Shear Walls S5 (with Stiff Diaphragms)	These buildings consist of a gravity frame assembly of steel beams, joists, open-web joists, and/or trusses, and steel columns. The floor and roof diaphragms consist of cast-in-place concrete slabs or steel deck with reinforced structural concrete fill and are stiff relative to the walls. Walls consist of solid or perforated infill panels constructed of solid clay brick, concrete block, or hollow clay tile masonry which are in-plane with and infill within the structural frames.
S5a (with Flexible Diaphragms)	These buildings are similar to S5 buildings, except that diaphragms consist of wood sheathing or bare steel deck, or steel deck with fill other than reinforced structural concrete and are flexible relative to the walls.
Steel Plate Shear Walls S6	These buildings consist of a gravity frame assembly of steel beams, joists, open-web joists, and/or trusses, and steel columns. Floor and roof diaphragms consist of cast-in-place concrete slabs or steel deck with reinforced structural concrete fill supported on the steel framing and are stiff relative to the shear walls. Shear walls are constructed with steel plates with horizontal and vertical boundary elements adjacent to the webs.
Cold-Formed Steel Light-Frame Construction CFS1 (Shear Wall System)	These buildings have cold-formed steel light-frame walls supporting the majority of the lateral loads. Floor and roof framing consists of cold-formed steel joists or rafters on cold-formed steel studs spaced no more than 24 in. (61 cm) apart, wood or cold-formed steel trusses, structural steel or cold-formed steel beams, and structural steel or cold-formed steel columns. Seismic forces are resisted by wood structural panel or bare steel deck diaphragms, and wood structural panel sheathed shear walls or steel sheet sheathed shear walls. Cold-formed steel light-frame buildings that have precast concrete plank diaphragms shall not be permitted to be classified as this common building type.
Cold-Formed Steel Light-Frame Construction CFS2 (Strap-Braced Wall System)	These buildings have cold-formed steel light-frame strap walls supporting the majority of the lateral loads. Floor and roof framing consists of cold-formed steel joists or rafters on cold-formed steel studs spaced no more than 24 in. (61 cm) apart, wood or cold-formed steel trusses, structural steel or cold-formed steel beams, and structural steel or cold-formed steel columns. Seismic forces are resisted by diaphragms with wood structural panels or bare steel deck, and steel light-frame stud walls with diagonal flat strap bracing. Cold-formed steel light-frame buildings that have precast concrete plank diaphragms shall not be permitted to be classified as this common building type.
Concrete Moment Frames C1	These buildings consist of a frame assembly of cast-in-place reinforced concrete beams and columns. Floor and roof framing consists of cast-in-place concrete slabs, concrete beams, one-way joists, two-way waffle joists, or flat slabs. Seismic forces are resisted by concrete moment frames that develop their stiffness through monolithic beam–column connections. In some conditions the moment frames consist of slab-column frames in two-way flat slab systems.
Concrete Shear Walls C2 (with Stiff Diaphragms)	These buildings have floor and roof framing that consists of cast-in-place concrete slabs, concrete beams, one-way joists, two-way waffle joists, or flat slabs. Buildings may also have floor and roof framing consisting of steel beams, joists, open-web joists, trusses, and/or cold-formed steel light-frame construction that support diaphragms consisting of steel deck with reinforced structural concrete fill. Floor and roof framing is supported on concrete or steel columns and/or concrete bearing walls. Seismic forces are resisted by cast-in-place concrete shear walls.
C2a (with Flexible Diaphragms)	These buildings are similar to C2 buildings, except that diaphragms consist of wood sheathing or bare steel decking and are flexible relative to the walls.

Concrete Frames with Infill Masonry Shear Walls C3 (with Stiff Diaphragms)	These buildings consist of a gravity frame assembly of cast-in-place concrete beams and columns. The floor and roof diaphragms consist of cast-in-place concrete slabs with concret joists and beams and are stiff relative to the walls. Walls consist of solid or perforated infill panels constructed of solid clay brick, concrete block, or hollow clay tile masonry which are in-plane with and infill within the structural frames.
C3a (with Flexible Diaphragms)	These buildings are similar to C3 buildings, except that diaphragms consist of wood sheathing or bare steel deck or steel deck with fill other than reinforced structural concrete and are flexible relative to the walls.
Precast or Tilt-Up Concrete Shear Walls PC1 (with Flexible Diaphragms)	These buildings have precast concrete perimeter wall panels and, in some conditions, interior walls, that are typically cast on site and tilted into place. The panels are interconnected by weldments, cast-in-place concrete pilasters, or collector elements. Floor and roof framing consists of wood purlins, joists, and girders; open-web wood or steel joists; or steel beams, girders, and/or trusses. Framing is supported on interior steel or wood columns and perimeter concrete bearing walls. Seismic forces are resisted by precast concrete shear walls. Diaphragms consist of wood sheathing, bare steel deck, or steel deck with fill other than reinforced structural concrete and are flexible relative to the walls.
PC1a (with Stiff Diaphragms)	These buildings are similar to PC1 buildings, except that diaphragms consist of precast elements, cast-in-place concrete, or steel deck with reinforced structural concrete fill and are stiff relative to the walls.
Precast Concrete Frames PC2 (with Shear Walls)	These buildings consist of a frame assembly of precast concrete beams, girders, and columns with the presence of concrete shear walls. Floor and roof framing consists of cast-in-place concrete slabs, precast concrete planks, tees, or double-tees supported on precast concrete girders, some or all of which could be pre- or post-tensioned. Seismic forces are resisted by precast or cast-in-place concrete shear walls, which also support gravity loads. Diaphragms consist of precast elements interconnected with welded inserts, cast-in-place closure strips, or reinforced concrete slabs or topping slabs.
PC2a (without Shear Walls)	These buildings are similar to PC2 buildings, except that concrete shear walls are not present. Seismic forces are resisted by precast concrete moment frames that develop their stiffness through beam–column joints rigidly connected by welded inserts or cast-in-place concrete closures. Diaphragms consist of precast elements interconnected with welded inserts, cast-in-place closure strips, or reinforced concrete slabs or topping slabs.
Reinforced Masonry Bearing Walls RM1 (with Flexible Diaphragms)	These buildings have bearing walls that consist of reinforced brick or concrete block masonry. Floor and roof framing consists of wood purlins, joists, and girders; open-web wood or steel joists; or steel beams, girders, and/or trusses. Framing is supported by reinforced masonry bearing walls, wood stud walls, cold-formed steel light-frame construction, or by steel, wood or masonry columns. Seismic forces are resisted by reinforced masonry shear walls. Diaphragms consist of wood sheathing, bare steel deck, or steel deck with fill other than reinforced structural concrete and are flexible relative to the walls.
Reinforced Masonry Bearing Walls RM2 (with Stiff Diaphragms)	These building are similar to RM1 buildings, except that the diaphragms consist of steel deck with reinforced structural concrete fill, precast concrete planks, tees, or double-tees, with or without a cast-in-place concrete topping slab, and are stiff relative to the walls. The floor and roof framing is supported on interior steel or concrete frames or interior reinforced masonry walls.
Unreinforced Masonry Bearing Walls URM (with Flexible Diaphragms)	These buildings have perimeter bearing walls that consist of unreinforced clay brick, stone, or concrete masonry. Interior bearing walls, where present, also consist of unreinforced clay brick, stone, or concrete masonry. Floor and roof framing consists of wood joists and beams, which are supported by wood, steel, or cast iron columns. Seismic forces are resisted by unreinforced masonry shear walls. The diaphragms consist of wood sheathing and are flexible relative to the masonry shear walls. Where they exist, ties between the walls and diaphragms consist of anchors or bent steel plates embedded in the mortar joints and attached to framing. Previously retrofitted buildings have wall anchors that consist of post-installed adhesive anchors or post-installed thru-bolts. Buildings with bearing and/or shear walls comprised of adobe shall not be permitted to be classified as this common building type.
URMa (with Stiff Diaphragms)	These buildings are similar to URM buildings, except that the diaphragms are stiff relative to the unreinforced masonry walls. Floor and roof framing consists of cast-in-place concrete slabs supported by concrete or concrete encased steel beams and columns; arched or flat brick or tile floors, with or without concrete topping slabs; or steel deck with reinforced structural concrete fill on steel framing and are stiff relative to the masonry shear walls. Buildings with bearing and/or shear walls comprised of adobe shall not be permitted to be classified as this common building type.