1.3 DEFINITIONS

For the purposes of NZS 3604, the following definitions shall apply. The plural of a defined term shall have the same meaning as the singular and vice versa.

ANCHOR PILE. A *pile* directly supporting a *bearer*, and used to resist horizontal as well as vertical *loads*. The *pile* is embedded in concrete to a depth of 900 mm below cleared ground.

BALCONY. An open floor (i.e. no *roof* or *walls*) attached to the exterior of the main structure of a building and supported on cantilevered *joists*.

BATTEN. See CEILING BATTEN, TILE BATTEN or PURLIN.

BEARER. A beam supported on *jack studs, foundation walls, piles*, or piers and carrying *joists, jack studs*, or subfloor *framing*. See also EAVES BEARER.

BLOCK. See WING.

BLOCKING. Solid timber having the same depth as the *joists* and set at right angles between the *joists* to stiffen and prevent them from buckling.

BOND, RUNNING or STRETCHER. The *bond* when the units of each course overlap the units in the preceding course by between 25 % and 75 % of the length of the units.

BOTTOM PLATE. A *plate* other than a *wall plate* placed under the bottom ends of *studs*.

BOUNDARY JOIST or HEADER JOIST. A *joist* running along the outer ends of the floor *joists*.

BRACE or BRACED. See DIAGONAL BRACE, SUBFLOOR BRACE, WALL BRACING ELEMENT.

BRACE or BRACED PILE or BRACED PILE SYSTEM. A group of two *piles*, between which a *diagonal brace* is fixed. Each *pile* is embedded in concrete to a depth of 450 mm below cleared ground. A *braced pile system* is used to resist horizontal as well as vertical *loads*.

BRACE RUNNER. A horizontal member attached to the upper edges of ceiling *joists* or truss bottom chords to which a *diagonal brace* is attached.

BRACING. Any method employed to provide lateral support to a building.

BRACING CAPACITY. Strength of *bracing* of a whole building or of elements within a building. *Bracing capacity* is measured in *bracing units* (BUs), and shall be determined from section 5.

BRACING DEMAND. The horizontal forces resisted by a whole building or by an element within a building. These horizontal forces are a result of wind or earthquake action. *Bracing demand* forces are measured in *bracing units* (BUs). They shall be determined as set out in 5.2 (wind) or 5.3 (earthquake).

BRACING ELEMENT. See WALL BRACING, WALL BRACING ELEMENT.

BRACING LINE. A line along or across a building for controlling the distribution of *wall bracing elements*.

C1.3

Terms defined in 1.3 are used throughout this Standard in italics except in the foreword, headings, tables, figures, the index or in notes including notes to tables or figures.

BRACING RATING. The lateral *load* resistance assigned to a subfloor or *wall bracing* system, when tested in accordance with BRANZ Technical Paper P21.

BRACING UNIT (BU). A *bracing unit* is a measure of:

(a) The horizontal force *(bracing demand)* on the building (1 kilo Newton is equal to 20 *bracing units)*;
(b) The resistance to horizontal force *(bracing capacity)* of building elements.

BUILDING CONSENT AUTHORITY. A *building consent authority* as defined in the Building Act and includes a *territorial authority* or private body acting within the scope of their approval.

CALL SIZE. The dimensions as given by NZS 3601 and by which timber is referred to in commercial transactions.

CANTILEVER PILE. A *driven timber pile* directly supporting a *bearer*, and used to resist horizontal as well as vertical *loads*.

CANTILEVERED FOUNDATION WALL. A *foundation wall* receiving lateral support only by means of cantilever action from its *footing*.

CAPACITY. The *load* resistance of a connector or fixing determined in accordance with 2.4.7.

CEILING BATTEN. A horizontal timber member fixed below *rafters*, ceiling *joists*, or truss bottom chords to which the ceiling *lining* is attached.

CEILING RUNNER. A beam supporting ceiling *joists*.

CLADDING. The exterior weather-resistant surface of a building.

CLEARED GROUND LEVEL (CGL). The *ground level* after completion of site excavation and removal of all harmful material, but before excavation for *foundations*.

CLEAT. A short member used in *roof* construction to tie a pair of *rafters* together immediately below the *ridge board.*

COLLAR TIE. A horizontal member connecting paired *rafters* together at intermediate points between the ceiling level and the level of the *ridge board*. A *collar tie* is often fixed directly above the *underpurlins*.

CONCRETE BLINDING. Concrete laid over exposed ground, to form a working surface.

CONSTRUCTION JOINT. A joint that results from concrete in one section of the slab being poured up against another vertical section of slab that has already been poured and allowed to harden for 16 hours.

COUPLE-CLOSE ROOF. A *roof* construction in which *roof* timbers consist of a pair of *rafters* tied together at their feet by a ceiling *joist* to prevent spreading.

CURTAILED JOIST. A *joist* not of the full length as other *joists* but cut short and fixed to a *trimmer* at one end.

D. A deformed reinforcing bar of the stated diameter in millimetres.

DAMP-PROOF COURSE (DPC). A strip of durable vapour barrier placed between building elements to prevent the passage of moisture from one element to another.

DAMP-PROOF MEMBRANE (DPM). A sheet material, coating or vapour barrier, having a low water-vapour transmission, and used to minimise water and water-vapour penetration into buildings. Usually applied against concrete in contact with the ground. (Also known as a concrete underlay.)

DECK or DECKING. An open platform projecting from an exterior *wall* of a building and supported by *framing*. A *deck* may be over enclosed internal spaces, or may be open underneath.

DEEP JOIST. A floor *joist* whose depth is 4 or more times its width.

DIAGONAL BRACE. A member of a framed building fixed diagonally and used to resist tension or compression or both.

DIAPHRAGM. A building element such as a floor or ceiling capable of transferring *loads* in its own plane to boundary members.

DRAGON TIE. A member fixed diagonally across the *top plates* at the corner of a building, in the absence of a ceiling *diaphragm*, to support the *top plates* against wind *loads*, act as ceiling *bracing*, and prevent the *walls* from spreading.

DRIVEN TIMBER PILE. A natural round timber driven into the ground to serve as a *braced pile, cantilever pile,* or *ordinary pile.*

DWANG or DWANGING. A short (usually horizontal) member fixed between *framing* timbers. Also known as *nogging*.

EAVES BEARER or SOFFIT BEARER. A horizontal member attached to the end of a truss or a *rafter* and to a *stud*, or a *ribbon board*, or a *soffit plate*, and to which the eaves *lining* is attached. (Also known as a *sprocket*.)

EXTERNAL WALL. Any vertical exterior face of a building consisting of primary and/or secondary elements intended to provide protection against the outdoor environment.

FINISHED GROUND LEVEL (FGL). The level of the ground against any part of a building after all backfilling and/or landscaping and/or surface paving has been completed.

FLAT ROOF. A *roof* having its exterior surface at an angle of less than 10° to the horizontal (that is, at a slope of less than 1 in 6).

FLOOR LOAD or FLOOR LOADING. The uniformly distributed live *load* for floors as specified in table 1.2.

FOOTING. That portion of a *foundation* bearing on the ground and any adjoining portion that is reinforced so as to resist the bearing forces. A *footing* may be spread out to provide an increase in bearing area or an increase in stability.

FOUNDATION. Those parts of a building, transmitting and distributing *loads* to the ground through a *footing*.

FOUNDATION WALL. That part of the *foundation* comprising a concrete masonry or concrete *wall* supporting a building or part of a building, and not extending more than 2 m above the underside of the *footing*.

FRAMING. Timber members to which *lining*, *cladding*, flooring, or *decking* is attached; or which are depended upon for supporting the structure, or for resisting forces applied to it.

FREE JOINT. A construction joint where no *reinforcement* passes through the joint linking both sides of the concrete slab and the vertical faces of the joint are not in bonded contact with each other.

GABLE. Outside *wall* between the planes of the *roof* and the line of the eaves.

GOOD GROUND. Any soil or rock capable of permanently withstanding an ultimate bearing *capacity* of 300 kPa (i.e. an allowable bearing pressure of 100 kPa using a factor of safety of 3.0), but excludes:

(a) Potentially compressible ground such as top soil, soft soils such as clay which can be moulded easily in the fingers, and uncompacted loose gravel which contains obvious voids;

(b) Expansive soils being those that have a liquid limit of more than 50 % when tested in accordance with NZS 4402 Test 2.2, and a linear shrinkage of more than 15 % when tested from the liquid limit in accordance with NZS 4402 Test 2.6; and

(c) Any ground which could foreseeably experience movement of 25 mm or greater for any reason including one or a combination of land instability, ground creep, subsidence, seasonal swelling and shrinking, frost heave, changing groundwater level, erosion, dissolution of soil in water, and effects of tree roots.

GROUND LEVEL, See CLEARED GROUND LEVEL, FINISHED GROUND LEVEL, NATURAL GROUND LEVEL.

HEADER JOIST. See JOIST.

HEAVY ROOF. A *roof* with roofing material (*cladding* and any *sarking*) having a mass exceeding 20 kg, but not exceeding 60 kg/m^2 of *roof* area. Typical examples are concrete tiles, slates and the like.

HEAVY WALL CLADDING. A *wall cladding* having a mass exceeding 80 kg/m^2, but not exceeding 220 kg/m^2 of *wall* area. Typical examples are clay and concrete masonry veneers.

HERRINGBONE STRUTTING. Members set diagonally to form an “x” pattern between the *joists*, to act as *blocking*.

HIP RAFTER. A *framing* timber which conforms to the slope of the intersection of 2 *roof* surfaces, meeting in a hip and into which *jack rafters* are trimmed.

INTERNAL WALL. A *wall* other than an *external wall*.

JACK RAFTER. A short *rafter* extending from the *valley rafter* to the *ridge board* or *hip rafter* or *trimmer*, or from the *top plate* to the *hip rafter* or *trimmer*.

JACK STUD.

Either:

(a) A *stud* of less length than the full height, from *plate* to *plate* of *wall* of which it forms part; or
(b) A *stud* at *pile spacing* forming part of the supporting *framing* under the ground floor of a building.

JOIST. A horizontal *framing* member to which is fixed floor *decking*, or ceiling *linings*, and which is identified accordingly as a floor *joist* or ceiling *joist*. See BOUNDARY JOIST, HEADER JOIST, CURTAILED JOIST, DEEP JOIST, TRIMMING JOIST.

LIGHT ROOF. A *roof* with roofing material (*cladding* and any *sarking*), having a mass not exceeding 20 kg/m^2 of *roof* area. Typical examples are steel, copper, and aluminium *roof claddings* of normal thickness, 6 mm thick cellulose cement tiles, 6 mm thick corrugated cellulose cement, and the like, without *sarking*.

LIGHT WALL CLADDING. A *wall cladding* having a mass not exceeding 30 kg/m^2. Typical examples are weatherboards.

LINING. The rigid sheet covering for a *wall*, ceiling, or other interior surface.

LINTEL. A horizontal *framing* timber spanning an opening in a *wall*.

LOAD. See FLOOR LOAD.

LOADBEARING STUD. A *stud* in a *loadbearing wall.*

LOADBEARING WALL. A *wall* supporting vertical loading from floors, ceiling *joists, roof*, or any combination thereof.

LOADED DIMENSION. A measure of the weight of construction contributing to the member under construction. See figures 1.3(A) to (N).

M. A steel bolt of the stated diameter in millimetres.

MANSARD ROOF. A symmetrical *roof* enclosing a full *storey* with 2 pitches on each side of a ridge, the steeper commencing at the eaves and intersecting with a flatter pitch finishing at the ridge. The steeper pitched part is formed from *wall framing*, sloped at a maximum of 20° from the vertical and the flatter part formed as *roof framing*, with both parts clad with *roof cladding*.

MEDIUM WALL CLADDING. A *wall cladding* having a mass exceeding 30 kg/m^2 but not exceeding 80 kg/m^2 of *wall* area (a typical example is stucco *cladding*).

MEMBER SPAN. The clear distance between supports, measured along the members. See figure 1.3.

METAL ANGLE WALING. A horizontal member manufactured of metal angle, usually steel, checked into a saw cut in the face of *studs*.

NATURAL GROUND LEVEL. The *ground level* before the site has been cleared.

NOG or NOGGING. See DWANG.

NON-LOADBEARING STUD. A *stud* in a *non-loadbearing wall.*

Vertical loadings on non-loadbearing walls which result from the long term creep settlement of loadbearing members, such as trusses, rafters or joists, do not affect the "non-loadbearing" classification of such walls.

NON-LOADBEARING WALL. A *wall* other than a *loadbearing wall* and may contain *bracing elements*.

ORDINARY PILE. A *pile* required to resist vertical *loads* only.

PART STOREY. A basement, or a *storey* in a *roof* space, the floor area of which basement or *storey*, as the case may be, does not exceed 50 % of the area of the ground floor area of the same *wing* or *block* in which the *part storey* occurs.

PILE. A *block* or a column-like member used to transmit *loads* from the building and its contents to the ground. See ANCHOR PILE, BRACED PILE SYSTEM, CANTILEVER PILE, DRIVEN TIMBER PILE, ORDINARY PILE.

PITCHED ROOF. A *roof* having its exterior surface at an angle of 10° or more to the horizontal (that is, at a slope of 1 in 6 or steeper).

PLAN FLOOR AREA. The area of the site covered by the building in plan view not necessarily on one level (the footprint).

PLATE. A timber supported by a *wall* or *bearers* or *joists*, to support and distribute the *load* from floors, *walls*, *roofs* or ceiling. See BOTTOM PLATE, TOP PLATE, WALL PLATE.

POST. An isolated vertical member acting as a support.

PURLIN includes TILE BATTEN. A horizontal member laid to *span* across *rafters* or trusses and to which the *roof cladding* is attached. See also UNDERPURLIN.

R. A plain round reinforcing bar of the stated diameter in millimetres.

RAFTER. A *framing* timber, normally parallel to the slope of the *roof*, providing support for *sarking*, *purlins* or *roof cladding*.

REINFORCEMENT. Any form of reinforcing rod, bar, or mesh that complies with the relevant requirements of NZS 3109.

RIBBON BOARD includes SOFFIT PLATE. A horizontal *framing* timber secured to, or checked into, the edges of *studs* and supporting floor or ceiling *joists* or *eaves bearers*.

RIDGE BEAM. A single or, sometimes, double beam (timber pole construction) supporting the common *rafters* of a framed *roof*.

RIDGE BOARD. The horizontal timber to which *rafters* of *couple-close roofs* are fixed at their upper ends.

ROOF. That part of the building having its upper surface exposed to the outside and at an angle of 60° or less to the horizontal. See COUPLE-CLOSE ROOF, FLAT ROOF, HEAVY ROOF, LIGHT ROOF, PITCHED ROOF, SKILLION ROOF.

ROOF STRUT. See UNDERPURLIN STRUT.

RUNNER. See BRACE RUNNER, CEILING RUNNER.

SARKING. Boarding or sheet material secured to *rafters*, trusses, or *purlins* and which may also serve as the ceiling *lining*.

SHEATHING. Material used as a backing to *cladding* and includes *sarking*.

SHRINKAGE CONTROL JOINT. A line along which the horizontal strength of the slab is deliberately reduced so that any shrinkage in the slab will result in a crack forming along that line.

SILL TRIMMER. A member supporting the *wall framing* beneath an opening and carrying wind *loads* to the *trimmer studs*.

SKILLION ROOF. A *pitched roof* where the ceiling *lining* is parallel and close to the *roof cladding*. The *roof* may be mono-pitch or may consist of more than one *roof* plane. These *roofs* often have *rafters* exposed below the ceiling.

SNOW LOAD or SNOW LOADING. In the context of this Standard, *snow load* refers to the *snow load* on the ground, as defined in AS/NZS 1170.3. A *snow load* of 1 kPa is built into sections 1 to 14. Section 15 covers adjustments required for a *snow load* up to 2 kPa.

SOFFIT BEARER. See EAVES BEARER.

SOFFIT PLATE. See RIBBON BOARD.

SPACING or SPACED. The distance at which members are measured centre to centre.

SPAN. See MEMBER SPAN and SUPPORT SPAN.

SPECIFIC ENGINEERING DESIGN (SED). Requires calculation and design beyond the scope of this Standard.

SPROCKET. See EAVES BEARER.

STOREY. That portion of a building included between the upper surface of any floor and the upper surface of the floor immediately above, except the top *storey* shall be that portion of a building included between the upper surface of the topmost floor, and the ceiling or *roof* above.

STRINGER. A horizontal *framing* timber on edge fixed to the side of a concrete or concrete masonry *wall*, to support the ends of *joists* or *rafters*.

STRUCTURAL GRADE (SG). The grade of timber identified by the modulus of elasticity parameter, E, which has been verified as either machine or visual stress graded timber in accordance with NZS 3622. The grades covered by this Standard are:

(a) Dry timber

  (i) SG 6, to meet the properties specified for No. 1 Framing or MSG 6 in NZS 3603;

  (ii) SG 8, to meet the properties specified for MSG 8 or VSG 8 in NZS 3603; and

  (iii) SG 10, to meet the properties specified for VSG 10 in NZS 3603.

(b) Wet timber

  (i) SG 6 (Wet), to meet the properties specified for wet No. 1 Framing in NZS 3603;

  (ii) SG 8 (Wet), to meet the properties specified for G 8 in NZS 3603.

STRUT. See UNDERPURLIN STRUT.

STRUTTING. Short members fixed between *joists* to stiffen and prevent them from buckling. See HERRINGBONE STRUTTING.

STRUTTING BEAM. A structural beam spanning between *loadbearing walls* from which *underpurlins* may be strutted.

STUD. A vertical *framing* timber.

SUBFLOOR BRACE. A *bracing element* below the ground floor level.

SUPPORT SPAN. The clear distance along a member between supports, measured in plan (horizontally). See figure 1.3.

TERRITORIAL AUTHORITY. Wherever the term *territorial authority* appears replace this with *building consent authority.*

TILE BATTEN. See PURLIN.

TOP PLATE. A *plate* placed over the top ends of *studs*.

TRIMMER. A *framing* timber supported by two *trimming joists, studs* or *rafters,* to which is fixed one or more *curtailed joists, jack studs,* or *jack rafters.*

TRIMMING JOIST. A *joist* which is of the full *span* as other *joists*, but which on one side supports one or more *trimmers*.

TRIMMING STUD. A *stud* located on the side of an opening.

UNDERPURLIN. A horizontal timber member laid underneath *rafters*, supporting the *rafters* at intermediate points along their length.

UNDERPURLIN STRUT. A member used to transfer *load* from an *underpurlin* to a *loadbearing wall* or a *strutting beam*.

VALLEY BOARD. A board laid to support a valley gutter.

VALLEY RAFTER. A *rafter* which conforms to the slope of the intersection of two *roof* surfaces meeting in a valley and into which *jack rafters* are trimmed.

WALING. A horizontal *framing* member secured to, or checked into, the edges of *studs*. See METAL ANGLE WALING.

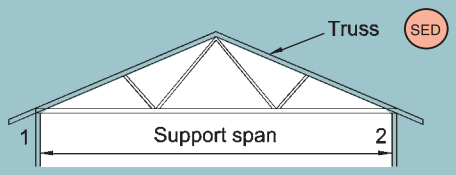
WALL. See EXTERNAL WALL, FOUNDATION WALL, INTERNAL WALL, LOADBEARING WALL, NON-LOADBEARING WALL.

WALL BRACING, WALL BRACING ELEMENT. A section of *wall* above the ground floor level that performs a *bracing* function.

WALL PLATE. A *plate* laid upon a concrete or concrete masonry *foundation wall.*

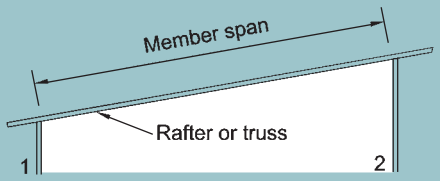
WING or BLOCK. A *wing* or *block* is any part of the building which projects by more than 6 m from the remainder of the building.

WIRE DOG. Galvanized or stainless steel wire, D or Z shaped nail, spiked at each end. Used for fixing timber together to resist uplift. (See figure 2.2.)



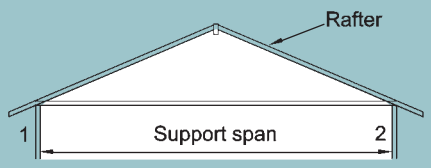
(A) SUPPORT SPAN

(A) For members 1 and 2:
Loaded dimension = $\frac{\text{Support span}}{2}$



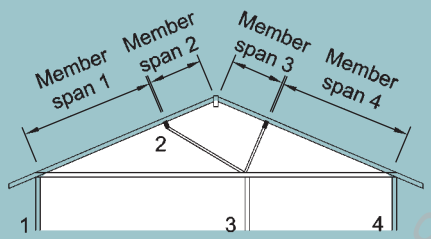
(B) MONOSLOPE ROOF

(B) For members 1 and 2:
Loaded dimension = $\frac{\text{Member span}}{2}$



(C) COUPLE CLOSE ROOF OR TIED RAFTERS

(C) For members 1 and 2:
Loaded dimension = $\frac{\text{Support span}}{2}$



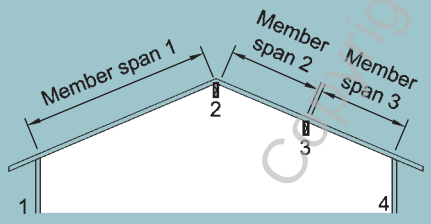
(D) FRAMED OR STRUTTED ROOF

(D) For member 1: Loaded dimension = $\frac{\text{span 1}}{2}$

For member 2: Loaded dimension = $\frac{\text{span 1} + \text{span 2}}{2}$

For member 3:
Loaded dimension = $\frac{\text{span 1}}{2} + \text{span 2} + \text{span 3} + \frac{\text{span 4}}{2}$

For member 4: Loaded dimension = $\frac{\text{span 4}}{2}$



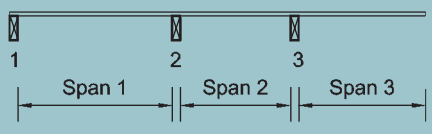
(E) RAFTERS SUPPORTED ON BEAMS OR WALLS

(E) For member 1: Loaded dimension = $\frac{\text{span 1}}{2}$

For member 2: Loaded dimension = $\frac{\text{span 1} + \text{span 2}}{2}$

For member 3: Loaded dimension = $\frac{\text{span 2} + \text{span 3}}{2}$

For member 4: Loaded dimension = $\frac{\text{span 3}}{2}$



(F) FLOOR STRUCTURE

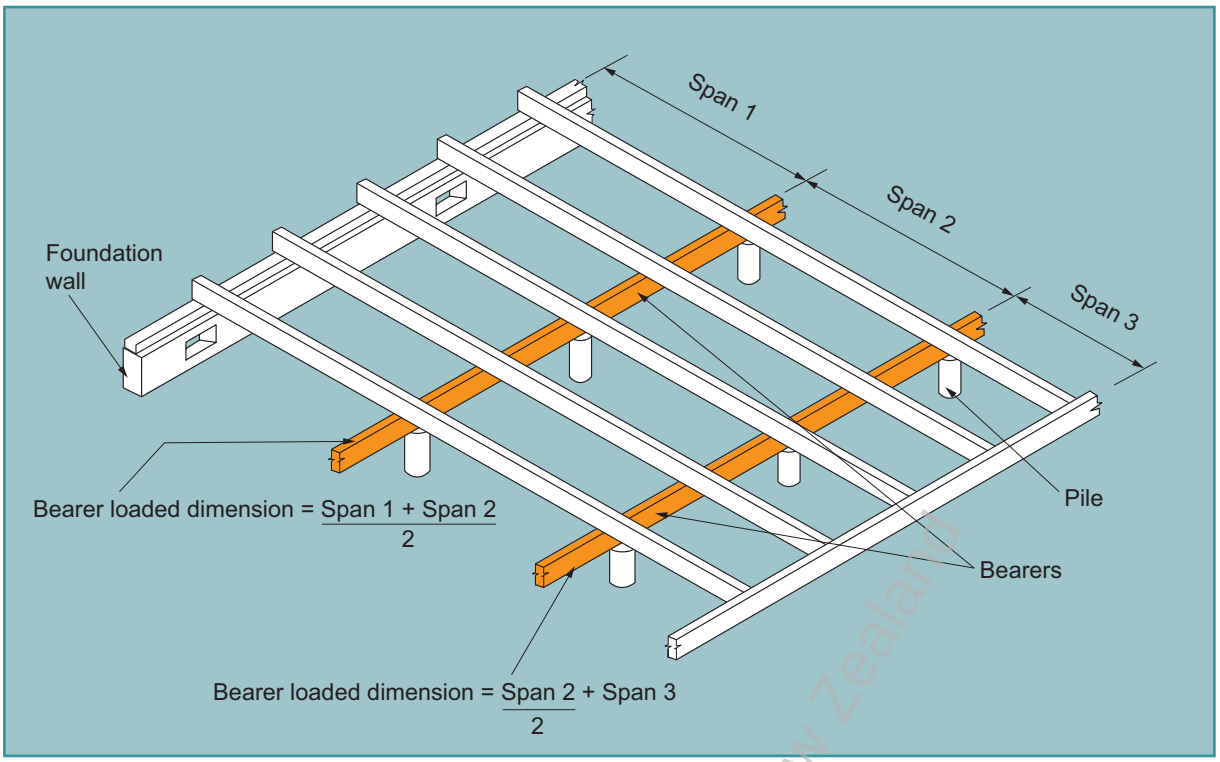
(F) For member 1: Loaded dimension = $\frac{\text{span 1}}{2}$

For member 2: Loaded dimension = $\frac{\text{span 1} + \text{span 2}}{2}$

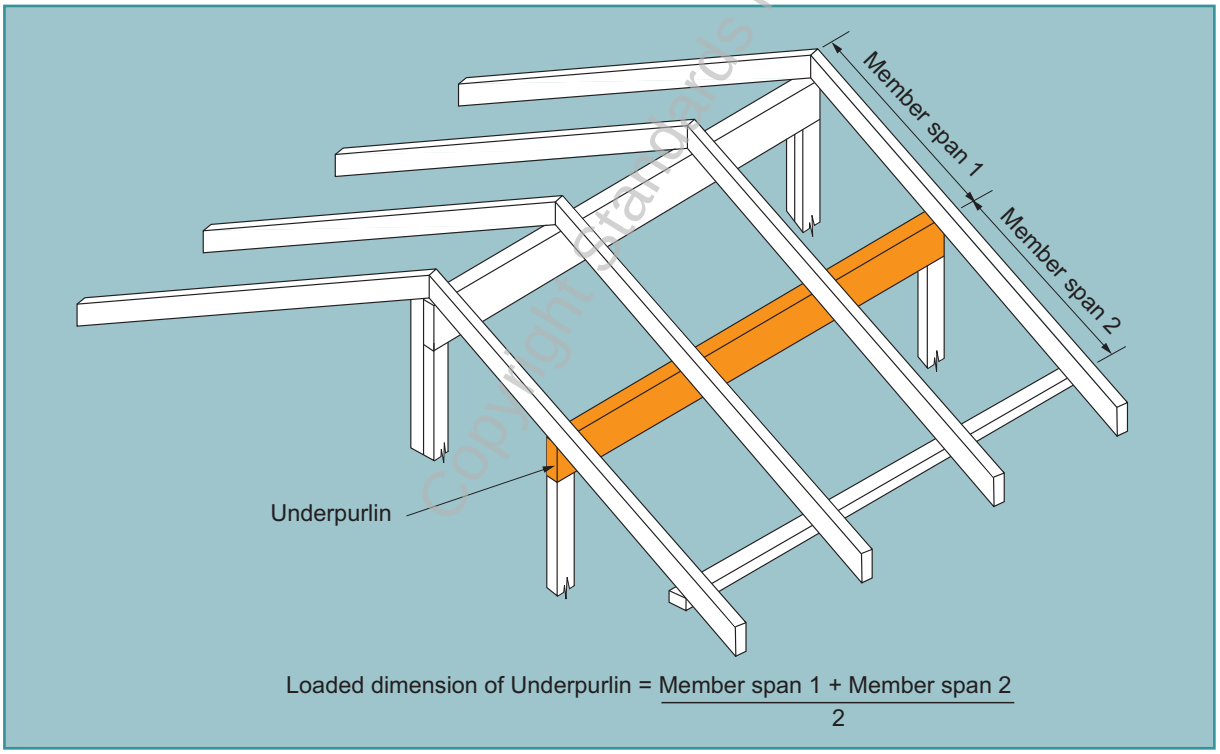
For member 3: Loaded dimension = $\frac{\text{span 2}}{2} + \text{span 3}$

NOTE – Maximum eaves overhang dimension 750. Such overhangs may be ignored when calculating loaded dimensions.

Figure 1.3 – Definitions of spans and loaded dimensions (see 1.3)

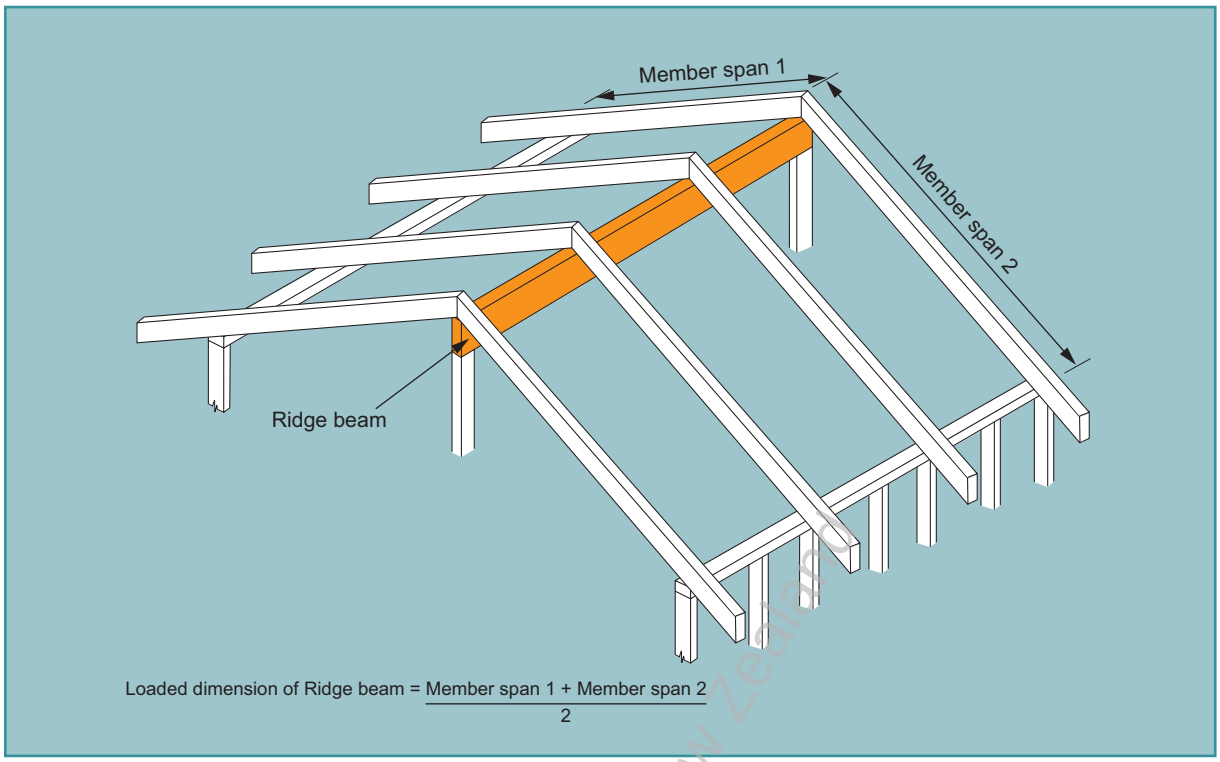


(G) SUBFLOOR BEARERS

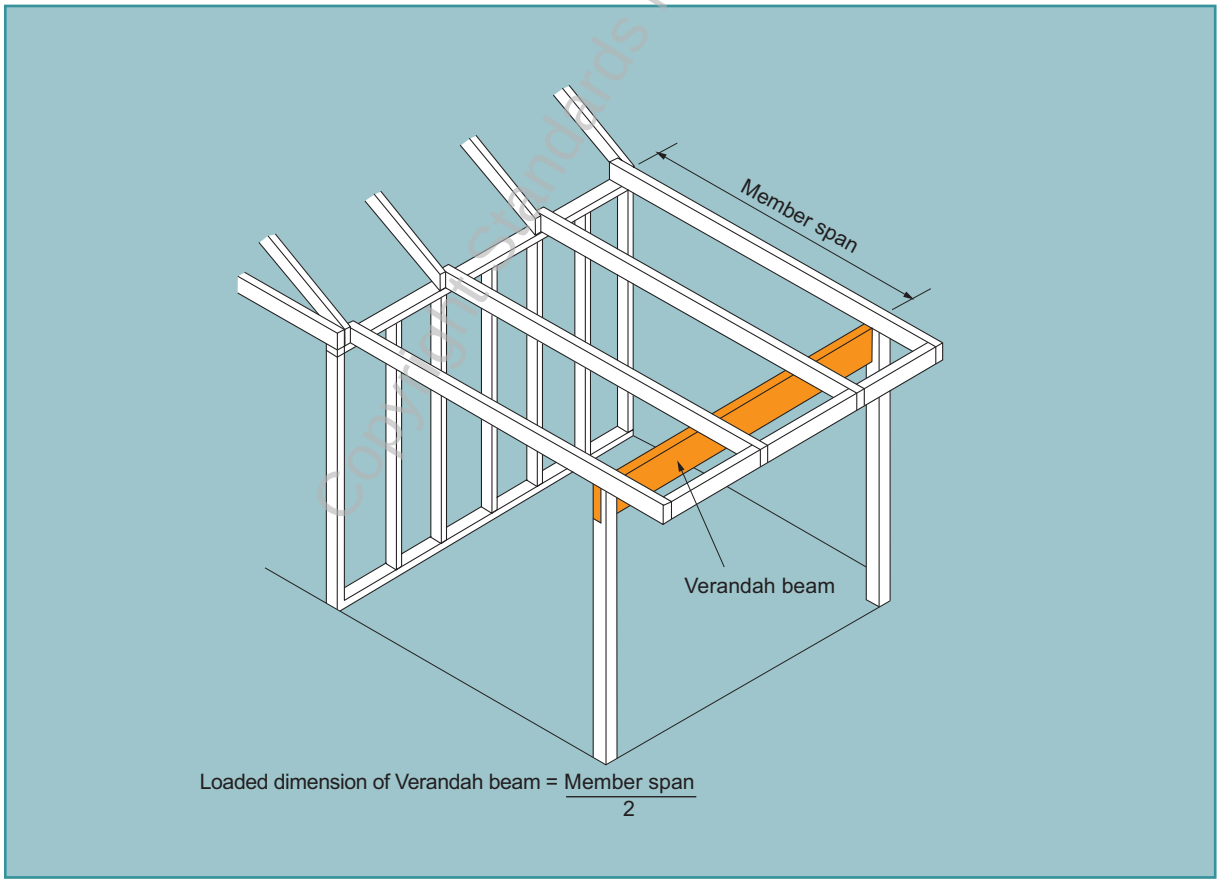


(H) UNDERPURLIN

Figure 1.3 – Definitions of spans and loaded dimensions (continued) (see 1.3)

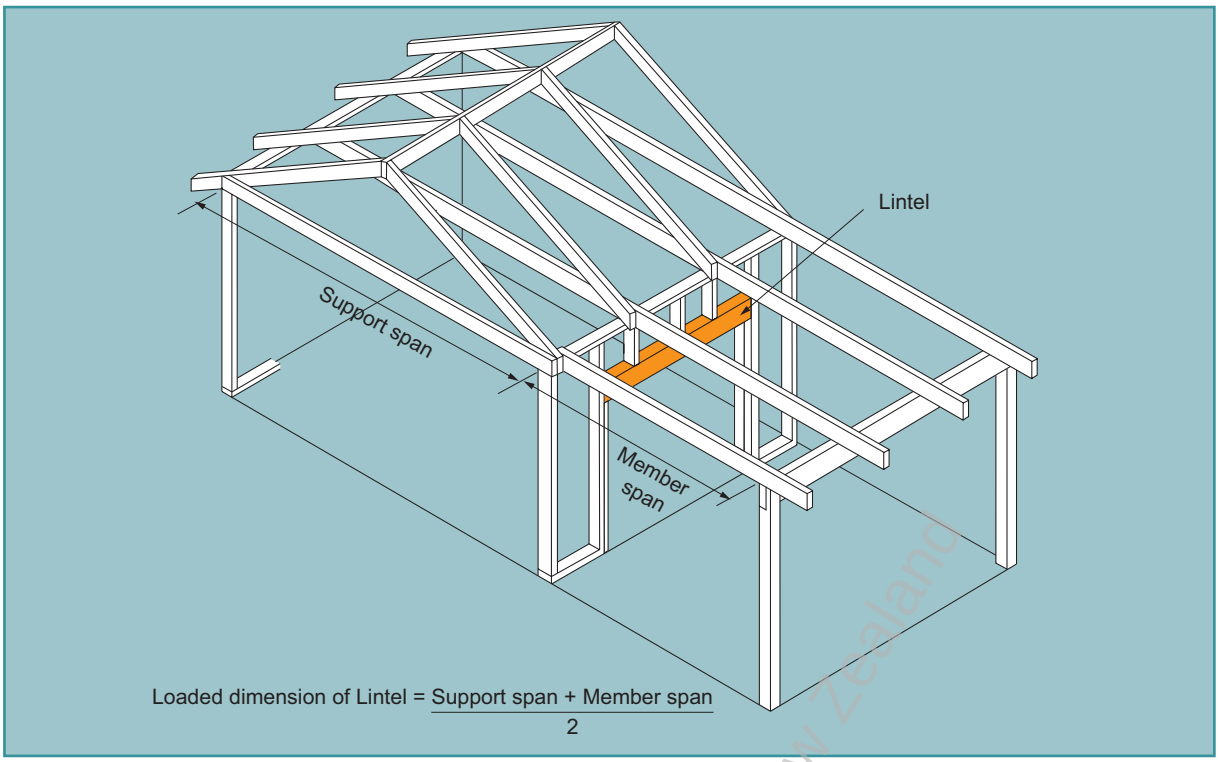


(I) RIDGE BEAM

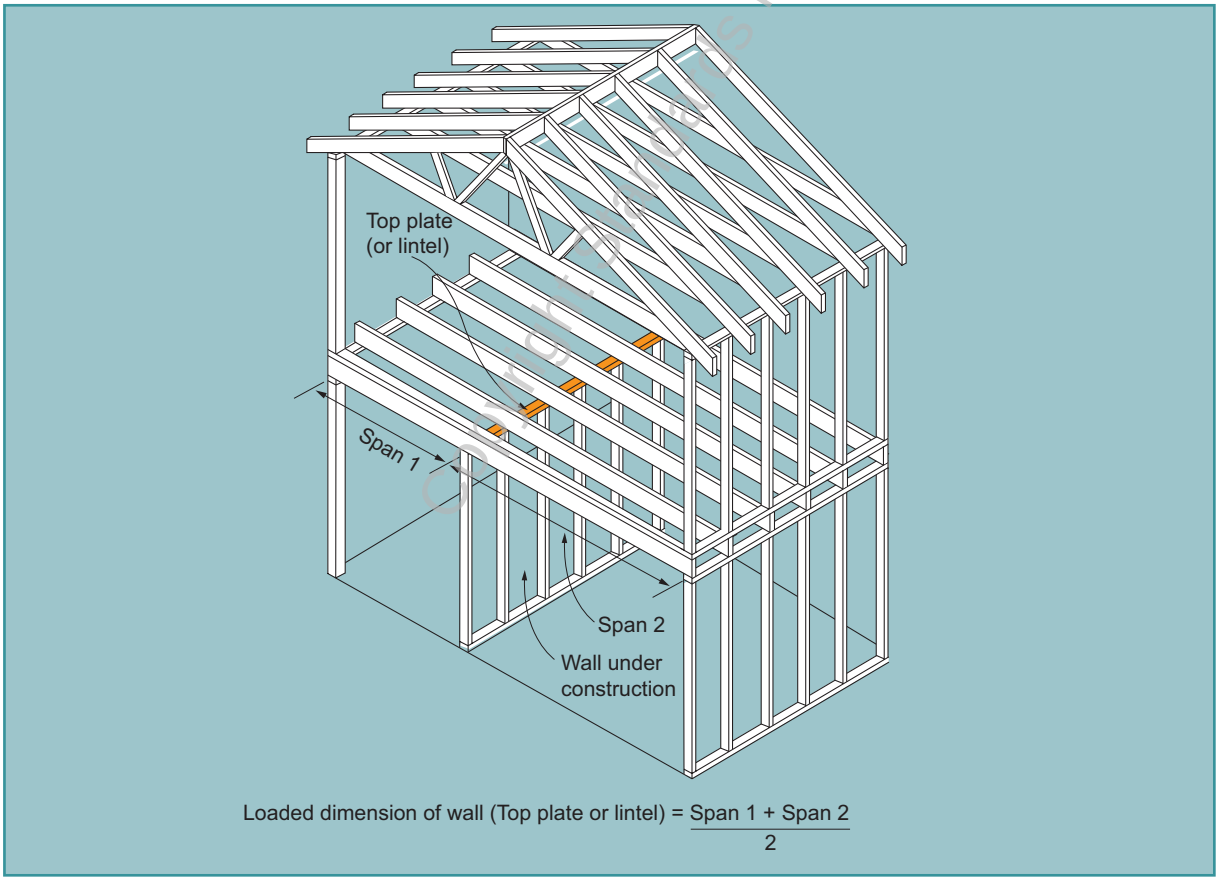


(J) VERANDAH BEAM

Figure 1.3 – Definitions of spans and loaded dimensions (continued) (see 1.3)

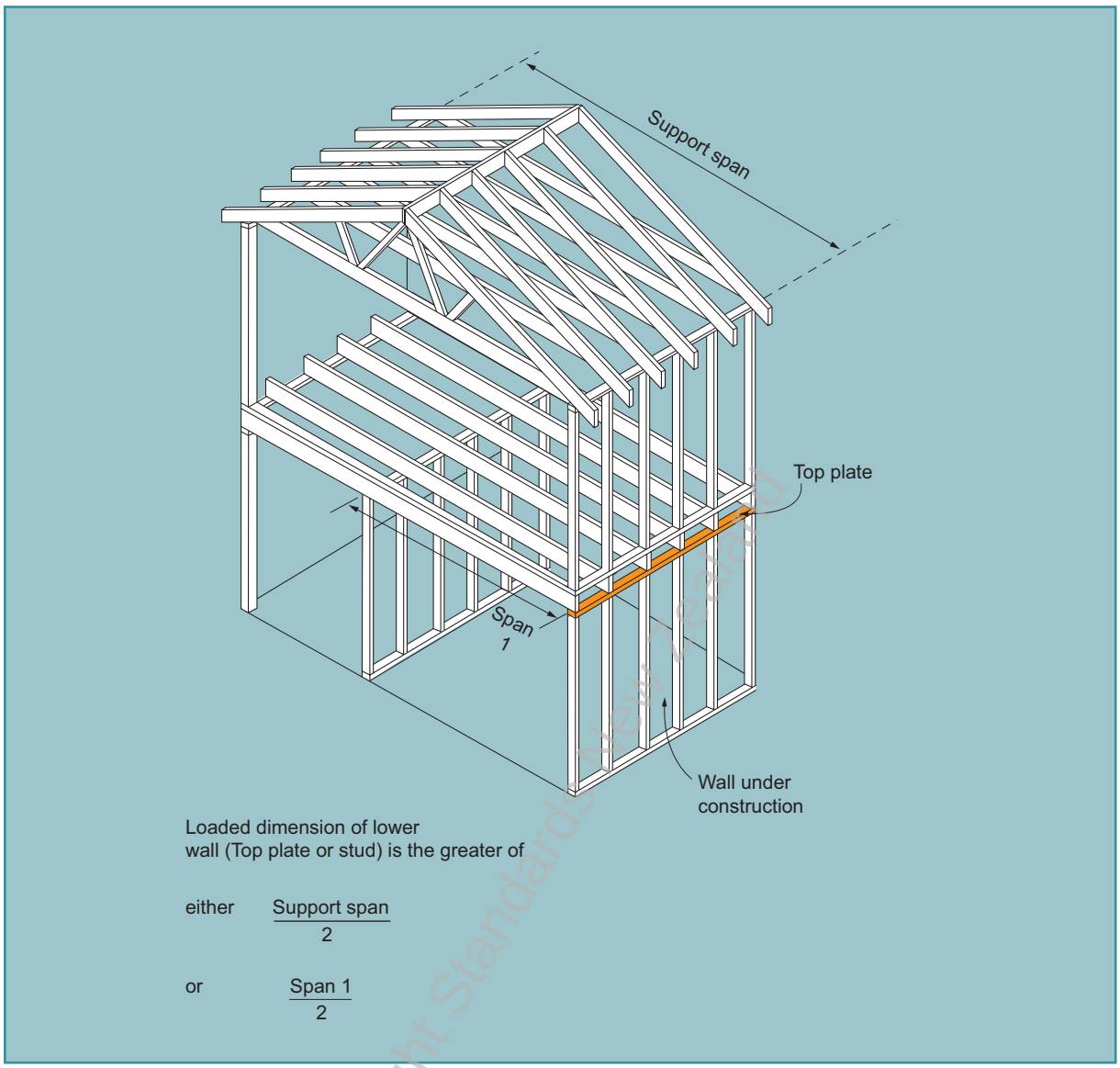


(K) LINTEL SUPPORTING ROOF ONLY



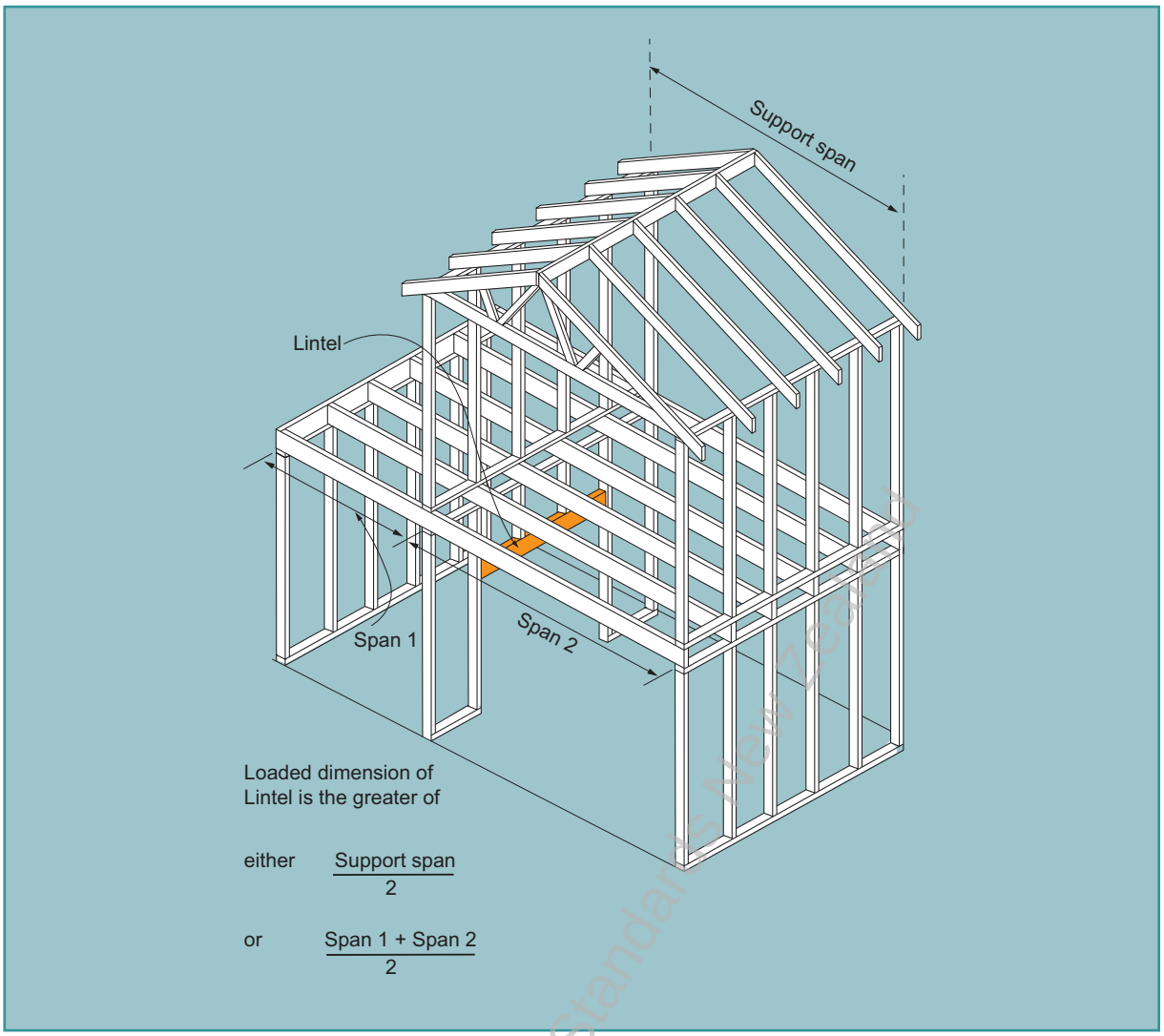
(L) INTERNAL WALL FOR LINTEL SUPORTING FLOOR ONLY

Figure 1.3 – Definitions of spans and loaded dimensions (continued) (see 1.3)



(M) WALL TOP PLATE, LOWER OF TWO STOREYS

Figure 1.3 – Definitions of spans and loaded dimensions (continued) (see 1.3)



(N) LINTEL SUPPORTING ROOF, WALL AND FLOOR

Figure 1.3 – Definitions of spans and loaded dimensions (continued) (see 1.3)