(Continued From Page Eight) have concrete underfloor not less than 2 inches thick re inforced with wire lath or mesh. Boarding supporting the un der floor shall be let down between the joists with boarding linishing flush with tops of joists. Boarding shall be covered with waterproof building paper before the under floor is

Pourch All downspouts or leaders emptying on grade shall have splash blocks constructed of concrete or other approved material so located as to carry the rain water at least 3 feet from the building.

material so located as to carry the rain water at least 3 feet from the building.

Section 6.1 DAMPPROFING

6.101 Foundation wails of masonry units which enclose basements or cellars shall be waterproofed as follows:
6.102 In areas where sandy soil occurs: A heavy coat of undiluted tar or asphalt waterproofing shall extend from the outside top edge of footing to the finished grade.
6.103 In areas where other than sandy soil occurs: a coat of the finished from the state of the footing of the finished grade.
6.103 In areas where other than sandy soil occurs: a coat the bottom, extending to the outside edge of the footing. When plaster coat is dry, all exterior surfaces below gradeshall be covered with a heavy coat of undiluted tar or asphalt waterproofing.
6.104 If masonry veneer extends down to grade, the unditted tar or asphalt waterproofing described in (1) or (2); above shall extend beneath and behind the veneer to the top that the control of the con

case or water constitions exist, walls and floors shall be made wateright before final inspection is given and accepted.

Section 7.1 Structural Steel and from 3.1 Structural steel and from 5.1 Structural steel and from 5.1 be so designed as to comply with the requirements of the local building code, when no local regulations exist, the recommendations of the American Institute of Steel Construction shall apply.

7.102 Connections shall be riveted, bottled, or welded, and shall be so designed as to fully develop the strength of the structural members. Bearings of steel beams and girlers on masonry walls shall extend at least 4 inches into the wall, and shall be solidly bedded in portland center morter. Bearing shall be shall be standard agure, gas-pipe or structural steel with caps and bases of not less than 3716 inch plate. Bott caps to beams, Bases shall be not less than 3716 inch plate, Bott caps to beams, Bases shall be not less than 3716 inch plate, Bott caps to beams, Bases shall be not less than 3716 inch plate, Bott caps to beams, Bases shall be not less than 2716 inch plate, Bott caps to beams, Bases shall be not less than 3716 inch plate, Bott caps to beams, Bases shall be not less than 3716 inch plate, Bott caps to beams, Bases shall be not less than 3716 inch plate, Bott caps to be some shimmed up base plates, Loose shipms between column not be acceptable.

Section 8.1 Lamber -

caps and beams or girders and under column base plates will not be acceptable.

S.101 All softwood lumber shall meet all the grading requirements of the Association recognized in the trade of the Association recognized in the trade of the state of the Association recognized in the trade of the state of

Note: Outre Jumber for subflooring, sheathing, rool boarding, shinkle lath, etc., shall be not less than No. 2 Common boarding, should be not less than No. 2 Common Note: Board Lumber, No. 3 Common, of woods comparable to No. 2 Common grade in the other softwoods, will be acceptable, such as White Fir. Engelman Spruce, Eastern Spruce, Ponderosa Pine, Suear Pine, Idaho White Pine, Northern White Pine, Sorthern White Pine, Sort

and lumber shall comply with the American Lumber Standards.

Section 9 WOOD FRAMING
Section 9 Thors and Roots
9.101 All wood floor and roof framing construction shall
be kept at least two inches away from the chinney masonry,
except when, 8 inches of masonry is, used outside the flue
lining, in which case the framing may be built flush with
the chinney masonry. The Sinch space between the chinney
masonry and the floor framine shall be flittled with fire-resistant material with the chinney, sexept on plers which are
built integral with the chinney masonry.

102 Gloters may be steel, reinforced concrete, solid
wood, or built-up wood.

2103 All plants columns supports.

2104 Wood posts, when used as columns in basements,
shall bear on a cement base which shall extend not less than
3 inches above the finish floor. The base shall bear on a cement base which shall extend not less than
3 inches above the finish floor. The base shall bear on a cement base of nor the controlled sheet metal
shall separate the end of the post (room the data were all
shall separate the end of the post (room the data were all
shall bear of distance beweet of noncrorodible sheet metal
shall on exceed the following:

Maximum clear span

Maximum clear span

Maximum clear span

Size in in	ches Maximum	clear span
DILC 111 111	1-story	11/2-and
	dwellings	2-story
	4	dwelling
	5' 0"	4' 0
4 x 6	6′ 0″	5′ 2
6 x 6	6′ 4″	5′ 6
4 x 8		7' 0
4 x 10	8' 0"	
6 x 8	8' 0"	7′ 0
6 x 10	9' 0"	8' 0
Notes	The above spans are based on a n	ninimum fibe
Notes	atrees of 1 200 pounds. When the a	llowable fibe

Notes: The above spans are based on a minimum observer stress of 1,200 pounds. When the allowabe liber stress of the species of all one of the stress of the species of all one of the stress of the species of all one of the stress of the species of all one of the stress of the species of the sp

John the end of the joist shall be not more than ½ of the joist depth.

2.107 Ends of floor joists framing into masonry walls shall have not less than 4-inch bearing and shall have at least a 3-inch bevel or fire-cut, in cases where the ends of the floor joists which frame into the masonry walls are lecated below outside finish grade, the ends of the joists shall receive groud brish cout of creason; wood floor construction framing the property of the propert

which run parasite to the froot year.

Bell the outside wall and support stud construction shall be doubled.

9.110 Headers and trimmers shall be doubled, except that headers 4 feet or less in length may be of single thickness provided the header is supported on not less than 2x3 find ledger boards and ander is secured by splikes driven through one thickness of the trimmers into the ends of the header. Headers receiving more than 3 tail beams shall have ends supported in metal joist hangers!

Two 2 x 2 x ½ inch steel angles drilled for nall-ing may be spiked to the joists and header, in ileu of joist hanger, provided the length is not less than I inch shorter than the depth of the

9.11 Ends of lapped Joists shall rest on griders or on bearing partitions and shall rest on griders or on bearing partitions and shall be securely natiled to plate and to each other. (No lap shall exceed 12 inches.)
9.112 Where second sfory is framed out over the wall below and the second floor joists run parallel to the supporting wall, the supporting members of the overhang shall carry The maximum projection of the overhang shall carry The maximum projection of the overhang shall carry the form of the overhang shall be 15 inches. Where framing is at right nagle to the supporting wall, big is the shall be shall extend continuous in one piece to form the overhang.

Where framing is at right angle to the supported sorm the over hang.

Note: This construction shall also apply to all projections. This construction shall also apply to all projections construction where the installation of his lie is not supported directly by a foundation.

9.113 Jolist bearing on steel beams shall have 2 x 4 spacers wedged in between all pairs of joists and end-spiked shall be indeed of the foliate.

9.114 Floor (including attic floor) and flat roof joists shall be increased sufficiently to support the roof load withing shall be increased sufficiently to support the roof load withing.

9.114 Floor (including attic floor) and flat roof joists shall be increased sufficiently to support the roof load withing a shall be barded with 1 x 3 inch bridging at intervals not to exceed 8 feet and double-nailed at each end. Metal bridging to extend 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal bridging to exceed 8 feet and double-nailed at each end. Metal b

Maximum clear span (No. 1 or 2

	_						_	
Lumber size		Spac- ing cen- ter to cen- ter	stress 1,200 pounds Douglas Fir (Coast region and Inland Empire.) Southern Yellow		Coast Hemlock, Cypress, Redwood, Tamarack		Minimum fiber stress less than 1,000 pounds	
Nominal Actual								
		In.	Ft.	In.	Ft.	In.	Ft.	In.
2x6	1% x5%	16 12	9 10	1 0	8 9	6	7 S	9 7
2x8	156×736	16 12	12 13	1 3	11 12	4 5	10 11	4
3x8	256 x 714	16 12	14 15	: 0 : 4	13 14	2	12 13	. 1
2x10	15% x9 1/2	16 12	15 16	. 3	14 15	4 8	13 14	1
3x10	2 1/2 x 9 1/2	16 12	17 19	8 3	16 18	9 1	15 16	2 6
2x12	1%x11½	16 12	18 20	5	17	3 10	15 17	10

Note: When concentrated loads are involved, framing, nembers shall be of proper size and spacing to adequately support the load. Where the spacing the allowable fiber stress of the space of the concentration of the space of the concentration of the space of the concentration of the space of the old was a span of the jolists shall be determined on the basis as used for this table.

9.117 The cutting of floor joists to facilitate the installation of piping and duct work will be permitted with the folioning limitation: bottom edges of jolists may be notched not to exceed 1/6 of the joist depth. Notching the top or bottom edge of jolists to receive piping or duct work will not be permitted in the middle third of any joist span.

2. If cutting of a floor joist more than 1/6 of lis depth is found necessary, a header shall be cut in to support the end of the joists. The pipes necessitates passing through the joists, holes shall be drilled to receive the pipes. The diameter of the holes shall be not more than ½ inches, and the pipe and in no case greater than 2½ inches. The edge of the holes shall not be located nearer than 2 linches from the top or bottom edge of the joists.

Maximum clear span (No. 1 or 2 . Dimension)

				_					ı.
Lumber Size		Spac- ing cen- ter to cen- ter	Douglas Fir (Coast Region and		Hemlock, Cypress, Redwood, Tamarack		Minimum fiber stress lessthan 1,000 pounds		
Nominal	Actual		tern L						ì
		In.	Ft.	In.	Ft.	In.	Ft.	In.	١
- 2x4	1% x3%	16 12	10 11	0	9 10	8 6	8 9	7 4	
2x6	1%×5%	16 12	15 16	7	14 15	8 10	13 14	3 2	Ì
2 7 8	156 x736	16°	20 21	2 8	19 20	3	17 18	6	

Where the attic space above celling loists is un-finished but is usable for storage space, or it the space is suitable for finishing into future habit able rooms, the spans for the celling joists shall able rooms, the spans for the celling joists shall be figured the same as for floor joists.

9.123 Ceiling joists shall, wherever possible, serve as ties or the rafters and shall be double nailed to the rafters.

9.124 Collar beams of 1x6's or 2x4's shall be installed on at least each alternate pair of roof rafters and shall be double

nailed to the ratters.

3.15 Where ceiling joists serve as collar beams and occur above the midpoint of the ratter, adequate provision shall be middle for typing the lower end of the ratter to the shall be middle for typing the lower end of the ratter to the possible because of structural conditions, the ratter size shall be increased suitcidently to support the root load without trust or undue bending in the lower end and the size of the collar beams shall be not less than the ratters.

Maximum clear span (No. 1 or 2 Dimension)

	Silicitation (
			Minimum fiber stress 1,200 pounds Douglas Fir (Coast Region and Inland Empire) Southern Yellow Pine, Wes-		fiber stress 1,000 pounds West Coast Hemlock, Cypress, Redwood, Tamarack		Minimum fiber stress 'less than 1,000 pounds		
Lumber Size		ter to cen ter							
Nominal	Actual	_	tern	Larch					
	١.	In.	Ft.	In.	Ft.	In.	Ft.	In.	
2x4	156×356	24 20 16 12	6 6 7 8	0 5 4 5	5 6 6 7	5 0 8 9	5 5 6	10 4 11 11	
2x6	1% x5%	24 20 16 12	9 10 11 13	3 2 4 1	8 9 10 11	5 3 4 11	7 8 9 10	3 3 9	
2x8	1%x7½	24 20 16 12	12 13 15	4 5 1 5	11 12 13 15	3 4 10 11	10 11 12 14	2 0 4 3	

Where the allowable fiber stress of the species of wood used is in excess of 1,200 pounds, in creased spans will be permitted, provided they are determined on the same basis as used for this table.

Rafters on roofs with slopes less than 5 to 12 shall be gured same as floor joists.

3.127 Roof and valley rafters shall be securely spiked to the wall plate. Opposing rafters shall be framed directly opposite each other at the ridge. There shall be a ridge board at all ridges and one valley rafter at all valley; The depth of the ridge board and valley rafter shall be not less than the cut end of the abutting rafters. Valley rafters shall be not less than 2 lenhes thick.

be not less than 2 inches thick.

3.128 All openings in roof construction for dormer windows where there are no supporting partitions shall be
tramed with obubble orafters and headers.

9.129 Requirements for headers and trimmers for red
framing around chimneys shall be same as required you
tloors except that for a sloping roof where headers are less
than 4 feet in length and the thimney is either at the ridge
or the caves, the trimmers may be single.

9.139 Roof rafters shall be covered with 1 inch roof boards not more than 5 inches in width, laid closed for tile, slate, as bestoe-cement, or asphalt shingles or 1 linch apart for woo shingle roof. All roof boards shall be securely nailed to rafter at each bearing.

9.131 All attics having stairways leading to same shall be covered with at least one thickness of flooring or sub-flooring in all parts where headroom is four feet or more.

9.201 Wood stud walls shall have corner posts built-up sing.—

1. A 4x6 solid post with a 2x4 piece to form the interior

A 4x6 solid post with a 2x4 piece to form the interior lathing corner; or
 Two 2x4 pieces with a 2x6 member between; or
 Three 2x4 pieces arranged to form interior lathing

3. Three 2xi pieces arranged to form Interior lathing corner.

4. Four 2x4 pieces with 2 of the 2x4's used to form the lathing corner.

9.202 Studis shall be not less than 2x4's spaced not more than 16 inches o, c, and set the 4 inch way. Shall have studis doubled on jambs. The inner stud shall be cut to receive the interior of header over the opening and shall extend in one piece from lintel or header to bearing except that at windows the studies of the control of t

9.204 Spans for lintels or headers shall not exceed the following for the sizes given in the sizes given in

3.112 Wood sheathing boards shall be not less than 1 inch thick, not more than 8 inches wide, applied solid with each board drawn up tight and double-nailed at each stud or bearing point. Jointing shall occur over the center of, and parallel to, the stude.

9.213 Wood sheathing used in connection with stucco finish shall be applied horizontally and the frame shall be braced as described in 9.211 above.

9.214 Where shingles are applied over other than wood sheathing boards, 112 Inch nailing strips nailed to the stude over the building paper, spaced according to the shingle or posure, shall be used. Wood sheathing boards shall be installed and laid closed under shingle sliding where the shingle but thickness is less than ¾ inch. See 9.211 above.

BUILT INICEMENTS IN FEW THEM, THEM, THE ALL HOLVE.

3.415. All exterior finish shall be backed up with water-resisting building paper or saturated asphalt felt and shall be spiled over all (types of sheathing without exception. Each lay shall be not less than 4 inches with at least a 4 inch tap on the waterproof material around all opening.

9.216 All exterior openings in frame walls shall have strips of waterproof paper or saturated asphalt felt installed behind the exterior trim.

the exterior trin.

2.17 Studs in exterior frame walls may run from all it to roof line, except where the length of stud exceeds 20 feet, in while case a 4xl inch plate shall be provided at the second floor level or at the attic floor level. Studs shall be in continuous lengths without splicing. Floor joists supported on exterior frame walls shall bear on 1x inch plates properly exterior frame walls shall bear on 1x inch ledger boards the continuous floor fl

Section 9.3 INTERIOR PARTITIONS

9.301 All partition studs shall be 2x4's spaced 16 inches c, set the 4-inch way.

9.302 Nonbearing partitions may be set the 2 inch way around closets and chimneys, and in other locations where they contain no openings.

9.303 All openings in interior bearing partitions shall have jambs and head double-framed same as required for exterior openings. Jambs and heads of openings in non-bearing partitions shall be 2x4's doubled.

9.304 The top plates of all bearing partitions shall be doubled.

9.305 Were non-bearing partitions run parallel to the second floor joists, a lathing member shall be placed above the partition plate and shall be wide enough to provide nailing surface for ceiling lath. All partition plates shall lap at all intersecting partitions and at outside walls, and shall be double spiked.

8.306 Wood bearing partitions in cellars or basements not be acceptable except partitions supporting basen stairs and landings, provided such partitions are supporte a 3-inch cement curb. A sheet or non-corrodible metal separate the wood construction from the cement base.

9.307 All interior partitions connecting to masonry vishall have the end stud anchored to the masonry with not than three 1/2-inch bolts in each story height.

9.308 No stud shall be cut more than half its depth to re-ceive plumbing pipes or ducts. If more depth is required, the partition study shall be increased accordingly.

9,369 Where the running of duct risers and returns necessitates the cutting of plates, joists, and studs, proper provision shall be made for typic together and supporting all structural members affected by such cutting.

9.310 Corners for all rooms shall be framed solid for lath or other interior finish.

Section 10.1 MISCELLANEOUS

Section 10.1 MISCELLANEOUS

10.101 Install adequate column supports for first floor construction at turn of basement stalr, centered on a concrete footing of proper size.

10.102 Main stalrways shall have not less than 7 feet clear headroom measures reriteally on the face of riser. Main stalrways shall have not less than 7 feet clear headroom measures reriteally on the face of riser.

10.103 In connection with stalr construction, the cutting and training or all structural members such as stringers and landings, shall be such that the development of their ull strength will not be impaired. Stringers shall have solid bearing at top and bottom.

10.114 Maite caulking ill be required around all exterior openings in macrowood and masonry where vails and at other openings in macrowood and masonry where vails and at other sarry to make weathertight.

10.105 Fire stops shall be provided in partitions and out-side stud walls at first floor and at attic, which shall be cut off completely all openings between cellar and upper storkes. Approved masonry or wood blocks cut in solidly, or other approved methods will be acceptable.

10.107 Main entrance doors shall be not less than 3 feet work the tubbs for a helpit of at least 5 feet from the battor of the study of the stall the state of the study of the stall provided the study of the stall provided the study of the stall provided to the study of the stall provided to the study of the study of the stall provided to the study of the study of the stall provided to the study of th

Section 11.1 ROOF COVERINGS

Tile, slate, and asbestos cement roofs shall be in-coording to the manufacturer's directions or recom-

balled according to the management of the sendations.

11.102 Before applying the roof covering, roof sheathing that be covered with saturated asphalt roofing felt of the

1.102 Before apprying the coverage of the cove

11.103 Asphalt shingles shall bear Fire Underwriters Class "C" label, and shall be of the following minimum weight:

weignt:

Square butt strip shingles: 210 pounds per square.
Individual shingles: 250 pounds per square.
Hexagon strip shingles: 165 pounds per square.
Hexagon strip shingles: 165 pounds per square.
Note: The minimum pitch for sapital shingle roads
of the minimum pitch process of the shingle shiple roads.
One row of wood shingles shall be installed under the doubled starting row of all asphalt shingle installations.

11.104 When slate is installed, exposure shall not exceed the following:

11.104 When slate is installed, exposure shall not exceed the following:

14 inch slate—not over 5½ inches to the weather.
16 inch slate—not over 6½ inches to the weather.
16 inch slate—not over 7½ inches to the weather.
11 line is late—not over 7½ inches to the weather.
11 line is late—not over 7½ inches to the weather.
11.106 Built-up sispalt and tar and gravel coverings for flat roofs shall be applied according to manufacturer's guarantee for the type of roof used.
11.107 Wood shingle exposure to the weather shingles, manufacturer is guarantee for the type of roof used.
11.108 Wood shingle exposure to the weather shall not exceed the following: