Oriented strand board (OSB). A mat-formed wood structural panel comprised of thin rectangular wood strands arranged in cross—aligned layers with surface layers normally arranged in the long panel direction and bonded with waterproof adhesive; or

is constructed of unreinforced masonry or stone

Cripple walls that are not braced in accordance with the requirements of 04.4 and Table A3—A, or cripple walls not braced with diagonal sheathing ructural panels in accordance with the building code. I plates that are not connected to the foundation what is required by the building code.

STRENGTHENING REQUIREMENTS section A304

A304.4.3 Stud space ventilation. When bracing materials are installed on the interior face of studs forming an enclosed space between the new bracing and the existing exterior finish, each braced stud space must be ventilated. Adequate ventilation and access for future inspection shall be provided by drilling one 2-inch to 3-inch diameter round hole through the sheathing, nearly centered between each stud at the top and bottom of the cripple wall. Such holes should be spaced a minimum of 1 inch clear from the sill or top plates. In stud spaces containing sill bolts, the hole shall be located on the center line of the sill bolt but not closer than 1 inch clear from the nailing edge of the sheathing. When existing blocking occurs within the stud space, additional ventilation holes shall be placed above and below the blocking, or the existing block shall be removed and a new nominal 2-inch by 4-inch block shall be installed with the nominal 4-inch dimension against the face of the plywood. For stud heights less than 18 inches, only one ventilation hole need be provided.

ere an existing continu  $w \stackrel{?}{4}$  inch or  $\frac{23}{32}$  inch word nailed as shown in I nailed of wood stru

## GENERAL REQUIREMENTS

mit Requirements: All work shown on these plans require a building permit.

;—Inspection Requirements: None
pection Requirements: All footing excavations and placement of reinforcing steel and shor bolts in formwork shall be inspected prior to pouring of concrete for lacement footings and stem walls. All cripple wall bracing, blocking, connectors and shors in existing concrete shall be inspected after the work is completed but before screens for the ventilation holes at the sill plate anchors are completely fastened.

A panel manufactured from veneers, wood strands r and wood strands or wafers bonded together with or other suitable bonding systems. Examples of wo

STRUCTURAL WEAKNESSES and A308
For the purpose of this section, structural v

A304.4.2 Distribution and amount of bracing. See Table A3—A and Example 1 and Example 2 for the distribution and amount of bracing required for each wall line. Each braced nail length must be at least two times the height of the cripples stud. Where the minimum amount of bracing prescribed in Table A3—A cannot be installed along any walls, the bracing must be designed in accordance with Section A301.3.

# STRENGTHENING REQUIREMENTS

A304.2.2 Evaluation of existing foundations. Partial perimeter foundations or reinforced masonry foundations shall be evaulated by a registered design professional for the force levels specified in Section A301.3. Test reports or other substantiating data to determine existing foundation material strengths shall be submitted to the Enforcing Agency. Where approved by the Enforcing Agency, these existing foundation systems may be strengthened in accordance with the recommmendations included with the evaluation in lieu of being replaced.

A304.2.5 New hollow—unit masonry foundations. New shall be solidly grouted. The grout shall have minimum pounds per square inch. Mortar shall be Type M or A304.2.4 New Concrete foundations. New concrete foundations shall have compressive strength of 2,500 pounds per square inch at 28 days. designed by a registered design professional and approved Agency, partial perimeter foundations may be used in lieu perimeter foundation. foundations gth of 2,000

A304.2.6 New sill plates. Where new sill plates are used in conjunction with new foundations, they shall be a minimum 2x nominal thickness and shall be preservative treated wood or naturally durable wood permitted by the building code for similar applications, and shall be marked or branded by an approved agency. Fasteners in contact with preservative—treated wood shall be galvanized in accordance with ASTM A 653 with a G185 coating.

11'-10"

11'-10"

A304.3.2 Placement of anchors. Anchors shall be placed within 12 inches, but not less than 9 inches, from the ends of sill plates and shall be placed in the center of the stud space closest to the required spacing. New sill plates may be installed in pieces where necessary because of existing conditions. For lengths of sill plate 12 feet or greater, anchors shall be spaced along the sill plate as specified in Table A3—A. For other lengths of sill plate, anchor placement shall be accordance with Table A3—B.

d as based on the 12 inches.

A304.4.1.1 Sheathing installation requirements. Wood structural panel sheathing shall not be less than  $\frac{12}{32}$  inch thick and shall be installed in accordance with Figure A3-5 or A3-6. All individual pieces of wood structural panels shall be nailed with 8d common nails spaced 4 inches on center at all edges and 12 inches on center at each intermediate support with not less than two nails for each stud. Nails shall be driven so that their heads are flush with the surface of the sheathing and shall penetrate the supporting member a minimum of  $1\frac{1}{2}$  inches. When a nail fractures the surface, it shall be left in place and not counted as part of the required nailing. A new 8d nail shall be located within 2 inches of the discounted nail and be hand-driven flush with the sheathing surface. Where the installation involves horizontal joints, those joints shall occur over nominal 2-inch by 4-inch blocking installed with the nominal 4-inch dimension against the face of the plywood. 8d common t each soll be driven so netrate the

Required Bracing for 1 story building

els shall be centered on studs s. Where such edge distances ig stud, a new stud shall be ccordance with Detail 9.

2—Story Bldg. — Each end & not less than 50% of wall length Longituninal wall =  $40^{\circ}-0^{\circ}\times0.5=20^{\circ}-0^{\circ}$  required brace wall

& not less than 40% of w.  $\times$  0.4 = 12'-0" required 4'-0".

-Story Bldg. — Each end & not less than 80% of wall length Transverse wall =  $30^{\circ}-0^{\circ}\times0.8=24^{\circ}-0^{\circ}$  required brace wall

Example #1

## STRENGTHENING REQUIREMENTS section A304 continued

Any work may be subject to special inspection when requency in accordance with the building code. and nailing of new

ABLE 7 ANCHORAGE AND CRIPPLE BRACING

Summary

9

		AMOUNT OF BRACING FOR	R EACH WALL LINE
stories above cripple walls	connection and maximum spacing a,b	A combination of exterior walls finished with Portland Cement Plaster and roofing using clay Tile or Conc. 2 Tile weighing more than 6 psf (287 N/m)	All other conditions
One story	½" inch (12.7 mm) spaced 6 feet, 0" inch (1829 mm) center—to—center with washer plate	Each end and not less than 50 percent of the wall length	Each end and not less than 40 percent of the wall length
wo Stories	½ inch (12.7 mm) spaced 4 feet, 0" inch (1219 mm) center—to—center with washer plate; or 5% inch (15.9 mm) spaced 6 feet, 0" inch (1829 mm) center—to—center with washer plate.	Each end and not less than 70 percent of the wall length	Each end and not less than 50 percent of the wall length
nree Stories	% inch (15.9 mm) spaced 4 feet, 0" inch (1219 mm) center—to—center	100 percent of the wall length <sup>f</sup>	Each end and not less than 80 percent of the wall length

on be

inels at e

required underfloo

A3-B PLA 12

Stories

