

BOARD OF
BUILDING AND SAFETY
COMMISSIONERS

MARSHA L. BROWN
PRESIDENT

VAN AMBATIELOS
VICE-PRESIDENT

HELENA JUBANY
ELENORE A. WILLIAMS

CITY OF LOS ANGELES
CALIFORNIA



ANTONIO R. VILLARAIGOSA
MAYOR

DEPARTMENT OF
BUILDING AND SAFETY
201 NORTH FIGUEROA STREET
LOS ANGELES, CA 90012

ANDREW A. ADELMAN, P.E.
GENERAL MANAGER

RAYMOND CHAN
EXECUTIVE OFFICER

Intermat, Inc.
2045 Placentia Avenue
Costa Mesa, CA 92627

RESEARCH REPORT : RR 25576
(CSI # 06050)

Attn: Carleton Elliot
(714) 412-8647

Expires: February 1, 2010

GENERAL APPROVAL - Technical Modification - Sureboard Series 200W Structural Panels used on wood framed walls.

DETAILS

A Sureboard Series 200W Structural Panel composes of a 1/8- inch thick medium-density fiberboard (MDF) square-edged panel, laminated with water soluble adhesive to a sheet steel. The sheet steel is No. 22 gauge complying with ASTM A 653 SS Grade 33, with a minimum G40 hot dipped galvanized coating conforming to ASTM 924. The panel sizes vary, with a maximum aspect ratio of 2.25 to 1 (the panel width is 4'-0").

Shear Wall Assembly:

Single sided

The Series 200W sheathing is attached to 2x4 No. 2 DF. wood studs @ 16" o. c., 4x4 No. 1 & better DF. End posts, double 2x4 Standard & better DF. Top plates, 3x4 Standard & better DF. Bottom plate, with 4'x9' Sure-board series 200W sheathing on one side of the shear wall. The series 200W sheathing is fastened to the framing members with 10d ring shank nails. Nail spacing is 4-inches on center at the perimeter and 6-inches on center in the field. Nail spacing on the posts is two rows at 8-inches on center staggered. The allowable shear load of the wall is 709 lbs./ft.

The Series 200W sheathing is attached to 2x4 No. 2 DF. wood studs @ 16" o. c., 4x4 No. 1 & better DF. End posts, double 2x4 Standard & better DF. Top plates, 3x4 Standard & better DF. Bottom plate, with 4'x9' Sure-board series 200W sheathing on one side of the shear wall. The series 200W sheathing is fastened to the framing members with 10d ring shank nails. Nail spacing is 2-inches on center staggered at the perimeter and 6-inches on center in the field. Nail spacing on the posts is two rows at 4-inches on center staggered. The allowable shear load of the wall is 754 lbs./ft.

RR 25576
Page 1 of 3

Intermat, Inc.

Re: Sureboard Series 200W on wood framed walls

The Series 200W sheathing is attached to 2x4 No. 2 DF. wood studs @ 16" o. c., 4x4 No. 1 & better DF. End posts, double 2x4 Standard & better DF. Top plates, 3x4 Standard & better DF. Bottom plate, with 4'x9' Sure-board series 200W sheathing on one side of the shear wall. The series 200W sheathing is fastened to the framing members with 10d smooth shank nails. Nail spacing is 2-inches on center staggered at the perimeter and 6-inches on center in the field. Nail spacing on the posts is two rows at 4-inches on center staggered. The allowable shear load of the wall is 950 lbs./ft.

Double sided

The Series 200W sheathing is attached to 2x4 No. 2 DF. wood studs @ 16" o. c., 4x6 No. 1 & better DF. End posts, double 2x4 Standard & better DF. Top plates, 3x4 Standard & better DF. Bottom plate, with 4'x9' Sure-board series 200W sheathing on one side of the shear wall. Intermat proprietary compression posts are installed on the bottom of the 4x6 posts. The series 200W sheathing is fastened to the framing members with 10d ring shank nails. Nail spacing is 2-inches on center staggered at the perimeter and 6-inches on center in the field. Nail spacing on the posts is two rows at 4-inches on center staggered. The allowable shear load of the wall is 1965 lbs./ft.

The Series 200W sheathing is attached to 2x4 No. 2 DF. wood studs @ 16" o. c., 4x6 No. 1 & better DF. End posts, double 2x4 Standard & better DF. Top plates, 3x4 Standard & better DF. Bottom plate, with 4'x9' Sure-board series 200W sheathing on one side of the shear wall. The series 200W sheathing is fastened to the framing members with 10d smooth shank nails. Nail spacing is 2-inches on center staggered at the perimeter and 6-inches on center in the field. Nail spacing on the posts is two rows at 4-inches on center staggered. The allowable shear load of the wall is 1890 lbs./ft.

The approval is subjected to the following conditions:

1. The engineer of record shall check the uplift force and hold-down anchor bolt capacity based on edge and end distances detailed on plans.
2. Fabrication of Sureboard series 200W shall be in a shop of a fabricator licensed by the City of Los Angeles Building Department, in accordance with the Manufacturing Standards submitted to the Department.
3. All shear walls require 3x bottom plates.
4. Design of the system shall be considered with $R=4.5$ in the direction considered.
5. The panels shall be identified by the manufacturer's name and product designation.
6. Calculations demonstrating that applied loads comply with this report shall be prepared by an architect, civil or structural engineer registered in the State of California.

Intermat, Inc.

Re: Sureboard Series 200W on wood framed walls

DISCUSSION

The technical modification is to add 10d smooth shank nail type to the single sided nail spacing (2"/6") shear wall and to the double sided shear wall.

The approval is based on cyclic load tests and analyses.

The load value was obtained by taking the lesser of the average ultimate load divided by a 2.5 safety factor or the average load corresponding to Δ_s .

This general approval of an equivalent alternate to the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this approval have been met in the project in which it is to be used.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.

YEUAN CHOU, Chief
Engineering Research Section
201 N. Figueroa St., Room 880
Los Angeles, CA 90012
Phone (213) 202-9812
Fax (213) 202-9942

RB:elcm
RR25576/wp12
R07/25/08

