CITY OF NEW YORK
DEPARTMENT OF BUILDINGS

Pursuant to Administrative Code Section 27-131, the following equipment or materials has been found for use in accordance with the Report of the Material and Acceptance (MEA) Division.

Patricia J. Lancaster, Commissioner

MEA 309-03-M
Report of Material and Equipment Acceptance Division

Manufacturer - United States Gypsum Company, 125 S. Franklin St. 60606.
Trade Name - SHEETROCK® Brand Gypsum Liner Panel-Enhanced, UL Type SLX; SHEETROCK® Brand Gypsum Liner Panel, UL Type SLX; SHEETROCK® Brand Abuse-Resistant Gypsum Panels, UL Type AR; SHEETROCK® Brand Gypsum Panels, FIRECODE C Core, UL Type C; SHEETROCK® Brand Gypsum Panels, FIRECODE Core, UL Type SCX; SHEETROCK® Brand Gypsum Panels, HUMITEK Firecode Core, UL Type SCX; SHEETROCK® Brand Gypsum Sheathing, FIRECODE Core, UL Type SHX; SHEETROCK® Brand Gypsum Panels, FIRECODE Core, Water-Resistant, UL Type WRX; SHEETROCK® Brand Gypsum Panel, FIRECODE C Core, Water Resistant, UL Type WRC; FIBEROCK® Brand Sheathing and FIBEROCK® Brand Panels- Water-Resistant, UL Type FRX-G; IMPERIAL® Brand Plaster Base Abuse Resistant Panel, UL Type IP-AR; IMPERIAL® Brand Plaster Base (Type X), UL Type IP-X1; IMPERIAL® Brand Plaster Base (Type C), UL Type IP-X2; IMPERIAL® Brand Plaster Base Abuse Resistant FIRECODE “C” Core, UL Type IPC-AR; IMPERIAL® Brand Plaster Base, ULTRACODE Core, UL Type IP-X3; SHEETROCK® Brand Gypsum Panel, ULTRACODE Core, UL Type ULTRACODE; SHEETROCK® Brand Gypsum Sheathing, ULTRACODE Core, UL Type ULTRACODE SHC; SHEETROCK® Brand Gypsum Panels Water Resistant, ULTRACODE Core, UL Type WRC.

Product - Fire Rated Gypsum Panels
Prescribed Test – RS 5-2 (ASTM E-119)
Laboratories – Underwrites Laboratory
Test Reports—UL Project 96NK8744 dated March 27, 1996; UL Project 96BK8744 dated April 29, 1996; UL Project 96NK17458 dated June 7, 1996; UL Project 97NK33240 dated November 13, 1997; UL Project 97NK38733 dated November 21, 1997; UL Project 98NK41379 dated November 20, 1998; UL Project 99NK17857 dated May 5, 1999; UL Project 99NK34685 dated September 14, 1999; UL Project 00NK46531 dated November 21, 2000; UL Project 01NK13527 dated March 20, 2001
Description - Non Load bearing USG Shaftwalls 1, 2, 3, and 4, hour fire rated designs. See Underwriters Fire Resistance Directory, Design U415 for construction details specific to each hourly rating. USG SHAFTWALLS are designed to enclose and protect elevator shafts, stairwells, and other vertical shafts.
Design No. U415
Nonbearing Wall Ratings — 1, 2, 3, or 4 Hr

System A — 1 Hr.

System B — 2 Hr.

System C — 2 Hr.

System D — 2 Hr.

System E — 2 Hr.

System F — 2 Hr.

System G — 3 Hr.

System H — 3 Hr.

System I — 4 Hr.

1. Floor, Side and Ceiling Runners — "F"-shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG (min 20 MSG when item 4A or 7 are used) galv steel. Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 21 in. OC. "E"-shaped studs (item 2A) may be used as side runners in place of "F"-shaped runners.

2. Steel Studs — "C-11"-shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when item 4A or 7 are used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC.

2A. Steel Studs — (Not Shown) — "E"-shaped studs installed back to back in place of "C-11"-shaped studs (item 2) "F"-shaped studs secured together with steel screws spaced a maximum 12 in. OC. Fabricated from min 25 MSG (min 20 MSG when item 4A or 7 are used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling heights.

2B. Furring Channels — (Optional, not shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C-11" or "E" stud on side of stud opposite the 1 in. liner
panels with 1/2 in. long Type S or S-12 punched steel screws. When furring channels are used, wallboard to be installed vertically only. Not to be used with Type FRX or FRGC gypsum wallboard (Item 1A1 or 1A2).

2C. Furring Channels — For use with System I - Flat - shaped, 25 MSG galv steel furring channels attached directly over the inner layers of wallboard to each studs with 2 in. long Type S pan head steel screws. Screws alternate from hip flange to bottom flange at each stud intersection. Furring channels spaced vertically max 24 in. OC.

3. Gyproc Board — For use with System I - Gypsum liners cont. on p. 1. thick. 23 in. or 600 mm (for metric spacing) wide. Panels cut in 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" portion of "C-H" studs or the gap between the two 3 1/2 in. legs of the "H" studs. Free edge of panel attached to ground floor level or to ledger "L" runners with 1-5/8 in. long Type S steel screws spaced no greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be bent to extend to the full height of the wall. Horizontal joints need not be backed by steel framing. In System I, butt joints in liner panels are staggered min. 36 in. Butt joints backed with a 1 in. by 22 in. strips of 3/4 in. thick gypsum wallboard (Item 4). Wallboard strips centered over butt joints and secured to liner panels with six 1 1/2 in. long Type G steel screws, three screws along the 22 in. dimension at the top and bottom of the strips.

CANADIAN GYPSUM COMPANY — Type SLX
UNITED STATES GYPSUM CO — Type SLX
USG MEXICO S A DE C V — Type SLX

4. Gyproc Board —

System A - 1 Hr
Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. when installed vertically or 8 in OC when installed horizontally. Horizontal joints need not be backed by steel framing.

CANADIAN GYPSUM COMPANY — Types AR, C, IP-AR, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR
UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR
USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR

System B - 2 Hr
Gypsum panels, with beveled, square or tapered edges, nom 1 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in OC when installed horizontally. Outer or face layer attached to studs with 1 in. long Type S steel screws spaced 12 in. OC when installed vertically and staggered 12 in. 1/2 in. SCX, SHX, WRC, WRR

CANADIAN GYPSUM COMPANY — Types AR, C, IP-AR, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR
UNITED STATES GYPSUM CO — Types AR, C, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR
USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR

System C - 2 Hr
Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, secured with 1-1/4 in. long Type S steel screws spaced 8 in. OC along vertical edges and 12 in. OC in the field when installed vertically or 8 in OC along the vertical edges and in the field when installed horizontally. Horizontal joints need not be backed by steel framing. Screws along side joints offset 4 in. Requires min 4 in. deep framing per item 1, 2 and 3. Requires min 3 in. thick mineral wood batts per item 4.

CANADIAN GYPSUM COMPANY — Types IP-X3, ULTRACODE, ULTRACODE SHC, ULTRACODE WRC
UNITED STATES GYPSUM CO — Types IP-X3, ULTRACODE, ULTRACODE SHC or ULTRACODE WRC
USG MEXICO S A DE C V — Types IP-X3, ULTRACODE, ULTRACODE SHC or ULTRACODE WRC

System D - 2 Hr
Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached directly to studs with 1 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in OC when installed horizontally. Horizontal joints need not be backed by steel framing. Requires face layer of 1/2 in. or 5/8 in. thick, continuous backer units per item 7 and 8 in OC when installed horizontally. Not to be used with Type FRX or FRGC gypsum wallboard (Item 1A1 or 1A2).

CANADIAN GYPSUM COMPANY — Types AR, C, IP-AR, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR
UNITED STATES GYPSUM CO — Types AR, C, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR
USG MEXICO S A DE C V — Types AR, C, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR

System E - 2 Hr
Gypsum panels, with beveled, square or tapered edges, nom 1 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. OC when installed vertically or 8 in OC when installed horizontally. Horizontal joints need not be backed by steel framing.

CANADIAN GYPSUM COMPANY — Types C, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR
UNITED STATES GYPSUM CO — Types C, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR
USG MEXICO S A DE C V — Types C, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR

System F - 2 Hr
Gypsum panels, with beveled, square or tapered edges, nom 1 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically and staggered 12 in. OC when installed horizontally. Horizontal joints need not be backed by steel framing.

CANADIAN GYPSUM COMPANY — Types C, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR
UNITED STATES GYPSUM CO — Types C, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR
USG MEXICO S A DE C V — Types C, IP-X1, IP-X2, IP-AR, SCX, SHX, WRC, WRR

System G - 3 Hr
Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in three layers. Inner or lower layer attached to studs with 1 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in OC when installed horizontally. Middle layer attached to studs with 1-5/8 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in OC when installed horizontally. Outer or top layer attached to studs with 1-1/2 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in OC when installed horizontally. Screws offset 6 in. front layer below. Horizontal joints on adjacent layers staggered 1/2 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CANADIAN GYPSUM COMPANY — Types C, IP-X2, IP-AR, WRC
UNITED STATES GYPSUM CO — Types C, IP-X2, IP-AR, WRC
USG MEXICO S A DE C V — Types C, IP-X2, IP-AR, WRC

System H - 3 Hr
Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, two layers over the flange of the "C" section of the stud. The outer layer over the flange of the "C" section of the stud. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in OC when installed horizontally. Face layer attached to studs with 1-1/2 in. long Type S steel screws spaced 16 in. OC when installed vertically or 12 in OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered 1/2 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CANADIAN GYPSUM COMPANY — Types C, IP-X2, IP-AR, WRC
UNITED STATES GYPSUM CO — Types C, IP-X2, IP-AR, WRC
USG MEXICO S A DE C V — Types C, IP-X2, IP-AR, WRC

System I - 4 Hr
Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 4 ft wide (or 1200 mm for metric spacing) wallboard with square or tapered edges. Total of four layers to be used. First and second
(inner) layers applied vertically or horizontally over the steel studs. Horizontal joints need not be backed by steel framing. When applied vertically, joints centered over studs and staggered min 24 in., otherwise all joints staggered min 12 in. First layer secured to studs with 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 24 in. OC. Second layer secured to studs with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Third layer applied vertically over the furring channels (Item 2C) with a 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Fourth layer applied vertically or horizontally with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. When applied vertically, joints to be staggered min 24 in. from third layer, otherwise all joints staggered min 12 in.

CANADIAN GYPSUM COMPANY — Type IP-X3, ULTRACODE, ULTRACODE SR or ULTRACODE WR
UNITED STATES GYPSUM CO — Type IP-X3, ULTRACODE, ULTRACODE SR or ULTRACODE WR
USG MEXICO S.A DE C.V. — Type IP-X3, ULTRACODE, ULTRACODE SR or ULTRACODE WR

4A. Gypsum Board* — (As an alternate to Item 4, System A, B, D, E) — 5/8 in. thick gypsum panels, with tapered edges, installed as described in Item 4 with Type S-12 steel screws. The length and spacing of the screws as specified under Item 4.

CANADIAN GYPSUM COMPANY — Type FRX
UNITED STATES GYPSUM CO — Type FRX

5. Joint Tape and Compound — (Not Shown)

Systems A, B, C, E, F, G, H, I

Joints on outer layers of gypsum boards (Item 4 and 4A) covered with paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound.

6. Batts and Blankets* —

Systems A, B, E, F, G, H, I

(Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL Classification Mark as to Fire Resistance.

Systems C & D

Min 3 in. (System C) and min 1-1/2 in. (System D) thick mineral wool batts, friction fitted between the studs and floor and ceiling runners.

— THERMAFIBER L L C — Type SAFIB

7. Cementitious Backer Units* — (System D) — Nom 1/2 or 5/8 in. thick panels, square edge, attached to studs over gypsum wallboard with 1-5/8 in. long, Type S-12, corrosion resistant steel screws spaced 12 in. OC and staggered 8 in. from gypsum wallboard joints. Joints covered with glass fiber mesh tape. Vertical joints staggered one stud cavity from gypsum wallboard joints. Horizontal joints staggered a min of 12 in. from the gypsum wallboard joints.

UNITED STATES GYPSUM CO — DUROCK Exterior Cement Board or DUROCK Brand Cement Board.

8. Laminating Adhesive* — (Optional, Not Shown) — Used to bond outer layer of Cementitious Backer Units (Item 7) to inner layers of Gypsum Board (Item 4) in System D. ANSI A136.1 Type 1 organic adhesive applied with 1/4 in. square notched trowel. See Adhesives (FYWR) in the Fire Resistance Directory or Adhesives (BIII.Z) in the Building Materials Directory for names of Classified companies.

*Hearing the UL Classification Mark
Recommendation: That the above described non-load bearing USG SHAFTWALL designs U415 be accepted as having the fire resistance ratings as indicated when used where combustible or noncombustible construction as required in accordance with the Building Code. This acceptance does not include structural adequacy of wall design, which must be checked for particular structure for compliance with Building Code. All shipments and deliveries of such material shall be provided with a certificate or label certifying that the material shipped or delivered are equivalent to that tested and acceptable for use, as provided for in Section 27-131 of the Building Code.

Final Acceptance DEC/30/03

Examined by S. [Signature]