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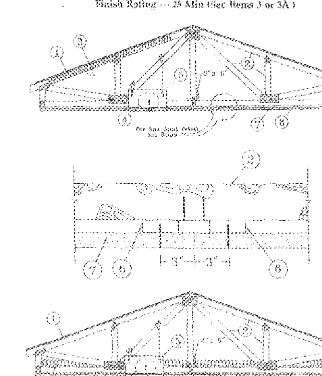
Design No. P522
Unrestrained Assembly Rating — 1 Hr
Finish Rating — 25 Min (See Items 3 or 3A)



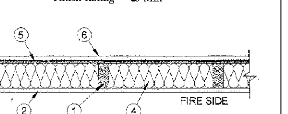
Alternate Insulation Placement

1. Roofing System* — Any UL Class A, B or C Roofing System (TGFU) or Prepared Roof Covering (TFWZ) acceptable for use over nom 15/32 in. thick plywood sheathing. Nom 15/32 in. thick plywood sheathing secured to trusses with construction adhesive and No. 6d ringed shank nails. Nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.
2. Trusses — Pitched or parallel chord wood trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Truss members secured together with 0.040 in. thick galv steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/8 in. centers with four rows of teeth per inch of plate width. Where the truss intersects with the interior face of the exterior walls, the min truss depth shall be 5-1/4 in. with a min roof slope of 3/12 and a min area in the plane of the truss of 21 sq/ft. Where the truss intersects with the interior face of the exterior walls, the min truss depth may be reduced to 3 in. if the batts and blankets (Item 3) are used as shown in the above illustration (Alternate Insulation Placement) and are firmly packed against the intersection of the bottom chords and the plywood sheathing.
3. Batts and Blankets* — (Optional) — Glass fiber insulation, secured to the plywood decking with staples spaced 12 in. OC or to the trusses with 0.090 in. diam galv steel wires spaced 12 in. OC. Any glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance, having a min density of 0.5 pcf. As an option, the insulation may be fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane when resilient channels and gypsum wallboard attachment is modified as specified in Items 6 and 7. The finished rating has only been determined when the insulation is secured to the decking.

3A. Loose Fill Material* — As an alternate to Item 3 — Any thickness of loose fill material bearing the UL Classification Marking for Surface Burning Characteristics, having a min density of 0.5 pcf, fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane when resilient channels and gypsum wallboard attachment is modified as specified in Items 6 and 7. The finished rating when loose fill material is used has not been determined.
4. Air Duct* — Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.
5. Ceiling Damper* — Max nom area, 324 sq in. Max square size, 18 in by 18 in. rectangular sizes not to exceed 324 sq in. with a max width of 18 in. Max damper height is 14 in. Installed in accordance with manufacturers installation instructions provided with the damper. Max damper openings not to exceed 162 sq in. per 100 sq ft of ceiling area.
   C&S AIR PRODUCTS — Model RD-521
   POTTORFF CO INC — Model CFD-521
6. Resilient Channels — Formed of 25 MSG galv steel, installed perpendicular to the trusses (Item 2), spaced a max of 16 in. OC when no insulation (Item 3 or 3A) is fitted in the concealed space, or a max of 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane. Two courses of resilient channel positioned 6 in. OC at wallboard butt-joints (3 in. from each end of wallboard). Channels oriented opposite at wallboard butt-joints. Channel splices overlapped 4 in. beneath wood trusses. Channels secured to each truss with 1-1/4 in. long Type S screws.
7. Gypsum Board* — One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to trusses. Attached to the resilient channels using 1 in. long Type S bugle-head screws. Screws spaced a max of 12 in. OC along butted end-joints and in the field when no insulation (Item 3 or 3A) is fitted in the concealed space, or a max of 8 in. OC along butted end-joints and in the field when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane.
   CANADIAN GYPSUM COMPANY — Types C, IP-X2, IPC-AR.
   UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR.
   YESO PANAMERICANO S A DE C V — Types C, IP-X2, IPC-AR.
8. Finishing System — (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum wallboard.
   Alternate Ceiling Membrane — Not Shown. — Not for use when insulation (Item 6 or 6A) is used.
9. Steel Framing Members —
   a. Main runners — Installed perpendicular to Structural Steel Members - Nom 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft OC. Main runners hung a min of 2 in. from bottom chord of Structural Steel Members with 12 SWG galv steel wire. Wires located a max of 48 in. OC.
   b. Cross tees or channels — Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used at 8 in. from each side of butted wallboard end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.
   c. Wall angles or channels — Used to support steel framing member ends and for screw-attachment of the gypsum wallboard - Painted or galv steel angles with 1 in. legs or channels with 1 in. legs and 1-9/16 in. deep, attached to walls at perimeter of ceiling with fasteners 16 in. OC.
   CGC INTERIORS, DIV OF
   CGC INC — Type DGL or RX.
   USG INTERIORS INC — Type DGL or RX.
10. Gypsum Board* — For use with Steel Framing Members (Item 9) - One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to the main runners. Wallboard fastened to each cross tee or channel with five wallboard screws, with one screw located at the midspan of the cross tee or channel, one screw located 12 in. from and on each side of the cross tee or channel mid span and one screw located 1-1/2 in. from each wallboard side joint. Except at wallboard end joints, wallboard screws shall be located on alternating sides of cross tee flange. At wallboard end joints, wallboard screws shall be located 1/2 in. from the joint. Wallboard fastened to main runners with wallboard screws 1/2 in. from side joints, midway between intersections with cross tees or channels (16 in. OC). End joints of adjacent wallboard sheets shall be staggered not less than 32 in. Wallboard sheets screw attached to leg of wall angle with wallboard screws spaced 12 in. OC. Joints treated as described in Item 7.
   CANADIAN GYPSUM COMPANY — Type C or IP-X2.
   UNITED STATES GYPSUM CO — Type C or IP-X2.
   YESO PANAMERICANO S A DE C V — Type C or IP-X2.

5 DETAIL: UL# P522
SCALE: N.T.S.

Design No. U356
(Exposed to Fire on Interior Face Only)
Bearing Wall Rating — 1 Hr
Finish Rating — 23 Min



1. Wood Studs — Nom 2 by 4 in. spaced 16 in. OC with two 2 by 4 in. top and one 2 by 4 in. bottom plates. Studs laterally-braced by wood structural panel sheathing (Item 5) and effectively fire stopped at top and bottom of wall.
2. Gypsum Board* — Any Classified 5/8 in. thick, 4 ft wide, applied vertically and nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails, 1-7/8 in. long with 1/4 in. diam head. See Gypsum Board (CKNX) Category for names of Classified Companies.
3. Joints and Nailheads — (Not Shown) — Wallboard joints covered with tape and joint compound. Nail heads covered with joint compound.
4. Batts and Blankets* — Mineral fiber or glass fiber insulation, 3-1/2 in. thick, pressure fit to fill wall cavities between studs and plates. Mineral fiber insulation to be unfaced and to have a min density of 3 pcf. Glass fiber insulation to be faced with aluminum foil or kraft paper and to have a min density of 0.9 pcf (min R-13 thermal insulation rating). See Batts and Blankets (BKNV) Category in the Building Materials Directory and Batts and Blankets (BZJZ) Category in the Fire Resistance Directory for names of Classified Companies.
5. Wood Structural Panel Sheathing — Min 7/16 in. thick, 4 ft wide wood structural panels, min grade "C-D" or "Sheathing". Installed with long dimension of sheet (strength axis) or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 6d cement coated box nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs.
6. Exterior Facings — Installed in accordance with the manufacturer's installation instructions. One of the following exterior facings is to be applied over the sheathing.
   A. Vinyl Siding — Molded Plastic* — Contoured rigid vinyl siding having a flame spread value of 20 or less. See Molded Plastic (BIAT) category in the Building Materials Directory for names of manufacturers.
   B. Particle Board Siding — Hardboard exterior sidings including patterned panel or lap siding.
   C. Wood Structural Panel or Lap Siding — APA Rated Siding, Exterior, plywood, OSB or composite panels with veneer faces and structural wood core, per PS 1 or APA Standard PRP-108, including textured, rough sawn, medium density overlay, brushed, grooved and lap siding.
   D. Cementitious Stucco — Portland cement or synthetic stucco systems with self-furring metal lath or adhesive base coat. Thickness from 3/8 to 3/4 in., depending on system.
   E. Brick Veneer — Any type on nom 4 in. wide brick veneer. When brick veneer is used, the rating is applicable with exposure on either face. Brick veneer fastened with corrugated metal wall ties attached over sheathing to wood studs with 8d nail per tie: ties spaced not more than each sixth course of brick and max 32 in. OC horizontally. One in. air space provided between brick veneer and sheathing.
   F. Exterior Insulation and Finish System (EIFS) — Nom 1 in. Foamed Plastic* insulation bearing the UL Classification Marking, attached over sheathing and finished with coating system, or Portland cement or synthetic stucco systems, in accordance with manufacturer's instructions. See Foamed Plastic (BRYX and CCVW) categories for names of Classified companies.
   G. Siding — Aluminum or steel siding attached over sheathing to studs.

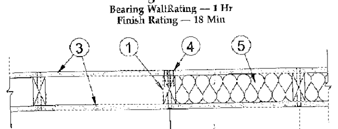
*Bearing the UL Classification Mark

2 DETAIL: UL# U356
SCALE: N.T.S.

FIRE RESISTANCE DIRECTORY (BXRH)

Fire Resistance Ratings - ANSI/UL 263 (BXUV)—*Continued*

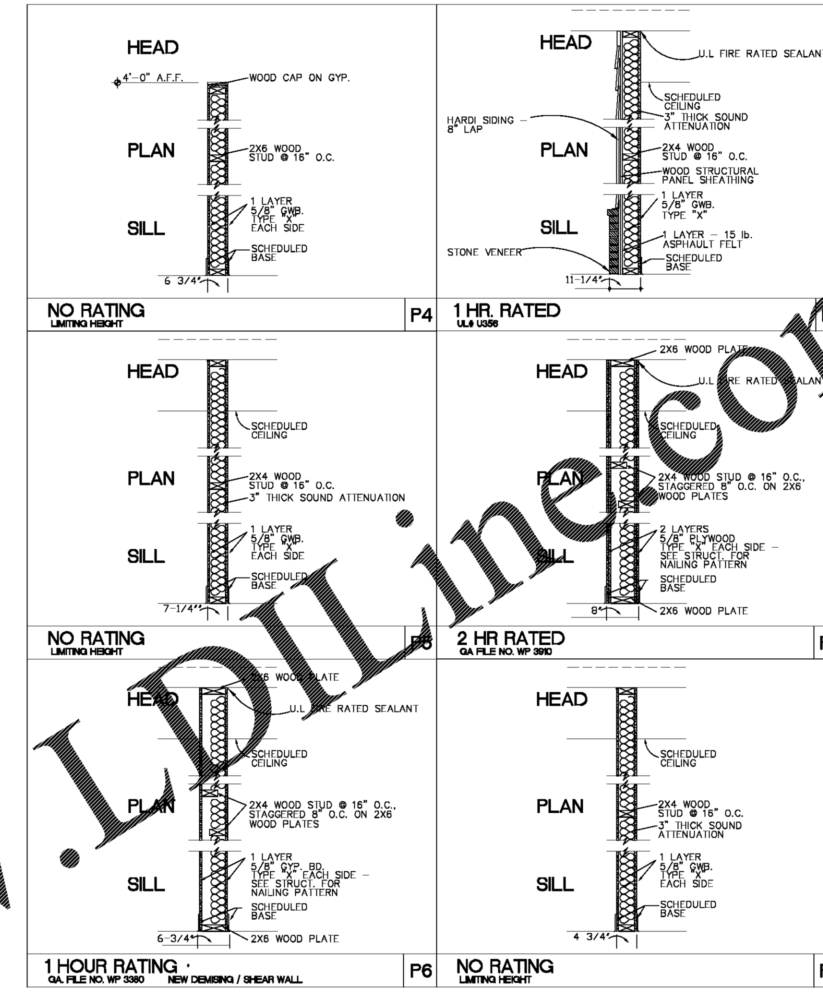
Design No. U365
Bearing WallRating — 1 Hr
Finish Rating — 18 Min



1. Wood Studs — Nom 2 by 4 in., spaced 16 in. OC.
2. Bearing Plate — (Not Shown) - Nom 2 by 4 in.
3. Gypsum Board* — 5/8 in. thick wallboard paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Wallboard fastened with Wall and Partition Facings and Accessories* (Item 4). When used in widths of other than 48 in., wallboard is to be installed horizontally.
   AMERICAN GYPSUM CO — Types AGX-1, AGX-2, AGX-3, AGX-7, AGX-11, AG-C.
   BEIJING NEW BUILDING MATERIALS CO LTD — Type DBX-1.
   CANADIAN GYPSUM COMPANY — Type AR, C, FCV, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRC, WRX, FRX.
   BPB AMERICA INC
   BPB CELOTEX — Type 1, SF3, A, B, C or FRP.
   CONTINENTAL GYPSUM COMPANY — Type CG1-1, CG-2, CG-3, CG3-3, CG-5, CG5-5, CG6-6, CG-3W, CG-5W, CG-3WS, CG-5WS, CG-6, CG6-6, CG-C, CGT6-6, CG9-9, CGT6-6, CGTC-C.
   G-P GYPSUM CORP, SUB OF
   GEORGIA-PACIFIC CORP — Type 5, 6, 9, C, DGG, GPFS1, GPFS2, GPFS6.
   JAMES HARDIE GYPSUM INC — Type Fire X, Max"C".
   LAFARGE GYPSUM, DIV OF
   LAFARGE CORP — Type LGFC2, LGFC3, LGFC6, LGFC-C, LGFC6A, LGFC2A, LGFC-C/A.
   NATIONAL GYPSUM CO — Type FSK, FSK-C, FSK-G, FSW, FSW-2, FSW-3, FSW-C, FSW-G.
   NATIONAL GYPSUM CO — Type FR or WR.
   PABCO GYPSUM, DIV OF
   PACIFIC COAST BUILDING PRODUCTS INC — Types C, PG-2, PG-3, PG-3W, PG-5W, PG-4, PG-6, PG-3WS, PG-5WS, PG-5, PG-9 or PG-C.
   REPUBLIC GYPSUM CO — Type RG-1, RG-2, RG-3, RG-4, RG-6 or RG-C.
   SIAM GYPSUM INDUSTRY CO LTD — Type EX-1
   STANDARD GYPSUM L L C — Type SGC, SGC-3, SG-C or SGC-G.
   TEMPLE-INLAND FOREST PRODUCTS CORP — Types T, VPB-Type T, WR-T, T SHTG, FRX 6, VPBX-6, FRWRX-6, TG-C or FRX-6 Exterior Gypsum Soffit Board.
   UNITED STATES GYPSUM CO — Types AR, C, FCV, FRX, IP-X1, IP-X2, IPC-AR, SCX, WRX, WRC, SHX.
   WESTROC INC — Type Westroc Fireboard.
   YESO PANAMERICANO S A DE C V — Type AR, C, FCV, IP-X1, IP-X2, IPC-AR, WRX, WRC, SHX, SCX.
4. Wall and Partition Facings and Accessories*-Staples — 2 in. long 16 gauge staples max 3 in. OC along vertical joints and 6 in. OC in the field.
   PASLODE
   ILLINOIS TOOL WORKS CO
5. Batts and Blankets* — (Optional, Not Shown) glass fiber or mineral wool insulation.
   CERTAINTEED CORP
   JOHNS MANVILLE INTERNATIONAL INC
   KNAUF FIBER GLASS GMBH
   ROCK WOOL MANUFACTURING CO — Delta Board
   ROXUL INC
   THERMAFIBER L L C — Type SAFB
6. Finishing System — Wallboard joints covered with paper tape and joint compound. Staples covered with joint compound.

*Bearing the UL Classification Mark

1 DETAIL: UL# U365
SCALE: N.T.S.

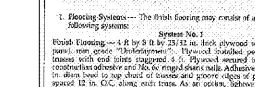


WALL TYPES - DESCRIPTION

P1		NEW PARTITION 5/8" ON INTERIOR SIDE OF 2X4 WOOD STUD AND 1 LAYER 15 lb. ASPHAULT FELT AND 7/16" MIN. WOOD STRUCTURAL PANEL SHEATHING ON EXTERIOR SIDE TO STRUCTURE ABOVE. EXTERIOR FINISH IS HARDI SIDING/STONE VENEER. 3" THICK SOUND ATTENUATION INSTALLED.
P2		NEW 2 HR FIRE RATED PARTITION 2 LAYERS 5/8" GYP EA. SIDE ON 2x4 WOOD STUD AT 16" O.C., STAGGERED @ 8" O.C. ON 2x6 WOOD PLATES, TO STRUCTURE ABOVE.
P3		NEW PARTITION 5/8" GYP EA. SIDE OF 2X6 WOOD STUD AT 16" O.C. TO STRUCTURE ABOVE. 3" THICK SOUND ATTENUATION INSTALLED.
P4		NEW PARTITION 5/8" GYP EA. SIDE OF 2X6 WOOD STUD AT 16" O.C. TO 48" A.F.F. TOP WITH WOOD CAP. SEE 5/A6.1.
P5		NEW PARTITION 5/8" GYP EA. SIDE OF 2X6 WOOD STUD AT 16" O.C. TO STRUCTURE ABOVE. 3" THICK SOUND ATTENUATION INSTALLED.
P6		NEW 1 HR FIRE RATED PARTITION 1 LAYER 5/8" GYP EA. SIDE ON 2x4 WOOD STUD AT 16" O.C., STAGGERED @ 8" O.C. ON 2x6 WOOD PLATES, TO STRUCTURE ABOVE.

7 DETAIL: GYP. ASSOC. WP 3242
SCALE: N.T.S.

Fire Resistance Ratings - ANSI/UL 263 (BXUV)—*Continued*



1. Flooring Systems — The finish flooring may consist of any one of the following systems:

System No. 1
Finish Flooring — 4 ft by 8 ft by 23/32 in. thick plywood wood structural panel, min grade "Underlayment". Plywood installed perpendicular to trusses with end joints staggered 4 ft. Plywood secured to trusses with construction adhesive and No. 6d ringed shank nails. Adhesive applied in 3/8 in. diam bead to top chord of trusses and groove edges of plywood. Nails spaced 12 in. O.C. along each truss. As an option, lightweight insulating concrete with Perlite or Vermiculite Aggregate* or gypsum concrete may be placed on the flooring. The min thickness of insulating concrete shall be 3/4 in. The max thickness shall be determined by job site conditions. A thin plastic or paper vapor retarder may be placed on plywood prior to pouring the concrete. See Perlite Aggregate (IFSX) and Vermiculite Aggregate (CJZZ).

System No. 2
Finish — Flooring — Floor Topping Mixture* — 5.8 gal. of water to 80 lb bag of floor topping mixture to 1.9 cu ft. of sand. Thickness to be 3/4 in. minimum.
HACKER INDUSTRIES INC — Firm-Fill, Firm-Fill High Strength and Gyp-Span Radiant.
Subflooring — 23/32 in. thick plywood wood structural panels, min grade "Underlayment". Face grain of plywood to be perpendicular to joists with joints staggered.

System No. 5
Finish Flooring — Floor Topping Mixture* — [illegible]
[illegible]
Subflooring — 23/32 in. thick plywood wood structural panels, min grade "Underlayment". Face grain of plywood to be perpendicular to joists with joints staggered.

[illegible]
UNITED STATES GYPSUM CO — Levelrock 2500, Levelrock RH
Vapor Barrier — (Optional) — Commercial Asphalt saturated felt, 0.030 in. thick.
Subflooring — 23/32 in. thick plywood wood structural panels, min grade "Underlayment". Face grain of plywood to be perpendicular to joists with joints staggered.

System No. 8
Finish Flooring — Floor Topping Mixture* — Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mix at rate of 1.4 cu feet of preformed foam to 94 lbs Type I Portland cement and 300 lbs of sand with 3-1/2 gal of water. Cast density of floor topping mixture 100 plus or minus 5 pcf. Min compressive strength 1000 psi. Thickness 1-1/2 in.
ELASTIZELL CORP OF AMERICA — Type FF.
Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.
Subflooring — 23/32 in. thick plywood wood structural panels, min grade "Underlayment". Face grain of plywood to be perpendicular to joists with joints staggered.

System No. 6
Floor Topping Mixture* — Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through a foam nozzle. Mix at rate of 1.4 cu ft of preformed foam to 94 lbs Type I Portland Cement, 62.5 lb of Pea Gravel and 312.5 lbs of sand, with approximately 5.5 gal of water. Cast density of floor Topping Mixture 100 (+ or -) 5 pcf. Min compressive strength 1000 psi. Thickness 1 in.
LITE-CRETE INC — Type I.
Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.
Subflooring — 23/32 in. thick plywood wood structural panels, min grade "Underlayment". Face grain of plywood to be perpendicular to joists with joints staggered.

Fire Resistance Ratings - ANSI/UL 263 (BXUV)—*Continued*

System No. 7
Finish Flooring — Floor Topping Mixture* — Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through a nozzle. Mix 94 lbs cement, 300 lbs sand, approximately 5.4 gal water, 1.2 cu ft preformed foam, 5 oz Type N fiber and 4 oz Component Z. Cast density of floor topping mixture shall be 105 (+ or -) 5 pcf with a min compressive strength of 1200 psi. Min thickness shall be 3/4 in.
ELASTIZELL CORP OF AMERICA — Type ZC.
Subflooring — 23/32 in. thick plywood wood structural panels, min grade "Underlayment". Face grain of plywood to be perpendicular to joists with joints staggered.

System No. 8
[illegible]

System No. 9
Finish Flooring — Floor Topping Mixture* — 4 to 7 gal of water mixed with 80 lbs of floor topping mixture and 1.4 to 1.9 cu ft of sand. Compressive strength to be 1200 psi min. Min thickness to be 3/4 in.
RAPID FLOOR SYSTEMS — Types RF, RFP or RFU.
Floor Mat Materials* — (Optional) Floor mat material nom 1/4 in. thick adhered to subfloor with Maxxon Floor Primer. Primer to be applied to the surface of the mat prior to lath placement.
MAXXON CORP — Type Acousti-Mat.
Metal Lath — For use with floor mat material, 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Floor topping thickness a min 1 in. over the floor mat.
Alternate Floor Mat Materials* — (Optional) — Floor mat material nom 1/4 in. thick loose laid over the subfloor. Maxxon Floor Primer to be applied to the surface of the mat prior to the floor topping placement. Floor topping thickness a min 1 in. over the floor mat.
MAXXON CORP — Type Acousti-Mat II.
Vapor retarder — (Optional) Commercial asphalt saturated felt 0.030 in. thick.
Subflooring — 23/32 in. thick plywood wood structural panels, min grade "Underlayment". Face grain of plywood to be perpendicular to joists with joints staggered.

System No. 10
Finish Floor — Mineral and Fiber board*, sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft, by min 1/2 in. thick. All joints to be staggered a min of 12 in. OC with adjacent sub-floor joints.
HOMASOTE CO — Type 440-32 Mineral and Fiber Board
Subflooring — 23/32 in. thick plywood wood structural panels, min grade "Underlayment". Face grain of plywood to be perpendicular to joists with joints staggered.

System No. 11
Finish Flooring — Floor Topping Mixture* — 8 gal max of water to 100 lbs min of floor topping mixture to 275 lbs max of sand. Compressive strength to be 2100 psi minimum. Thickness to be 1/2 in. minimum.
UNITED STATES GYPSUM CO — Levelrock 3500
Vapor Barrier — (Optional) — Commercial asphalt saturated felt 0.030 in. thick.
Sub-flooring — 23/32 in. thick wood structural panels min grade

Fire Resistance Ratings - ANSI/UL 263 (BXUV)—*Continued*

"Underlayment". Face grain of plywood to be perpendicular to joists with joints staggered.

System No. 12
Finish Flooring — Floor Topping Mixture — 8 gal max of water to 100 lbs min of floor topping mixture to 275 lbs max of sand. Compressive strength to be 3000 psi minimum. Thickness to be 1/2 in. minimum.
UNITED STATES GYPSUM CO — Levelrock 4500
Vapor Barrier — (Optional) — Commercial asphalt saturated felt 0.030 in. thick.
Sub-flooring — 23/32 in. thick wood structural panels min grade "Underlayment". Face grain of plywood to be perpendicular to joists with joints staggered.

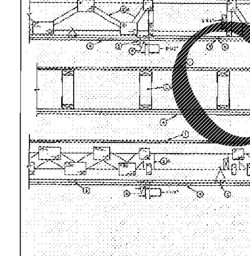
System No. 13
Finish Flooring — Floor Topping Mixture* — 2.5 gal max of water to 100 lbs min of floor topping mixture to 100 lbs max of washed silica sand. Compressive strength to be 3000 psi minimum. Thickness to be 3/4 in. minimum.
UNITED STATES GYPSUM CO — Levelrock SLC
Vapor Barrier — (Optional) — Commercial asphalt saturated felt 0.030 in. thick.
Sub-flooring — 23/32 in. thick wood structural panels min grade "Underlayment". Face grain of plywood to be perpendicular to joists with joints staggered.

2. Trusses — Parallel chord trusses spaced a max 24 in. OC fabricated from nom 2 by 4 in. lumber with lumber orientated either vertically (2A) or horizontally (2B). Truss members secured together with No. 20 MSG galv steel truss plates. Plates include 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other made from the same punch creating a split tooth type plate. Each tooth has a chisel point on its outside edge, with these points being diagonally opposite from each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approx 7/8 in. centers with four rows of teeth per in. of plate width.
3. Furring Channels — Formed of No. 25 MSG galv steel spaced 24 in. OC perpendicular to trusses. Channels secured to trusses with double strand of No. 18 SWG galv steel wire spaced 48 in. OC. Channels spliced with adjacent pieces overlapped 6 in. and tied with double strand of No. 18 SWG galv steel wire at each end of overlap.

3A. Resilient Channels — (Not shown) — As an alternate to Item — Formed from No. 26 MSG galv steel, spaced 16 in. OC perpendicular to trusses. Channels secured to trusses with Type S, 1-1/4 in. long steel screws spaced 24 in. OC. Channels overlapped at splice 4 in.
4. Gypsum Board* — 5/8 in. thick, 4 ft wide. Sheets of wallboard installed with long dimension perpendicular to furring or resilient channels with 1 in. long wallboard screws spaced 12 in. OC and located a min 1-1/2 in. from side and end joints. At end joints, two furring or resilient channels are used which extend a min of 6 in. beyond end of joint.
   BPB AMERICA INC
   BPB CELOTEX — Type FRP.
5. Screw, Wallboard — 1 in. long, Type S, 9/64 in. diam, self-drilling and self-tapping, Bugle head.
6. Finishing System — (Not shown) — Paper tape embedded in cementitious compound over joints with edges of compound feathered out and exposed screw heads covered with compound. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum wallboard.

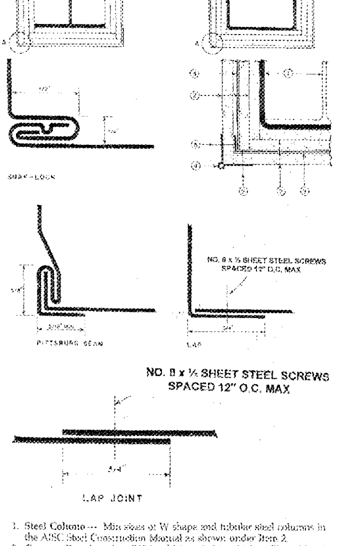
*Bearing the UL Classification Mark

Design No. L534
Unrestrained Assembly Rating — 1 Hr.
Finish Rating — 22 Min.



6 DETAIL: UL# L534
SCALE: N.T.S.

Design No. X526
Ratings — 1, 2, 3 and 4 Hr.



1. Steel Column — Min sizes of W shape and tubular steel columns in the AISC Steel Construction Manual as shown under Item 2.
2. Gypsum Board — Any 5/8 in. thick or 1/2 in. thick wallboard bearing the Underwriters Laboratories Inc. Fire Resistance Classification Marking. Min total thicknesses of layers in inches for the various ratings and min column sizes are as follows:

W Shape Columns

Dsg	Outside Dimensions In.	Min Column Size Flange Thkns In.	Web Thkns In.	in.² Area	Rating Hr Total Thkns of Layers of Wallboard In. 1	2	3	4
W8x15	4-1/8x8	0.315	0.245	4.44	1	1-1/2	2-1/4	--
W8x15.5	6x6	0.269	0.235	4.56	1	1-1/2	2-1/4	3-1/8
W10x49	10x10	0.560	0.340	14.4	1/2	1-1/2	1-7/8	2-1/2

Tubular Shape Columns

Dsg	Min Column Size Outside Dimensions In.	Thkns In.	In.² Area	Rating Hr Total Thkns of Layers of Wallboard In. 1	2	3	4
TS4X4X0.188	4X4	0.188	2.74	1	1-5/8	2-1/2	--
TS8X8X0.250	8X8	0.250	7.48	5/8	--	--	--

Applied in layers as shown in above illustration. Each layer held together with paper masking adhesive tape during erection to allow placement of succeeding layers.
For column ratings of 2 hr or less, one layer of wallboard may be applied to the outer surface of steel cover. Boards applied vertically, without horizontal joints, attached to cover with screws located 1 in. from the board edge and 8 in. OC. See Gypsum Board (CKNX) category for names of manufacturers.

2A. Gypsum Board* — As an alternate to Item 2, 3/4 in. thick applied as described in Item 2.
   CANADIAN GYPSUM COMPANY — Type IP-X3, ULTRACODE, ULTRACODE SHX OR ULTRACODE WRX
   UNITED STATES GYPSUM CO — Type IP-X3, ULTRACODE, ULTRACODE SHX OR ULTRACODE WRX.
   YESO PANAMERICANO S A DE C V — Type IP-X3, ULTRACODE, ULTRACODE SHX OR ULTRACODE WRX.
3. Steel Covers — For seamed joints — 0.024 in. min thickness (No. 24 MSG) uncoated, galv or stainless steel, for column ratings of 3 hr or less. For 4 hr ratings, only stainless steel covers to be used. Covers consist of two L-shaped sections with Snap-Lock or Pittsburgh sheet steel joints. Width to be determined on the basis of protection thickness and column size. Length of sections to provide 1/8 in. clearance per lineal foot of column length between cover and any restraint.
   For lapped joints — (Max ratings 2 hr) — No. 22 MSG (0.027 in. thick) uncoated or galv steel. Fasteners used at laps to be No. 8 by 1/2 in. steel sheet metal screws spaced a max of 12 in. O.C. Other details to be the same as those stated for seamed joints as shown above.
4. Corner Bead — For columns with outer layer of wallboard attached to outside surface of metal cover, No. 28 MSG galv steel, 1-1/4 in. legs corner beads attached to wallboard with screws spaced 12 in. O.C.
5. Screws — For columns with outer layer of wallboard attached to outside surface of metal cover, self-drilling Phillips bugle head, 1 in. long screws for 1/2 or 5/8 in. thick wallboard (1-1/4 in. long screws for 3/4 in. thick wallboard) are used to attach wallboard to steel cover and corner bead to wallboard.
6. Sodium Silicate Solution — (Not shown, optional) — Used to adhere one layer of wallboard to inside of steel cover prior to assembly.
7. Finishing System — (Not shown) — Joint compound applied over corner beads to a thickness of 1/16in.

*Bearing the UL Classification Mark

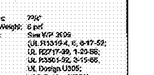
3 DETAIL: UL# X526
SCALE: N.T.S.

GA FILE NO. WP 3380	GENERIC	1 HOUR FIRE	40 to 44 STC SOUND

GYPSUM WALLBOARD, WOOD STUDS

One layer 5/8" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to each side of 2 x 4 wood studs 16" o.c. staggered 8" o.c. on 2 x 6 wood plates with 6d coated nails, 1⅞" long, 0.0915" shank, ¼" heads, 7" o.c.

Joints staggered 24" on opposite sides. Horizontal bracing required at mid-height. (LOAD-BEARING)



Thickness: 7¼"
Approx. Weight: 6 psf
Fire Test: See WP 3605 (UL R1319-4, 6, 8-17-52; UL R2717-39, 1-20-56; UL R3501-52, 3-15-65; UL Design U305; ULC Design W301)
Sound Test: Estimated

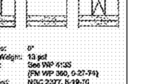
4 DETAIL: GYP. ASSOC. WP 3380
SCALE: N.T.S.

GA FILE NO. WP 3910	GENERIC	2 HOUR FIRE	50 to 54 STC SOUND

GYPSUM WALLBOARD, WOOD STUDS

Base layer 5/8" type X gypsum wallboard or gypsum veneer base applied at right angles to each side of 2 x 4 wood studs 16" o.c., staggered 8" o.c. on 2 x 6 wood plates with 6d coated nails, 1⅞" long, 0.095" shank, ¼" heads, 24" o.c. Face layer 5/8" type X gypsum wallboard or gypsum veneer base applied at right angles to each side with 8d coated nails, 2⅜" long, 0.113" shank, 9/32" heads, 8" o.c.

Joints staggered 16" each layer and side. Sound tested with nails for base layer spaced 6" o.c. Horizontal bracing required at mid-height. (LOAD-BEARING)



Thickness: 8"
Approx. Weight: 13 psf
Fire Test: See WP 4135 (FM WP 360, 9-27-74)
Sound Test: NGC 2377, 8-19-70

8 DETAIL: GYP. ASSOC. WP 3910
SCALE: N.T.S.

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Issue & Revisions:

No.	Date	Description
1	04.01.19	CLARIFICATION

PARTITION TYPES/DETAILS

Drawn: MWB
Checked: KEP
Contract No.
Scale: AS NOTED

STATE OF GEORGIA — KIRBY EUGENE PATE — CERTIFICATE NO. 7375 — REGISTERED ARCHITECT

A6.1
04.01.19 of sheets

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