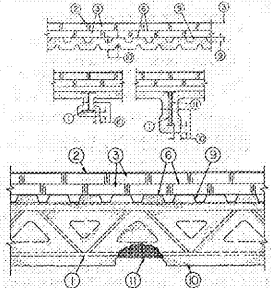


Design No. P717
Restrained Assembly Rating — 1, 1-1/2 or 2 H (See Items 3, 4 and 10)
Unrestrained Assembly Rating — 1, 1-1/2 or 2 H (See Items 3, 4 and 10)
Unrestrained Beam Rating — 1, 1-1/2 or 2 H (See Item 10)
Restrained Load Condition — See Item 1
Load Restriction for Canadian Applications — See Table BXUV



- Beam — W6x16 min size, or Steel Joist — 10H4, 14T, 12K3 or 16K3 min sizes, (See Items 10 and 10A)
- NOTE: Design load shall stress H-Series joists to a max tensile stress of 22 KSI
- Roof Covering — Consisting of hot mopped or cold application bituminous materials compatible with the insulation(s) described herein which provide Class A, B or C Coverings. See Roofing Materials and Systems Directory—Roof Covering Materials (RPV7)
- In lieu of Item 2, roof covering consisting of single-ply Roofing Membrane — That is either ballasted, adhered or mechanically attached as permitted under the respective manufacturer's Classification. See Fire Resistance Membrane (RMC3)
- Metal Roof Deck Panels — (Not Shown) — In addition to or in lieu of Item 2 or 3A, the roof covering may consist of a mechanically fastened metal roof deck panel assembly. See Fire Resistance Directory — Metal Roof Deck Panels (CE1W)
- Roof Insulation — Foamed Plastic — Polyisocyanurate foamed plastic insulation boards, nom 48 by 48 or 96 in., to be applied in one or more layers over gypsum wallboard (Item 4) and for the 1-1/2 and 2 hr ratings without gypsum wallboard (Item 4) and for the 1-1/2 and 2 hr ratings with gypsum wallboard (Item 4) and for the 1-1/2 and 2 hr ratings without gypsum wallboard. (No limit on max overall thickness). Boards to be installed with end joints staggered a min of 6 in. in adjacent rows. When applied in more than one layer, each layer to be offset in both directions from layer below a min of 6 in. in order to lap all joints.
- ATLAS ROOFING CORP.—ACFoam II, ACFoam II, ACFoam IV, CARLISLE SYNTAC INCORPORATED—Types HP, HP-H, JFN, JP, JV, THE DOW CHEMICAL CO.—Types Hy-Therm AF, Hy-Therm B, HYLAST PRODUCTS L.L.C.—FIRSTSTONE BUILDING PRODUCTS CO L.L.C.—"ISO 95-GI," "ISO 300" CAP MATERIALS CORP.—Insultherm R, HUNTER PANELS—H Shield, JOHNS MANVILLE—ENRGY 3, ISO-4, PSI 25, LOADMASTER SYSTEMS INC.—Loadmaster Polyisocyanurate Insulation, RMAX OPERATING L.L.C.—Multi-Max-3, Multi-Max FX-3, Ultra-Max, Tapered Thermantec-3, Tapered Thermantec FX-3, Ultra-Max, Tapered, DOW ROOFING SYSTEMS L.L.C.—"Stevens ISO 300," GENIEK ROOFING SYSTEMS L.L.C.—"GeniFlex ISO"
- Foamed Plastic — (Not Shown) — 2 to 8 in. thick density of 2.5 pcf max, polystyrene foamed plastic insulation boards secured to the gypsum wallboard (Item 4) with asphalt glue coat or adhesive.

- (Note: Adhesive (Item 6) and/or asphalt glue coat may be omitted when Item 2A is used.) See Foamed Plastic (BXUV) category in the Building Materials Directory or Foamed Plastic (CCVV) category in the Fire Resistance Directory for names of manufacturers.
- Mineral and Fiber Boards — (Not Shown) — Optional — Applied in one or more layers over the Foamed Plastic (Item 3). For use applied with adhesive (Item 6), asphalt or coal tar pitch (Item 7) or mechanically fastened (Item 8).
 - CHYENS CORNING HT INC, DIV OF OWENS CORNING
SIFLAST INC
Building Units — As an alternate to Item 3, polyisocyanurate foamed plastic insulation boards, nom 48 by 48 or 96 in., faced on the top surface with oriented strand board. Min thickness of the polyisocyanurate core is 1.3 in. for the 1 hr rating without gypsum wallboard (Item 4) and for the 1-1/2 and 2 hr ratings with gypsum wallboard 2 and 2 1/2 for the 1-1/2 hr ratings without gypsum wallboard. No limit on max overall thickness. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows.
ATLAS ROOFING CORP—ACFoam NonRoof Insulation, **JOHNS MANVILLE**—Innovis Roof Board
HERSTONE BUILDING PRODUCTS CO L.L.C.—Hailgard, **JOHNS MANVILLE**—NonRoof
Roof Insulation — Foamed Plastic — Polyisocyanurate foamed plastic insulation boards, nom 48 by 48 or 96 in., to be applied in one or more layers over gypsum wallboard (Item 4). Min thickness is 3 in. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows. When applied in more than one layer, each layer to be offset in both directions from layer below a min of 6 in. in order to lap all joints.
 - RMAX OPERATING L.L.C. — Polyisocyanurate foamed plastic insulation boards faced on the underside with mineral fiber board. Min thickness of the polyisocyanurate core is 1.3 in. for the 1 hr rating without gypsum wallboard (Item 4) and for the 1-1/2 and 2 hr ratings with gypsum wallboard 2 and 2 1/2 for the 1-1/2 hr ratings without gypsum wallboard. No limit on max overall thickness. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows. Adhesive (Item 6) may be applied between the building units and the vapor retarder for gypsum wallboard or vapor retarder (not used).
 - HERSTONE BUILDING PRODUCTS CO L.L.C.—"ISO 35+ Wood Fiberboard Composite"
JOHNS MANVILLE—Fibro-Foam
Building Units — As an alternate to Items 3 through 3C, polyisocyanurate foamed plastic insulation boards faced on the underside with wood fiber board. Min thickness of the polyisocyanurate core is 1.3 in. for the 1 hr rating without gypsum wallboard (Item 4) and for the 1-1/2 and 2 hr ratings with gypsum wallboard 2 and 2 1/2 for the 1-1/2 hr ratings without gypsum wallboard. No limit on max overall thickness. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows.
HERSTONE BUILDING PRODUCTS CO L.L.C.—"ISO 35+ Wood Fiberboard Composite"
JOHNS MANVILLE—Fibro-Foam Plus
Building Units — As an alternate to Items 2 and 3 through 3C, insulated steel panels, 36 in. wide, installed over gypsum wallboard (Item 4). Backing units mechanically fastened to the steel deck (through the gypsum wallboard) in accordance with the manufacturer's recommendations.
CENTRIA—Types VP-175, VP-2.5, VP-6.0
Building Units — (Not Shown) — As an alternate to Items 3 through 3C, monolithic polyisocyanurate foamed plastic insulation board, nom 48 by 48 or 96 in., with an adhered facing surface may be used with the following limitations: These composite building units have ventilation slots internal to the panels. The thickness of the panel depends upon the thinned portion of the polyisocyanurate insulation. The following dimensions apply to the polyisocyanurate insulation, min 1.3 in. thick for the 1 hr rating without gypsum wallboard applied to the steel deck, min 1.3 in. thick for the 1-1/2 and 2 hr ratings with gypsum wallboard and min 2 1/8 in. for the 1-1/2 hr rating without gypsum wallboard. There is no limit on the max insulation thickness.
CAF MASTER ALS CORP—Type ISU-4 AIR
JOHNS MANVILLE—Type ISU-VENT
Building Units — As an alternate to Items 3 through 3C, polyisocyanurate foamed plastic insulation boards, nom 48 by 48 or 96 in., faced on the top surface with gypsum board. Min thickness of the polyisocyanurate core is 1.3 in. for the 1 hr rating without gypsum wallboard (Item 4) and for the 1-1/2 and 2 hr ratings with gypsum wallboard 2 and 2 1/2 for the 1-1/2 hr ratings without gypsum wallboard (Item 4). No limit on overall thickness. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows. Adhesive (Item 6) may be applied between the building units and the vapor retarder for gypsum wallboard or vapor retarder (not used).

- nom wallboard if vapor retarder is not used.
JOHNS MANVILLE—ENRGY 2 Gypsum Composite
Roof Insulation — Foamed Plastic — (Not Shown) — As an alternate to Items 3 through 3C, polyisocyanurate foamed plastic insulation boards, nom 48 by 48 or 96 in., faced on the top surface with oriented strand board, overlaid with gypsum wallboard 1-1/2 in. and welded to supports of deck laps at a max of 12 in. OC between sides of units. Side laps of adjacent units welded, but not fastened or secured together with a max of 3/4 in. in long, weld-filled, overlapping steel wires spaced a max of 24 in. OC.
ASC STEEL DECK, DIV OF ABC PROFILES
INC—Type S, **CANAM STEEL CORP**—Type P-306, P-3015, P-2436, and P-2434
CNC FAST & DECK - MANUFACTURERS
OF UNITED STEEL DECK PRODUCTS—Types B, B1, N1 and N2
VERCO DECKING INC - A HUCK CO—Types PLS, R, RM or N Huckdeck. Uniformity may be pld/pfd. Types PLS, RLS, RM or N Huckdeck. Uniformity may be pld/pfd.
VULCRAFT, DIV OF NUCOR CORP—Cals. in pld/pfd/Type 1.5H, 1.5L, 1.5E, 2N, 2NL
WHEELING PITTSBURGH STEEL CORP OF WHEELING CORRUGATING CO — Cals. or pld/pfd/Types A, B, C, E, High Strength B, High Strength BW, N
Spray-Applied Restorative Materials — Applied by mixing with water and spraying in more than one coat to final thickness as shown in the illustration above and in the table below to steel surfaces which must be clean and free of dirt, loose scale and oil. Steel deck surface must be "spatter" coated with Types DK, DKL, DKS, SK-II spray-applied restorative material prior to application of spray-applied restorative material. Types TR, DK, DKS, SK-II spray-applied restorative material applied in accordance with the manufacturer's application instructions. Min avg and min ind density of 15/14 pcf, respectively. Min avg and min ind density of 19/18 pcf, respectively for Types TGP and THD. For method of density determination, see Design Information Section. Thickness of the spatter coat is included in the total final thickness of the protection material.
UL DESIGN P717

Unrestrained Assembly Rating	Unrestrained Assembly Rating	On Deck			
		Without Gypsum Wallboard	With Gypsum Wallboard	With Gypsum Wallboard & Insulated Steel Deck	With Gypsum Wallboard & Insulated Steel Deck
1	1-1/2	1	1	1	1
1-1/2	1-1/2	1	1	1	1
2	2	2	2	2	2

- Metal Lath — (Optional, not shown) — Metal lath may be used to facilitate the spray application. The mesh is attached to one side of each joint web member. The method of attaching the mesh must be sufficient to hold the mesh and the spray-applied fire-resistive material in place during application until it has cured. An acceptable method to attach the mesh is by embedding the mesh in minimum 1/4 in. long beads of hot method glue. The beads of glue shall be spaced a maximum of 12 in. OC, along the top chord of the bar joint. Another method to secure the mesh by 1 1/2 in. long by 1/2 in. wide lutein clips fastened from No. 18 SWG or heavier steel wire.
- Non-Metallic Fabric Mesh — (Optional) — As an alternate to metal lath, glass fiber fabric mesh, weighing approximately 2.5 sq/yd, polypropylene fabric mesh, weighing approximately 2.5 sq/yd, or equivalent, may be used to facilitate the spray application. The mesh is attached to one side of each joint web member. The method of attaching the mesh must be sufficient to hold the mesh and the spray-applied fire-resistive material in place during application until it has cured. An acceptable method to attach the mesh is by embedding the mesh in minimum 1/4 in. long beads of hot method glue. The beads of glue shall be spaced a maximum of 12 in. OC, along the top chord of the bar joint. Another method to secure the mesh by 1 1/2 in. long by 1/2 in. wide lutein clips fastened from No. 18 SWG or heavier steel wire.
- Metal Lath — (Optional, not shown) — Metal lath may be used to facilitate the spray application of Spray-Applied Fire Restorative Materials as noted by embedding the mesh in minimum 1/4 in. long beads of hot method glue. The beads of glue shall be spaced a maximum of 12 in. OC, along the top chord of the bar joint. Another method to secure the mesh by 1 1/2 in. long by 1/2 in. wide lutein clips fastened from No. 18 SWG or heavier steel wire.
- Building Units — (Optional, not shown) — Minimum 1 1/2 by 18 in. flat or tapered solid concrete blocks or 24 by 48 in. flat or tapered cellular glass blocks over the roof (see Item 3) with a spall for coat tar pitch (Item 7) or mechanically fastened (Item 8) to the steel deck.
- WHEELING PITTSBURGH CORNING CO — Refer to UL Classification Mark

UL DESIGN P717

Unrestrained Assembly Rating	Unrestrained Assembly Rating	On Deck			
		Without Gypsum Wallboard	With Gypsum Wallboard	With Gypsum Wallboard & Insulated Steel Deck	With Gypsum Wallboard & Insulated Steel Deck
1	1-1/2	1	1	1	1
1-1/2	1-1/2	1	1	1	1
2	2	2	2	2	2

- Design No. X772**
BXUV.X772
Fire-resistance Ratings — ANSI A263
Design No. X772
October 25, 2017
 Ratings — 5, 4, 3, 2 and 4 h.
 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.
-

- (Note: Adhesive (Item 6) and/or asphalt glue coat may be omitted when Item 2A is used.) See Foamed Plastic (BXUV) category in the Building Materials Directory or Foamed Plastic (CCVV) category in the Fire Resistance Directory for names of manufacturers.
- Mineral and Fiber Boards — (Not Shown) — Applied in one or more layers over the Foamed Plastic (Item 3). For use applied with adhesive (Item 6), asphalt or coal tar pitch (Item 7) or mechanically fastened (Item 8).
 - CHYENS CORNING HT INC, DIV OF OWENS CORNING
SIFLAST INC
Building Units — As an alternate to Item 3, polyisocyanurate foamed plastic insulation boards, nom 48 by 48 or 96 in., faced on the top surface with oriented strand board. Min thickness of the polyisocyanurate core is 1.3 in. for the 1 hr rating without gypsum wallboard (Item 4) and for the 1-1/2 and 2 hr ratings with gypsum wallboard 2 and 2 1/2 for the 1-1/2 hr ratings without gypsum wallboard. No limit on max overall thickness. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows.
ATLAS ROOFING CORP—ACFoam NonRoof Insulation, **JOHNS MANVILLE**—Innovis Roof Board
HERSTONE BUILDING PRODUCTS CO L.L.C.—Hailgard, **JOHNS MANVILLE**—NonRoof
Roof Insulation — Foamed Plastic — Polyisocyanurate foamed plastic insulation boards, nom 48 by 48 or 96 in., to be applied in one or more layers over gypsum wallboard (Item 4). Min thickness is 3 in. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows. When applied in more than one layer, each layer to be offset in both directions from layer below a min of 6 in. in order to lap all joints.
 - RMAX OPERATING L.L.C. — Polyisocyanurate foamed plastic insulation boards faced on the underside with mineral fiber board. Min thickness of the polyisocyanurate core is 1.3 in. for the 1 hr rating without gypsum wallboard (Item 4) and for the 1-1/2 and 2 hr ratings with gypsum wallboard 2 and 2 1/2 for the 1-1/2 hr ratings without gypsum wallboard. No limit on max overall thickness. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows. Adhesive (Item 6) may be applied between the building units and the vapor retarder for gypsum wallboard or vapor retarder (not used).
 - HERSTONE BUILDING PRODUCTS CO L.L.C.—"ISO 35+ Wood Fiberboard Composite"
JOHNS MANVILLE—Fibro-Foam
Building Units — As an alternate to Items 3 through 3C, polyisocyanurate foamed plastic insulation boards faced on the underside with wood fiber board. Min thickness of the polyisocyanurate core is 1.3 in. for the 1 hr rating without gypsum wallboard (Item 4) and for the 1-1/2 and 2 hr ratings with gypsum wallboard 2 and 2 1/2 for the 1-1/2 hr ratings without gypsum wallboard. No limit on max overall thickness. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows.
HERSTONE BUILDING PRODUCTS CO L.L.C.—"ISO 35+ Wood Fiberboard Composite"
JOHNS MANVILLE—Fibro-Foam Plus
Building Units — As an alternate to Items 2 and 3 through 3C, insulated steel panels, 36 in. wide, installed over gypsum wallboard (Item 4). Backing units mechanically fastened to the steel deck (through the gypsum wallboard) in accordance with the manufacturer's recommendations.
CENTRIA—Types VP-175, VP-2.5, VP-6.0
Building Units — (Not Shown) — As an alternate to Items 3 through 3C, monolithic polyisocyanurate foamed plastic insulation board, nom 48 by 48 or 96 in., with an adhered facing surface may be used with the following limitations: These composite building units have ventilation slots internal to the panels. The thickness of the panel depends upon the thinned portion of the polyisocyanurate insulation. The following dimensions apply to the polyisocyanurate insulation, min 1.3 in. thick for the 1 hr rating without gypsum wallboard applied to the steel deck, min 1.3 in. thick for the 1-1/2 and 2 hr ratings with gypsum wallboard and min 2 1/8 in. for the 1-1/2 hr rating without gypsum wallboard. There is no limit on the max insulation thickness.
CAF MASTER ALS CORP—Type ISU-4 AIR
JOHNS MANVILLE—Type ISU-VENT
Building Units — As an alternate to Items 3 through 3C, polyisocyanurate foamed plastic insulation boards, nom 48 by 48 or 96 in., faced on the top surface with gypsum board. Min thickness of the polyisocyanurate core is 1.3 in. for the 1 hr rating without gypsum wallboard (Item 4) and for the 1-1/2 and 2 hr ratings with gypsum wallboard 2 and 2 1/2 for the 1-1/2 hr ratings without gypsum wallboard (Item 4). No limit on overall thickness. Boards to be installed with end joints staggered a min of 6 in. in adjacent rows. Adhesive (Item 6) may be applied between the building units and the vapor retarder for gypsum wallboard or vapor retarder (not used).

UL DESIGN P717

Unrestrained Assembly Rating	Unrestrained Assembly Rating	On Deck			
		Without Gypsum Wallboard	With Gypsum Wallboard	With Gypsum Wallboard & Insulated Steel Deck	With Gypsum Wallboard & Insulated Steel Deck
1	1-1/2	1	1	1	1
1-1/2	1-1/2	1	1	1	1
2	2	2	2	2	2

- Metal Lath — (Optional, not shown) — Metal lath may be used to facilitate the spray application. The mesh is attached to one side of each joint web member. The method of attaching the mesh must be sufficient to hold the mesh and the spray-applied fire-resistive material in place during application until it has cured. An acceptable method to attach the mesh is by embedding the mesh in minimum 1/4 in. long beads of hot method glue. The beads of glue shall be spaced a maximum of 12 in. OC, along the top chord of the bar joint. Another method to secure the mesh by 1 1/2 in. long by 1/2 in. wide lutein clips fastened from No. 18 SWG or heavier steel wire.
- Non-Metallic Fabric Mesh — (Optional) — As an alternate to metal lath, glass fiber fabric mesh, weighing approximately 2.5 sq/yd, polypropylene fabric mesh, weighing approximately 2.5 sq/yd, or equivalent, may be used to facilitate the spray application. The mesh is attached to one side of each joint web member. The method of attaching the mesh must be sufficient to hold the mesh and the spray-applied fire-resistive material in place during application until it has cured. An acceptable method to attach the mesh is by embedding the mesh in minimum 1/4 in. long beads of hot method glue. The beads of glue shall be spaced a maximum of 12 in. OC, along the top chord of the bar joint. Another method to secure the mesh by 1 1/2 in. long by 1/2 in. wide lutein clips fastened from No. 18 SWG or heavier steel wire.
- Metal Lath — (Optional, not shown) — Metal lath may be used to facilitate the spray application of Spray-Applied Fire Restorative Materials as noted by embedding the mesh in minimum 1/4 in. long beads of hot method glue. The beads of glue shall be spaced a maximum of 12 in. OC, along the top chord of the bar joint. Another method to secure the mesh by 1 1/2 in. long by 1/2 in. wide lutein clips fastened from No. 18 SWG or heavier steel wire.
- Building Units — (Optional, not shown) — Minimum 1 1/2 by 18 in. flat or tapered solid concrete blocks or 24 by 48 in. flat or tapered cellular glass blocks over the roof (see Item 3) with a spall for coat tar pitch (Item 7) or mechanically fastened (Item 8) to the steel deck.
- WHEELING PITTSBURGH CORNING CO — Refer to UL Classification Mark

Design No. X771
Ratings - 3/4, 1, 1-1/2, 2, 3, and 4 h
OCTOBER 26, 2017

1. Steel Pipe or Tube Column — Steel circular pipe with diameter (OD) ranging from a minimum of 13 in. to a maximum of 32 in. and a maximum wall thickness of 3/16 in. Square or rectangular tube with the outside wall dimensions ranging from a minimum of 3 in. to a maximum of 32 in. and a minimum wall thickness of 3/16 in. The AP ratio of the steel pipe or tube (see Item 2) shall range from 0.18 to 2.0.

Spray-Applied Fire Restorative Materials — Applied by mixing with water and spraying in one or more coats to steel surfaces which must be clean and free of dirt, loose scale and oil. Min. avg and min ind density of 15/14 pcf, respectively. Min avg and min ind density of 19/18 pcf, respectively for types TGP and THD. For method of density determination, see Design Information Section, preceding these designs. The hourly rating of the structural member is dependent upon the ratio of AP and the thickness of Spray-Applied Fire Restorative Materials, where A is the cross sectional area of the pipe or tube and P is the heated perimeter. The AP ratio of a circular pipe is determined by:

$AP \text{ Ratio} = \frac{4d}{\pi P}$

Where:
 d = the outer diameter of the pipe (in.)
 P = the heated perimeter of the pipe (in.)
 The AP ratio of a rectangular or square tube is determined by:
 $AP \text{ Ratio} = \frac{4a}{\pi(a+b)}$

Where:
 a = the outer width of the tube (in.)
 b = the outer length of the tube (in.)
 P = the heated perimeter of the tube (in.)
 The thickness of Spray-Applied Fire Restorative Materials shall range from 1, 1-1/2, 2, 3 and 4 h of a steel pipe or tube can be determined by the equation:
 $h = R \cdot 0.20(4.43)(AP)^2$

Where:
 R = the hourly rating (hrs.)
 h = the thickness of Spray-Applied Fire Restorative Materials (minimum 1/4 in., maximum 3-7/8 in.)

ARABIAN VERMICULITE INDUSTRIES — Types MK6C/F, MK6E, MK6H, MK-6S, Monokote Acoustic 1, Monokote Acoustic 5, Z106, Z106G.
GRACE KOREA INC — Types MK6C/F, MK6E, MK6H, MK-6S, Monokote Acoustic 1, Monokote Acoustic 5, Z106, Z106G.
PYROK INC — Type LD.
SOUTHWEST FIREPROOFING PRODUCTS CO — Types 4, 5, SEF, 5EP, 5AR, 5GPIAR, SEF, 7HD, SEF, 8GP, 8MD, SEF, 9GP, 9MD.
GCP APPLIED TECHNOLOGIES INC — Types MK6H, MK-6S, Monokote Acoustic 1, Monokote Acoustic 5, G, Z106, Z106G.
 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Design No. X772
BXUV.X772
Fire-resistance Ratings — ANSI A263
Design No. X772
October 25, 2017
 Ratings — 5, 4, 3, 2 and 4 h.
 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

ARABIAN VERMICULITE INDUSTRIES — Types MK6C/F, MK6E, MK6H, MK-6S, Monokote Acoustic 1, Monokote Acoustic 5, Z106, Z106G.
GCP KOREA INC — Types MK6C/F, MK6E, MK6H, MK-6S, Monokote Acoustic 1, Monokote Acoustic 5, Z106, Z106G.
PYROK INC — Type LD.
SOUTHWEST FIREPROOFING PRODUCTS CO — Types 4, 5, SEF, 5EP, 5AR, 5GPIAR, SEF, 7HD, SEF, 8GP, 8MD, SEF, 9GP, 9MD.
GCP APPLIED TECHNOLOGIES INC — Types MK6H, MK-6S, Monokote Acoustic 1, Monokote Acoustic 5, G, Z106, Z106G.
 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Design No. X772
BXUV.X772
Fire-resistance Ratings — ANSI A263
Design No. X772
October 25, 2017
 Ratings — 5, 4, 3, 2 and 4 h.
 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

GENERAL WALL NOTES:

- WALL TYPES ARE KEVED ON THE FLOOR PLANS.
- ALL PENETRATIONS ARE TO BE SEALED WITH ACOUSTICAL SEALANT AT NON-RATED WALLS WITH SOUND ATTENUATION BATTS.
- DENS ARMOR BOARD OR EQUAL IS TO BE SUBSTITUTED FOR GYPSUM BOARD AT WALLS TO RECEIVE CERAMIC TILE. MAINTAIN RATINGS AS REQUIRED.
- PENETRATING ITEMS PASSING ENTIRELY THROUGH BOTH PROTECTIVE MEMBRANES OF BEARING WALLS REQUIRED TO HAVE A FIRE-RESISTIVE RATING AND WALLS SURROUNDING PROTECTED OPENINGS SHALL BE PROTECTED WITH THROUGH-PENETRATION FIRE STOPS.
- ALL LAYERS ARE TO BE TAPED AND MUDDER (ALL WALL TYPES).
- ALL WALLS ARE TO BE FINISHED SMOOTH (ALL WALL TYPES).
- CONTRACTOR TO PROVIDE MEANS OF ACCOMMODATING MOVEMENT AT TOP TRACK OF NON-LOAD BEARING STUD WALLS RUNNING PERPENDICULAR TO THE METAL DECK.
- NO BATT INSULATION IS TO BE LEFT EXPOSED ABOVE CEILING - ALWAYS EXTEND GYPSUM BOARD AS REQUIRED.

WALL TYPE 5 | 1 1/2" = 1'-0" | 5

WALL TYPE 5A: 2 1/2" STUD W/ 5/8" GYP. WALL BOARD ON BOTH SIDES
WALL TYPE 5B: 2 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE
WALL TYPE 5C: 2 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE
WALL TYPE 5D: 2 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE

5/8" GWB ONE SIDE 6" ABOVE CEILING MIN.
 2 1/2" 18 GA. (MIN.) METAL STUDS @ 16" O.C. - EXTEND TO METAL DECK. BRACE AS REQUIRED.

Design No. X772
BXUV.X772
Fire-resistance Ratings — ANSI A263
Design No. X772
October 25, 2017
 Ratings — 5, 4, 3, 2 and 4 h.
 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

GENERAL WALL NOTES:

- WALL TYPES ARE KEVED ON THE FLOOR PLANS.
- ALL PENETRATIONS ARE TO BE SEALED WITH ACOUSTICAL SEALANT AT NON-RATED WALLS WITH SOUND ATTENUATION BATTS.
- DENS ARMOR BOARD OR EQUAL IS TO BE SUBSTITUTED FOR GYPSUM BOARD AT WALLS TO RECEIVE CERAMIC TILE. MAINTAIN RATINGS AS REQUIRED.
- PENETRATING ITEMS PASSING ENTIRELY THROUGH BOTH PROTECTIVE MEMBRANES OF BEARING WALLS REQUIRED TO HAVE A FIRE-RESISTIVE RATING AND WALLS SURROUNDING PROTECTED OPENINGS SHALL BE PROTECTED WITH THROUGH-PENETRATION FIRE STOPS.
- ALL LAYERS ARE TO BE TAPED AND MUDDER (ALL WALL TYPES).
- ALL WALLS ARE TO BE FINISHED SMOOTH (ALL WALL TYPES).
- CONTRACTOR TO PROVIDE MEANS OF ACCOMMODATING MOVEMENT AT TOP TRACK OF NON-LOAD BEARING STUD WALLS RUNNING PERPENDICULAR TO THE METAL DECK.
- NO BATT INSULATION IS TO BE LEFT EXPOSED ABOVE CEILING - ALWAYS EXTEND GYPSUM BOARD AS REQUIRED.

WALL TYPE 2 | 1 1/2" = 1'-0" | 2

WALL TYPE 2A: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON BOTH SIDES
WALL TYPE 2B: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE
WALL TYPE 2C: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE
WALL TYPE 2D: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE

5/8" GWB EA. SIDE TO METAL DECK
 5 1/2" SOUND ATTENUATION BATTS CONTINUOUS TO UNDERSIDE OF METAL DECK
 PROVIDE CONTINUOUS ACOUSTICAL SEALANT ALONG BASE OF PARTITION

Design No. X772
BXUV.X772
Fire-resistance Ratings — ANSI A263
Design No. X772
October 25, 2017
 Ratings — 5, 4, 3, 2 and 4 h.
 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

GENERAL WALL NOTES:

- WALL TYPES ARE KEVED ON THE FLOOR PLANS.
- ALL PENETRATIONS ARE TO BE SEALED WITH ACOUSTICAL SEALANT AT NON-RATED WALLS WITH SOUND ATTENUATION BATTS.
- DENS ARMOR BOARD OR EQUAL IS TO BE SUBSTITUTED FOR GYPSUM BOARD AT WALLS TO RECEIVE CERAMIC TILE. MAINTAIN RATINGS AS REQUIRED.
- PENETRATING ITEMS PASSING ENTIRELY THROUGH BOTH PROTECTIVE MEMBRANES OF BEARING WALLS REQUIRED TO HAVE A FIRE-RESISTIVE RATING AND WALLS SURROUNDING PROTECTED OPENINGS SHALL BE PROTECTED WITH THROUGH-PENETRATION FIRE STOPS.
- ALL LAYERS ARE TO BE TAPED AND MUDDER (ALL WALL TYPES).
- ALL WALLS ARE TO BE FINISHED SMOOTH (ALL WALL TYPES).
- CONTRACTOR TO PROVIDE MEANS OF ACCOMMODATING MOVEMENT AT TOP TRACK OF NON-LOAD BEARING STUD WALLS RUNNING PERPENDICULAR TO THE METAL DECK.
- NO BATT INSULATION IS TO BE LEFT EXPOSED ABOVE CEILING - ALWAYS EXTEND GYPSUM BOARD AS REQUIRED.

WALL TYPE 3 | 1 1/2" = 1'-0" | 3

WALL TYPE 3A: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON BOTH SIDES
WALL TYPE 3B: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE
WALL TYPE 3C: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE
WALL TYPE 3D: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE

5/8" GWB EA. SIDE TO METAL DECK
 5 1/2" SOUND ATTENUATION BATTS CONTINUOUS TO UNDERSIDE OF METAL DECK
 PROVIDE CONTINUOUS ACOUSTICAL SEALANT ALONG BASE OF PARTITION

WALL TYPE 4 | 1 1/2" = 1'-0" | 4

WALL TYPE 4A: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON BOTH SIDES
WALL TYPE 4B: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE
WALL TYPE 4C: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE
WALL TYPE 4D: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE

5/8" GWB EA. SIDE TO METAL DECK
 5 1/2" SOUND ATTENUATION BATTS CONTINUOUS TO UNDERSIDE OF METAL DECK
 PROVIDE CONTINUOUS ACOUSTICAL SEALANT ALONG BASE OF PARTITION

WALL TYPE 1 | 1 1/2" = 1'-0" | 1

WALL TYPE 1A: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON BOTH SIDES
WALL TYPE 1B: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE
WALL TYPE 1C: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE
WALL TYPE 1D: 1 1/2" STUD W/ 5/8" GYP. WALL BOARD ON ONE SIDE

5/8" GWB EA. SIDE TO METAL DECK
 3 1/2" SOUND ATTENUATION BATTS CONTINUOUS TO UNDERSIDE OF METAL DECK
 PROVIDE CONTINUOUS ACOUSTICAL SEALANT ALONG BASE OF PARTITION

adwarchitects
 environments for life
 architecture | planning | interiors
 2815 COLISEUM CENTRE DRIVE
 SUITE 500
 614 ROLLETT, NORTH CAROLINA 28217
 P.704.379.1919
 F.704.379.1920
 www.adwarchitects.com

WALL TYPES & UL DETAILS

SCO #16-15889-02A
RICHMOND COMMUNITY COLLEGE
LEE BUILDING STUDENT SERVICES & CAREER CENTER VOL.2

BID DOCUMENTS

DATE: 04.05.2019
 PROJECT NO: 16063

REVISIONS:
 NO. DATE DESCRIPTION:

THIS DRAWING IS THE PROPERTY OF ADW ARCHITECTS, P.A. AND SHALL NOT BE REPRODUCED OR COPIED IN WHOLE OR PART, IT SHALL NOT BE USED ON ANY OTHER PROJECT OR GIVEN TO ANY OTHER COMPANY OR AGENCY WITHOUT THE CONSENT OF ADW ARCHITECTS, P.A.

4-5-2019

SHEET NUMBER