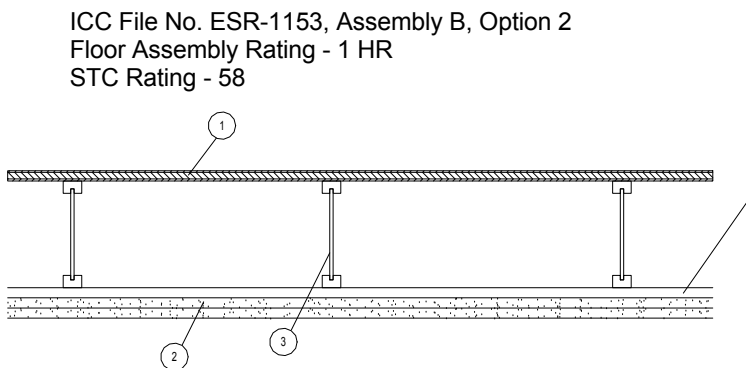


1. Gyp-Crete Gypsum Cement: Minimum 3/4" thick; density 100 pounds per cubic foot (minimum)
2. Subfloor: 5/8" plywood installed in accordance with the code
3. 2x10 wood joists at 16 o.c.
4. 2-1/2" fiberglass insulation; density, 1.5pcf (optional)
5. 1/2" deep by 1-1/2" wide, No. 25 gage resilient channels at 24" o.c. fastened to each joist with 1-1/4" long drywall screws
6. 5/8" gypsum board fastened to channel with 1" long drywall screws spaced at 12" o.c. All joints taped and sealed with compound

Note: In order to obtain 1-hour fire-resistive floor construction, the 1-1/2" wide No. 25 gage resilient channels must be fastened to each joist with 1-1/4" long Type W or S screws spaced 12" o.c. Additionally, the 5/8" Type 'X' gypsum wallboard must be fastened to channels with 1" long Type S screws.



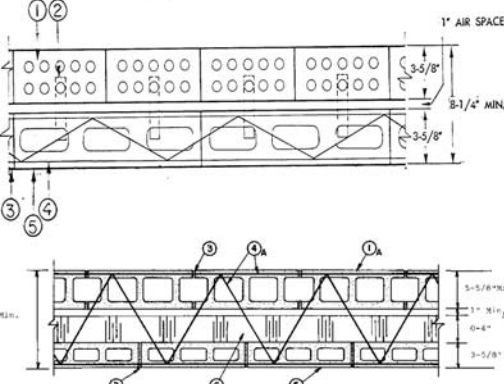
1. 48/24 tongue-and-groove span rated sheathing (Exposure 1), nailed and glued to the TJI joists with construction adhesive conforming to ASTM D3498
2. Two layers of 1/2" thick Type C, or 5/8" thick Type X gypsum board
3. TJI Joist
4. Optional minimum 3-1/2" thick glass fiber insulation or glass fiber insulation rated R-30 or less, with resilient channels (not shown)

Note: In order to obtain an STC rating of 58, the assembly requires 3/4" gypsum concrete topping (minimum) and two layers of 5/8" thick Type X gypsum board with minimum 3-1/2" thick fiber insulation or glass fiber insulation rated R-30 or less.

Note: Assembly B, Option 2 has a minimum STC rating of 58 when constructed with resilient channels spaced at 16" o.c. to separate the ceiling membrane from the structural framing, and with a 3/4" floor topping of gypsum concrete recognized in a current evaluation report.

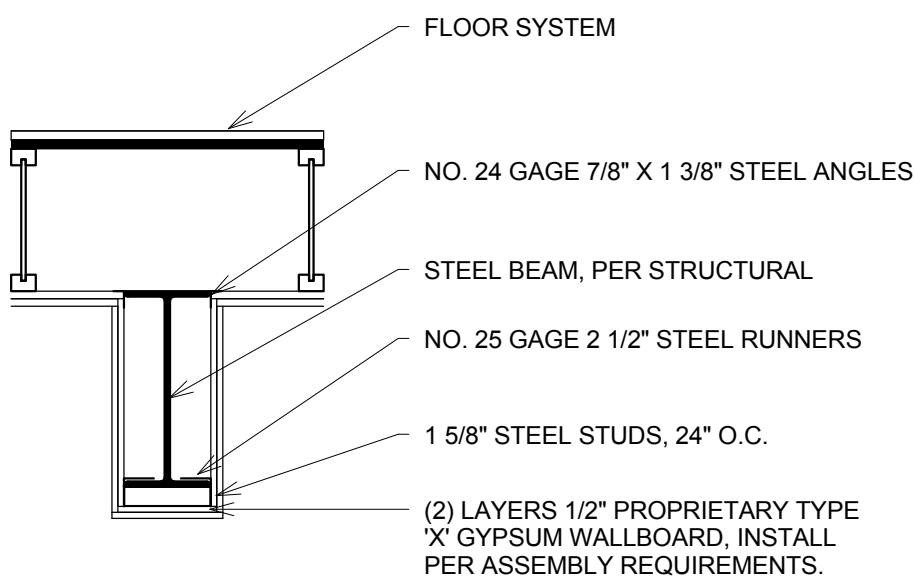
#### DESIGN NO. U902

##### Bearing Wall Rating -- 4 HR. Alternate Detail



1. Clay Face Brick -- 3-5/8 in. wide by 2-1/4 in. high by 8 in. long
- 1A. Concrete Blocks\* -- Various designs, Classification D-2 (2 h). See Concrete Blocks category for list of eligible manufacturers.
1. Brick Ties -- 3/4 in. wide, 7 in. long corrugated 26 MSG galv steel. Spaced one to each brick in every second course of blocks.
2. Mortar -- Bricks and blocks laid in full bed of mortar nom. 3/8 in. thick of not less than 2-1/4 and not more than 3-1/2 parts clean sharp sand to 1 part Portland cement (proportioned by vol) and not more than 50 percent hydrated lime (by cement vol). Vertical joints staggered.
3. Reinforcement -- Parallel and diagonal rods, 0.150 in. min diam with welded joints a max 16 in. OC. Placed the width of concrete block wall in every second course of blocks alternately with brick ties.
- 4A. Masonry Reinforcement -- Prefabricated steel reinforcement, truss or ladder type, used for embedment in every second horizontal mortar joint. Placed the full width of wall assembly. Side and cross rods No. 9 (0.150 in.) min diam with welded joints a max 16 in. OC.
5. Concrete Blocks\* -- Nom 4 in. wide. OLDCASTLE PRECAST INC, DBA AMACOR PRECAST INC
- Concrete Blocks\* -- (Alternate to Item 5) -- Various designs Classification D-2 (2 h). See Concrete Blocks category for list of eligible manufacturers.
6. Foamed Plastic\* -- (Optional -- Not shown with clay face brick detail) Rigid polystyrene insulation for use between brick and/or concrete blocks. One or more layers of rigid extruded polystyrene insulation, 4 in. thick max having 1 in. min air space with face brick or blocks.
- THE DOW CHEMICAL CO OC CELFORTEC INC OWENS CORNING SPECIALTY & FOAM PRODUCTS --Type 150 or 250.
- 6A. Foamed Plastic\* -- (Optional-Not shown with clay face brick detail). Rigid polyisocyanurate insulation for use between brick and/or concrete blocks. One or more layers of rigid extruded polystyrene insulation, 4 in. thick max having 1 in. min air space with face brick or blocks. BPB AMERICA INC --Type Thermax \*Bearing the UL Classification Mark

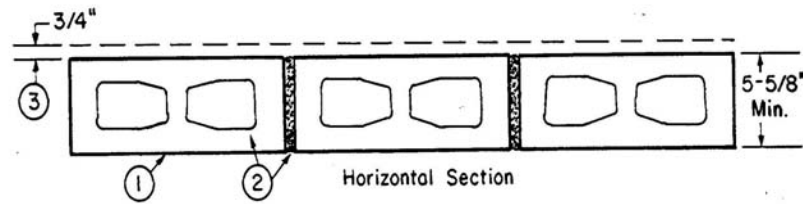
#### 1-HOUR RATED TYPICAL RATED STEEL BEAM SURROUND



BASED ON GA FILE NO: BM 1137  
1 HOUR RATED ASSEMBLY

#### DESIGN NO. U906

##### Bearing Wall Rating--2HR. Nonbearing Wall Rating--2HR.

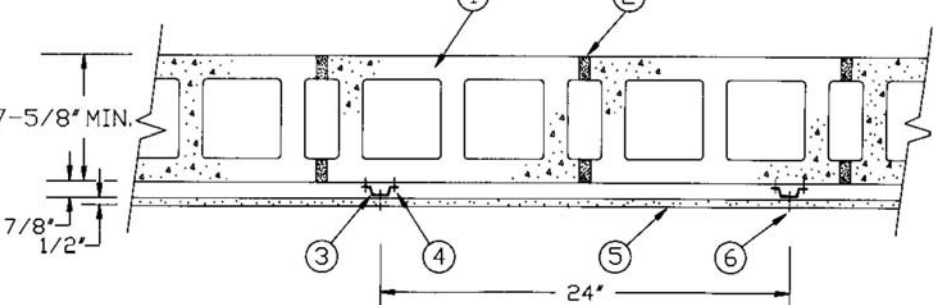


1. Concrete Blocks\* -- Nominal 6 by 8 by 16 in, hollow or solid. Classification D-2 (2 hr). ANCHOR CONCRETE PRODUCTS INC GAGNE & SON CONCRETE BLOCK INC Allowable compressive stress of 57% of max allowable compressive stress in accordance with the empirical design method. BETCO BLOCK & PRODUCTS INC, DBA ARTHUR WHITCOMB WESTBROOK CONCRETE BLOCK CO INC Allowable compressive stress of 75.6% of max allowable compressive stress in accordance with the empirical design method.
1. Mortar -- Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.
2. Portland Cement Stucco or Gypsum Plaster -- Add 1/2 hr to Classification if used. Attached to concrete blocks (Item 1).
3. Foamed Plastic\* -- (Optional-Not Shown) -- 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).

BPB AMERICA INC --Type Thermax \*Bearing the UL Classification Mark  
\*Bearing the UL Classification Mark

#### DESIGN NO. U914

##### Bearing Wall Rating--3HR. Nonbearing Wall Rating--3HR.

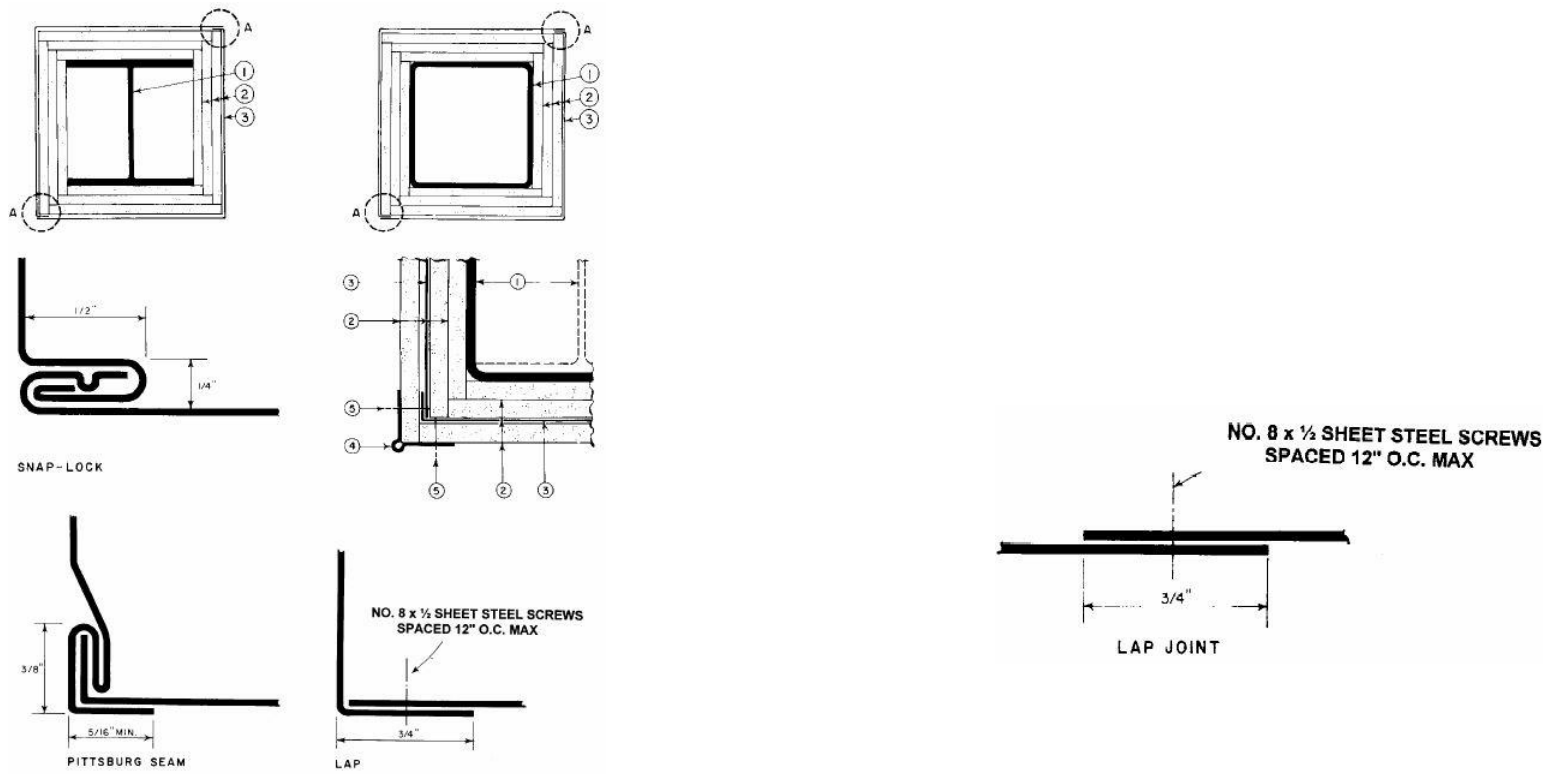


1. Concrete Blocks\* -- Various designs. Classification D-2 (2 hr). See Concrete Blocks category for list of eligible manufacturers.
2. Mortar -- Blocks laid in full bed of mortar, nom 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.
3. Furring Channels -- Min 0.019 in. thick (25 gauge) galv steel, 1-3/8 in. wide on top and 2-3/4 in. wide at bottom by 7/8 in. deep. Spaced 24 in. OC perpendicular to floor with a channel parallel to and approximately 3 in. above floor and 3 in. below ceiling. Clearance between vertical and horizontal channels 1/2 in.
4. Channel Fasteners -- 1-1/4 in. long masonry screws with 3/16 in. body and 5/16 in. diameter head. Fasteners spaced 24 in. O.C. with the fasteners staggered on each long leg of the furring channel.
- 4A. Steel Framing Members\* -- (Not Shown) -- Alternate method used to attach furring channels (Item 3) to concrete blocks (Item 1). Clips spaced 48 in. OC., and secured to blocks with 1/4 in. dia. By 3 in. long concrete expansion anchor (Item 4B) through the center grommet. Ends of adjoining channels are overlapped 5 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 5 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Furring channels are friction fitted into clips.
- PAC INTERNATIONAL INC --Type RSIC-1.
- 4B. Concrete Expansion Anchor -- (Not Shown) -- 1/4 in. dia. by 3 in. long carbon steel, pre-assembled, nail drive expansion anchor with mushroom head driven into the web of the concrete block. Min. embedment in concrete block of 1-3/8 in. and evaluated in accordance with ASTM E 488 to have ultimate load capacities of 980 lbs (tension) and 1400 lbs (shear) when used in 2000 psi concrete.
5. Gypsum Board\* -- 1/2 in. thick, 4 ft wide, secured to furring channels with wallboard fasteners (Item 6). Gypsum plaster not more than 1/16 in. thick may be applied to wallboard in addition to joint treatment.
- AMERICAN GYPSUM CO --Types AG-C, AGX-C. BPB AMERICA INC -- ProRoc Type C. BPB CANADA INC -- ProRoc Type C. CANADIAN GYPSUM COMPANY --Types C, IP-X2, IPC-AR. G-P GYPSUM CORP, SUB OF GEORGIA-PACIFIC CORP --Type 5. LAFARGE NORTH AMERICA INC --Types LGFC-C, LGFC
- C/A. NATIONAL GYPSUM CO --Types FSK-C, FSK-H, FSK-MR-C. PABCO GYPSUM, DIV OF PACIFIC COAST BUILDING PRODUCTS INC --Type PG-C -- STANDARD GYPSUM L L C --Type SG-C. TEMPLE-INLAND FOREST PRODUCTS CORP --Type TG-C. UNITED STATES GYPSUM CO --Types C, IP-X2, IPC-AR. USG MEXICO S ADE C V --Types C, IP-X2, IPC-AR
1. Wallboard Fasteners -- 1 in. long, self-drilling, self-tapping steel screws with bugle heads. Fasteners attached to each furring channel and spaced 8 in. OC at butt joints and 12 in. OC in the field of the board parallel with furring channels. Clearance between fasteners and edges of wallboard 3/4 in.
2. Joint System -- (Not shown) -- Paper tape embedded in cementitious compound over joints. Paper tape and exposed screw heads covered with two layers of compound. Edges of compound feathered out.

\*Bearing the UL Classification Mark

#### DESIGN NO. X526

1, 2, 3 and 4 hour

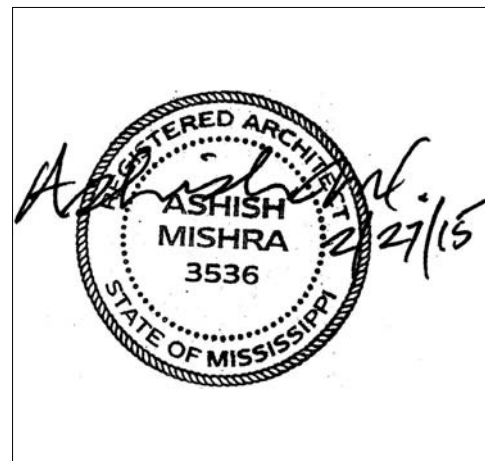


1. Steel Column -- Min sizes of W shape and tubular steel columns in the AISC Steel Construction Manual as shown under Item 2.
2. Gypsum Board -- Any 5/8 in. thick or 1/2 in. thick wallboard bearing the Underwriters Laboratories Inc. Fire Resistance Classification Marking. Min total thicknesses of layers in inches for the various ratings and min column sizes are as follows:
- W Shape Columns Min Column Size Rating Hr Dsg Outside Flange Web In.2 Total Thkns of Dimen-Thkns Thkns Area Layers of Wallboard In. sions In. In.
- 1234in.
- W4x13 4-1/8x4 0.345 0.280 3.82 1-1/2 2-1/4 -- W6x15.5 6x6 0.269 0.235 4.56 1-1/2 2-1/4 3-1/8 W10x49 10x10 0.558 0.340 14.4 1-1/2 1-1/8 1-7/8 2-1/2
- Tubular Shape Columns Min Column Size Rating Hr Outside Total Thkns of Dsg Dimensions Thkns In.2 Layers of Wallboard In. In.In.Area1 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 (CKN) 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, UTRACODE SHC OR ULTRACODE WRC. UNITED STATES GYPSUM CO --Type IP-X3, ULTRACODE, UTRACODE SHC OR ULTRACODE WRC. USG MEXICO S ADE C V --Type IP-X3, ULTRACODE, UTRACODE SHC OR ULTRACODE WRC.
1. 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 cover 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.
2. 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.
3. Screws -- For columns with outer layer of wallboard attached to outthichside 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.
4. Sodium Silicate Solution -- (Not shown, optional) -- Used to adhere one layer of wallboard to inside of steel cover prior to assembly.
5. Finishing System -- (Not shown) -- Joint compound applied over cor

ner beads to a thickness of 1/16in. \*Bearing the UL Classification Mark

REVISIONS		
No.	Date	Description

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#### KEY PLAN

Shiva Southaven  
Inc.

Holiday Inn Express  
& Suites

Lot 16 (Rev Lot 3) Southcrest  
Pkwy.  
Southcrest Subdivision  
Southaven, MS 38671

Drawing Title  
UL Details

Phase  
Construction Documents

Project No.	14-081	Sheet No.
Prepared by	Author	T002
Checked by	Checker	
Date	Feb. 27, 2015	

Review