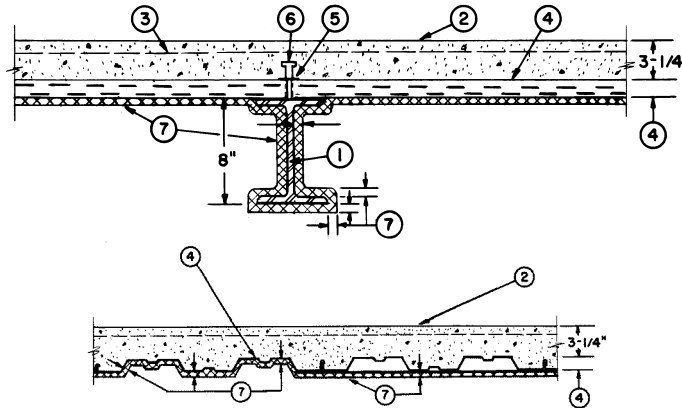


Design No. D860

Restrained Assembly Ratings — 2, 3 and 4 Hr (See Items 4, 7 and 7A)
 Unrestrained Assembly Rating — 1, 1-1/2 and 2 Hr.
 Unrestrained Beam Ratings — 1, 1-1/2 and 2 Hr. (See Items 4, 7 and 7A)
 Load Restricted for Canadian Applications — See Guide BXUV7



1. **Beam** — W8x20 or W8x28, min size, see Items 7 and 7A.
2. **Light-Weight Concrete** — Expanded shale, clay or slate aggregate by rotary kiln method; 118 +/- 3 pcf unit weight, 2500 psi compressive strength, vibrated 2 to 5 percent entrained air.
3. **Welded Wire Fabric** — 6x6 — W1.4xW1.4.
4. **Steel Floor and Form Units*** — Composite 1-1/2, 2 and 3 in. deep galv units. Alternating one 24 in. wide min cellular unit to one or more 24 or 36 in. wide fluted units, or all 24 or 36 in. wide fluted units. Min gauges are 22 msg for 2 and 3 in deep fluted units and 20 MSG for the 1-1/2 fluted units. Min gauges are 20/20 msg for the cellular units. Spacing of welds attaching units to supports shall be at each side of every side joint and not to exceed 12 in. OC between joints. Adjacent units button punched 36 in. OC at side joints. When a superimposed load of 250 PSF is desired the spacing of welds or button-punches shall not exceed 24 in. OC along side joints. When a blend of one cellular unit to one or more fluted units is used, the max **Unrestrained Beam Rating is 1 Hr** and the **Restrained Assembly Rating 2 Hr**. When all fluted units are used, the **max Restrained Assembly Rating is 4 Hr** and the **Unrestrained Beam Rating 2 Hr**.

CANAM STEEL CORP — 36 in. wide Type P-3623, P-3606, P-3615 and 24 in wide Type P-2432 composite, 36 in. wide Type P-3606 and P-3615 non-composite

CENTRIA — 24 or 36 in. wide, 2 or 3 in. deep, Type QL-99.

CHIA TEH CONSTRUCTION MATERIAL CO LTD — 24 or 36 in. wide Mac-Lok 3; 24 in. wide CFD-3.

CANAM STEEL CORP — 24 in. wide Types LF2, LF3, LF15, LFC1, LFC2, LFC3; 24 in. wide Types NL, NLC. Types LF2, LF3, NL may be phos/ptd.

CONSOLIDATED SYSTEMS INC — 24 in. wide Types CFD-2, CFD-3; 24, 30 or 36 in. wide Type CFD-1.5; 24 or 36 in. wide Type Mac-Lok 2 or Mac-Lok 3. The fluted units may be phos/ptd.

DECK WEST INC — 36 in. wide Type 2-DW or 3-DW.

DESIGN ASSISTANCE CONSTRUCTION

SYSTEMS INC — 24 in. wide Type DACS2.0CD, or DACS3.0CD.

GENS METALS INC — 24 in. wide Types LF2, LF3. Types LF2, LF3 units may be phos/ptd.

MARLYN STEEL DECKS INC — Type 1.5 CF, 2.0 CF or 3.0 CF.

NEW MILLENNIUM BUILDING SYSTEMS L L C — Type 1.5CD, 2.0CD, or 3.0CD. Units may be phos/painted or galvanized.

VULCRAFT, DIV OF NUCOR CORP — 24 or 36 in. wide Types 2VLI, 3VLI. The units may be phos/ptd.

Alternate Construction — Non-composite units of the same type listed above may be used provided allowable loading is calculated on the basis of noncomposite design.

5. **Joint Cover** — 2 in. wide, pressure-sensitive cloth tape, applied following the contour of floor units.
6. **Shear Connector** — (Optional) — Studs, 3/4 in. diam by 3-3/8 in. long, headed type or equivalent per AISC specifications. Welded to the top flange of beam through the steel floor units.
7. **Spray-Applied Fire Resistive Materials*** — Applied by spraying with water in one or more coat to final untamped thicknesses as shown in the table below, to steel surfaces which are free of dirt, oil or scale. Adhesive is optional. Min avg untamped density is 13 pcf with min ind untamped density of 11 pcf for Types II or DC/F. Min avg and min ind untamped densities of 22 and 19 pcf, respectively, for Type HP. For method of density determination, refer to Design Information Section. The required thicknesses of Spray-Applied Fire Resistive Materials are tabulated below:

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Min Mtl Thkns In.		W8x20 Beam
			Crests	Valley & Flat Plate	
2	1	1	3/8	3/8	3/4
3	1	1-1/2	3/8	3/8	3/4
4	2	2	11/16	1/2	1-1/8

ISOLATEK INTERNATIONAL — Type D-C/F, HP, or II, Type EBS or Type X adhesive.

- 7A. **Alternate Protection material** — **Spray-Applied Fire Resistive Materials*** — Applied by mixing with water and spraying in one or more coats to the thicknesses shown below, to steel surfaces which are clean and free of dirt, loose scale and oil. Use of Type PC Pre-coat is required on all cellular units when Types 300, 300AC, 300ES, 300HS, 300N or SB are used. Type PC Pre-coat shall be applied to cover approximately 70 percent of the flat plate surface. Thickness of the Type PC Pre-coat is included in the total thickness or the protection material. Min average and min individual density of 15 and 14 pcf, respectively. For method of density determination, see Design Information Section, Sprayed Material.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl In.	Steel Deck	
			Beam W8x28 Fluted Unit	Beam W8x28 Cellular or Blend	
2	1	1	5/16	5/16	3/8

2013 FIRE RESISTANCE DIRECTORY - ISOLATEK

90

FIRE-RESISTANCE RATINGS - ANSI/UL 263 (BXUV)

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl In. Beam W8x28 Fluted Unit	Beam W8x28 Cellular or Blend	Steel Deck
3	1-1/2	1-1/2	9/16	1/2	3/8

BERLIN CO LTD —Types 300, 300ES, 300N or SB.

ISOLATEK INTERNATIONAL —Types 300, 300AC, 300ES, 300HS, 300N, or SB and Type PC.

LUCKY CORE INSULATING MATERIALS

MANUFACTURING L L C —Types 300, 300ES, 300N, or SB.

NEWKEM PRODUCTS CORP —Types 300, 300ES, 300N, or SB.

- 7B. **Alternate Protection material — Spray-Applied Fire Resistive Materials*** — Applied by mixing with water and spraying in one or more coats to the thicknesses shown below, to steel surfaces which are clean and free of dirt, loose scale and oil. Min average and min individual density of 17.5 and 16 pcf, respectively for Type 300TW. Min average and min individual density of 22 and 19 pcf, respectively for Type 400. For method of density determination, see Design Information Section, Sprayed Material.

Restrained Assembly Rating Hr	Unrestrained Assembly Rating Hr	Unrestrained Beam Rating Hr	Spray Applied Fire Resistive Mtl In. Beam W8x28 Fluted Unit	Beam W8x28 Cellular or Blend	Steel Deck
2	1	1	5/16	5/16	3/8
3	1-1/2	1-1/2	9/16	1/2	3/8

ISOLATEK INTERNATIONAL — Types 300TW, or 400

LUCKY CORE INSULATING MATERIALS

MANUFACTURING L L C —Type 400

NEWKEM PRODUCTS CORP —Type 400.

8. **Metal Lath — (Not shown)** — For use on cellular steel floor units when Type 400 is used — 3/8 in. diamond, expanded steel weighing 3.4 lb per sq yd, secured to underside of the cellular units. The lath is to be placed with the ribs upward and secured with S-12 by 3/8 in. long pan-head, self-drilling, self-tapping steel screws spaced max 12 in. OC. Steel screws, to be fitted with 1/2 in. diam steel washers.

*Bearing the UL Classification Mark