

## FIRE-RESISTANCE DESIGN

### Assembly Usage Disclaimer

#### **BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States**

#### **BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada**

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada Design Criteria and Allowable Variances

### **Design No. D948**

November 08, 2012

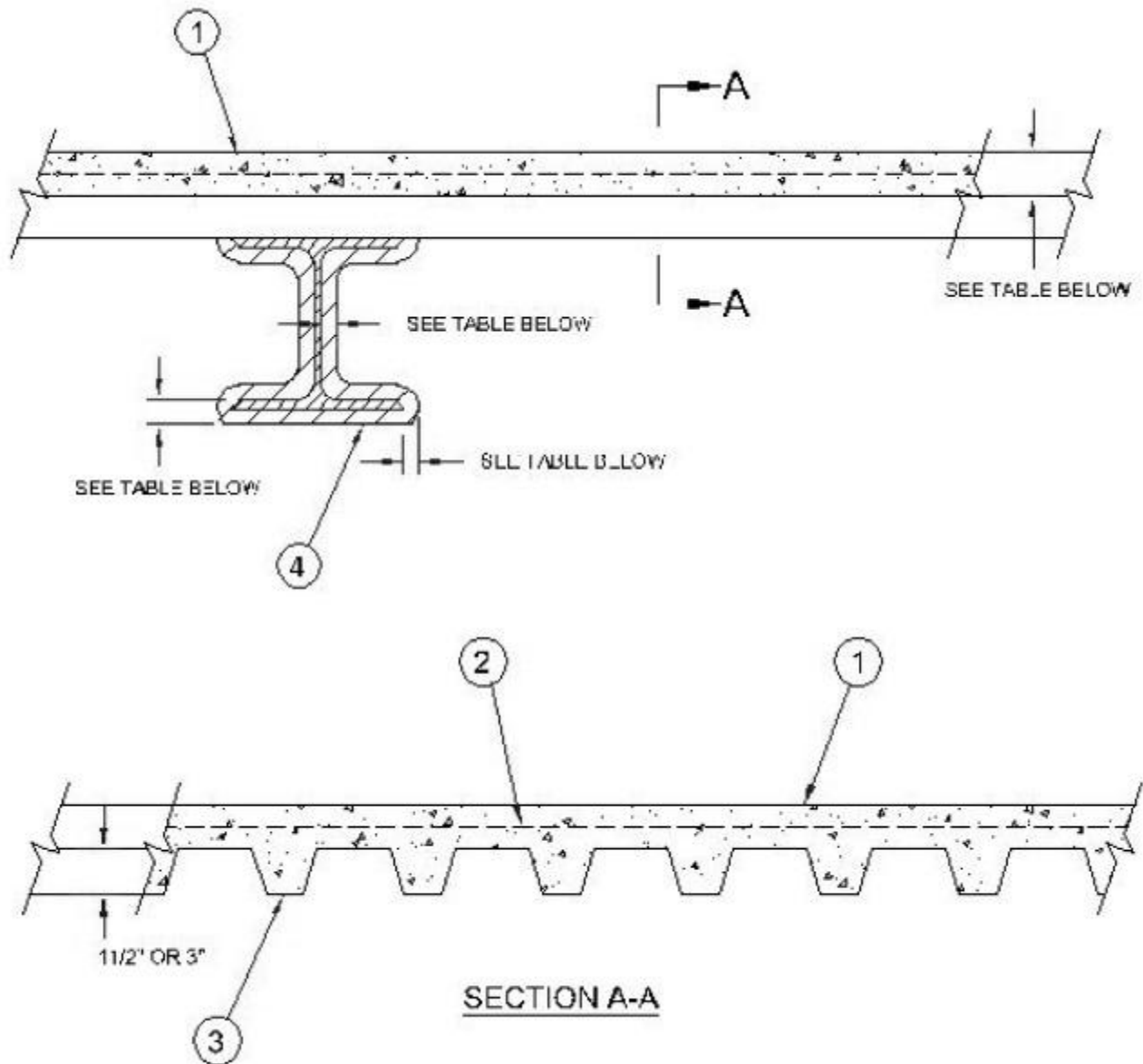
**Restrained Assembly Ratings — 1, 1-1/2, 2 and 3 Hr (See Item 4)**

**Unrestrained Assembly Ratings — 0 Hr (See Item 3)**

**Unrestrained Beam Ratings — 1 and 1-1/2 Hr (See Item 4)**

**This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide **BXUV** or **BXUV7****

**\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



**Beam** — W6x25, minimum size.

**1. Normal-Weight or Lightweight Concrete** — Normal-weight concrete, carbonate or siliceous aggregate, 3500 psi nominal compressive strength. Low-density concrete, expanded shale, clay or slate aggregate by rotary kiln method,  $110 \pm 3$  lb/ft<sup>3</sup> density, 3500 psi nominal compressive strength.

**2. Wire Wire Fabric** — 6 x 6- W1.4 x W1.4.

**3. Steel Floor Units\*** — Composite or noncomposite floor units. 22 MSG thick fluted sections, welded to supports with 3/4 in. puddle welds spaced 12 in. OC. Adjacent units button punched or welded 12 in. OC along side joints. When the maximum clear span of the steel floor units is less than or equal to the tested span of 9 ft- 6 in., the unrestrained assembly rating is increased to 1 Hr and 1-1/2 Hr to match the unrestrained beam rating.  
**DECK WEST INC** — 36 in. wide Type 3-DW.

**H H ROBERTSON** — Type QL-99, QL-WKX

**VULCRAFT, DIV OF NUCOR CORP** — 24 or 36 in. wide Types 3VLI and 3VLP. Phos/ptd Type 3VLI units.

**4. Mastic and Intumescent Coating\*** — Mastic coating spray or brush applied in accordance with manufacturer's instructions to the minimum dry film thicknesses shown below:

Restrained Assembly Rating, Hr.	Unrestrained Assembly Rating, Hr.	Unrestrained Beam Rating, Hr.	Min Concrete Cover Thickness, in		Min Dry Thickness of A/D FIREFILM on Beam, mils
			Normal-Weight Concrete	Lightweight Concrete	
1	0 (see Item 3)	1	3-1/4	2-1/2	45
1-1/2	0 (see Item 3)	1	4	2-3/4	45
2	0 (see Item 3)	1	4-1/2	3-1/4	45
3	0 (see Item 3)	1-1/2	4-1/2	Not permitted	82

**A/D FIRE PROTECTION SYSTEMS INC** — Types "A/D FIREFILM II" or "A/D FIREFILM III" or "A/D FIREFILM III C" investigated for Conditioned Interior Space Purpose and Interior General Purpose

**5. Shear Connectors** — (optional) (not shown)— Studs 1/2 in. diam. by 4 in. long, headed type, or equivalent per A.I.S.C specifications. Welded to top flange of the beam through the deck for a maximum composite action of 40 percent between Steel Beam and Concrete. Shear studs are not permitted for Restrained Assembly Rating greater than 2 hour.

**\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2012-11-08

### Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.

- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

---

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2019 UL LLC".

UL and the UL logo are trademarks of UL LLC © 2019 All Rights Reserved.