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| CSI® CONSOLIDATED SYSTEMS, INC. Metal Dek® Group | QUALITY OPERATING PROCEDURES | DATE 09/23/09 | PROCEDURE SOP 1.23.MDG |
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| | | APPROVAL Allan Abbata | |
| SUBJECT: Installation of Versa-Dek® 3.5 LS Acoustical Roof Panel (LWIC-Roof Application) Recommended Installation Guidelines | | | |

1.0 SCOPE

Versa-Dek® 3.5 LS Acoustical Roof Panel is a pre-assembled product manufactured in the plant and shipped to the job site. This SOP describes procedures for field installation of this product. The **Versa-Dek® 3.5 LS Acoustical Roof Panel** profile contains factory installed acoustical insulation batts, plastic lath and prefabricated metal cap covers with EPDM end plugs. This product is used as a metal form to contain, control and limit the boundaries of a lightweight insulating concrete (LWIC) roof system. When used as part of a system described above, the **Versa-Dek® 3.5 LS Acoustical Roof Panel** must be installed so that the deck ribs line up and therefore present a smooth panel cell transition at the abutted unit ends. End closures are commended and may be required.

2.0 RESPONSIBILITIES

The **Metal Dek Group®** is responsible for manufacturing the **Versa-Dek® 3.5 LS Acoustical Roof Panel** according to the required deck layout dimensions and installation directives set by the Engineering Group. The product will be delivered to the jobsite as a complete assembly that includes a roof deck panel with acoustical insulation batts, plastic lath, EPDM end plugs and prefabricated metal cap covers. The Deck Erector is responsible for installing the **Versa-Dek® 3.5 LS Acoustical Roof Panels** and associated accessories as shown on the Deck Erection Drawings. (See Typical Erection Drawings listed below in Item No. 6 Forms and Records). The roofing subcontractor is responsible for installing the lightweight insulating concrete fill system as specified in the Project Contract Documents (See 7.0 Procedures for additional responsibilities).

3.0 REFERENCES

1. SDI Manual of Construction with Steel Deck
2. Steel Deck Institute Design Manual - Latest Publication
3. **Metal Dek Group®** Erection (Approved Field Use) Drawings
4. Figure 1 - **Versa-Dek® 3.5 LS Acoustical Roof Panel** (Single Span)
5. Figure 2 - **Versa-Dek® 3.5 LS Acoustical Roof Panel** (Double Span)
6. Figure 3 - **Versa-Wedge™ 3.5 WC** Hanger Clip and Load Table

4.0 REQUIREMENTS

The Deck Erector must be experienced in installing this type deck and be thoroughly knowledgeable with the Steel Deck Institute, Code of Recommended Standard Practice and Manual of Construction with Steel Deck. All parties involved, including but not limited to, Architect, Engineer of Record, General Contractor, Steel Fabricator, Steel Erector and Roofing Contractor should receive and review documented field installation procedures for **Versa-Dek® 3.5 LS Acoustical Roof Panel**. The ultimate review and execution of this procedure will be the responsibility of the GC.

5.0 DEFINITIONS

Prefabricated Metal Cap Cover - A device used to separate concrete from acoustical areas of the deck profile.

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6.0 FORMS AND RECORDS

Deck Erection Drawings (Final Field Use Dek Drawings)

7.0 PROCEDURES

(Manufacturers Recommendations)

The following procedures reflect the recommended installation guidelines set forth in standards developed by the deck manufacturer. The **Versa-Dek® 3.5 LS Acoustical Roof Panel** supplied is a custom product shall not be installed without a total understanding of the supplied erection drawings and these installation procedures.

1. Install the *Versa-Dek® 3.5 LS Acoustical Roof Panel* in accordance with the SDI Manual of Construction with Steel Deck and the *Metal Dek Group® Erection Drawings with General Notes*. The specific location of *Versa-Dek® 3.5 LS Acoustical Composite Roof Panel* is depicted on the *Metal Dek Group® Erection Drawings* designated as "Final Field Use Dek Drawings".

2. Recommended Procedures to Properly Install *Versa-Dek® 3.5 LS Acoustical Roof Panel*:

- Installation of the initial roof deck panel is critical to achieve proper bearing and straight alignment of the entire deck system. Refer to the "Recommended Installation Procedures and General Notes - Deck Placement" on the Erection Drawings.
- The side lap connection is achieved by placing the starting edge (female leg) over the preceding panel trailing edge (male leg) to align the side lap for attachment to the next panel. (See Fastening Detail on Dek Drawings).
- Maintain the profile cover width by "stretching" the deck to the proper cover width dimension.
- Prior to stretching and attaching the panel to the supporting structural members, check the prefabricated metal cap covers, insulation batts and EPDM end plugs making sure the supporting members are exposed for deck attachment.
- Apply a flame resistant tape to the end plugs prior to deck attachment.
- Attach each panel to supporting structural members and then attach the side lap joint with #10 screws or arc puddle welds spaced as shown on the Deck Erection Drawings.
- Cover all metal cap joints with 2" wide adhesive (duct) tape to minimize concrete leakage.
- Repeat the above procedures until all roof panels are installed.

3. Prior to the roof deck panels being installed as shown on the deck erection plans, it will be necessary to make sure all deck ribs and rib openings are lined up with the specified dimensions. It is the deck manufacturer's recommendation that a gauge block be used to measure the rib gaps to insure proper alignment and appearance.

4. Subcontractors are to adhere to all OSHA standards for maintaining field construction practices. Access cover components may contain sharp edges and proper field precautions should be implemented.

5. Locations of openings in the *Versa-Dek® 3.5 LS Acoustical Roof Panel* shall be the responsibility of the trades requiring them. These openings shall be field cut and reinforced as required by the Engineer of Record. Holes shall be cut prior to installation of the above deck roofing materials. The penetrations shall be cut in such a manner as to present a neat appearance without burrs or sharp edges and in accordance with the SDI Manual of Construction for Steel Decks.

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6. Extreme care shall be used to protect the *Versa-Dek® 3.5 LS Acoustical Roof Panel*, including the insulation batts, plastic lath, prefabricated metal cap covers and EPDM end plugs from being damaged prior to, during and after installation.

7. Suspended ceilings, light fixtures, duct works and/or other utilities are permitted and can be suspended from the *Versa-Dek® 3.5 LS Acoustical Roof Panel*. Any such work must be approved and with expressed written permission from the Engineer of Record. The *Metal Dek Group®* has developed a series of hanger systems to suspend individual point loads up to 100 lbs per hanger. The hangers (referred to as *Versa-Wedge™*) can be acquired by calling 803.251.5029. (This provides a direct contact with the Project Services Group). Visit our website at <http://www.metaldek.com/> or click on [Design Unleashed - Versa-Wedge™](#) for more information.

8. Any instance in which a situation arises that is not covered in this SOP, contact is to be established with the *Metal Dek Group®*, Project Services Group to provide guidance to resolve the issue before proceeding.

This SOP is offered as the *Metal Dek Group's* recommendation. It is not intended as a guarantee or as a requirement. Successful installation can be achieved by following this procedure. The responsibility for appropriate quality installation and safety procedures ultimately lies with the GC and the subcontractors involved. The *Metal Dek Group®* is available to answer questions or concerns associated with this SOP.