

GUIDE SPECIFICATION FOR VIBRAFLEX® PROTECTION COURSE: ASPHALTIC PROTECTION BOARD FOR BRIDGE DECK WATERPROOFING

SECTION 07 10 00

DAMPPROOFING AND WATERPROOFING

Specifier Notes: This guide specification is written according to the Construction Specifications Institute (CSI) MasterFormat 2010. The section must be carefully reviewed and edited by the architect or engineer to meet the requirements of the project. Coordinate this section with other specification sections and the drawings.

Specifier Notes: W. R. MEADOWS® VIBRAFLEX bridge deck protection course is a multi-ply, semi-rigid asphalt panel composed of a mineral-fortified asphalt core between one liner of asphalt-saturated felt and one layer of fiberglass. One liner is weather-coated and has a polyethylene film facing. It may be used in conjunction with most types of built-up dampproofing and waterproofing membranes, including liquid membranes, sheet membranes of EPDM, butyl, neoprene rubber, polyvinylchloride, as well as built-up systems. It is equally adaptable to concrete, wood, steel, and pre-stressed or precast concrete structures that require waterproofing. VIBRAFLEX is ideal for both new and remedial waterproofing applications.

Developed by W. R. MEADOWS in conjunction with some of the nation's leading railroads, VIBRAFLEX provides a top-quality protection course that can be dry installed and is fully compatible with butyl sheeting and most sophisticated waterproofing membranes. It will withstand forces that would otherwise injure or deteriorate the membrane waterproofing material and destroy the integrity of the waterproofing system.

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Application of a waterproofing protection course.

1.02 RELATED SECTIONS

Specifier Notes: Edit the list of related sections as required for the project. List other sections dealing with work directly related to this section.

- A. Section 03 30 00 - Cast-in-Place Concrete.
- B. Section 07 12 00 - Built-Up Bituminous Waterproofing.
- C. Section 07 13 00 - Sheet Waterproofing.
- D. Section 07 14 00 – Fluid Applied Waterproofing.
- E. Section 33 46 00 – Subdrainage.

1.03 REFERENCES

- A. AREMA® Specification: Chapter 29 for Membrane Waterproofing

1.04 SUBMITTALS

- A. Comply with Section 01 33 00 - Submittal Procedures.

- B. Submit manufacturer's product data and application instructions.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Store materials in a clean, dry area in accordance with manufacturer's instructions.
- C. Protect materials during handling and application to prevent damage or contamination.
- D. Do not apply protection course over liquid-applied waterproofing membranes containing volatile solvents until all of the solvent has evaporated.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Product not intended for uses subject to abuse or permanent exposure to the elements.

PART 2 PRODUCTS

2.01 MANUFACTURER

- A. W. R. MEADOWS, INC., PO Box 338, Hampshire, Illinois 60140-0338. (800) 342-5976. (847) 683-4500. Fax (847) 683-4544. Web Site www.wrmeadows.com.

2.02 MATERIALS

- A. Protection Course: Multi-ply, semi-rigid asphalt panel composed of a mineral-fortified asphalt core between one liner of asphalt-saturated felt and one layer of fiberglass. One liner is weather-coated and has a polyethylene film facing.
 - 1. Performance Based Specification: bridge deck protection course shall meet the requirements of AREMA, Chapter 29, Section 29.10.
 - 2. Proprietary Based Specification: VIBRAFLEX bridge deck protection course by W. R. MEADOWS.

Specifier Notes: Select 3/8" or 1/2" thickness of VIBRAFLEX protection course based on project requirements.
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- a. 3/8" (9.53 mm).
- b. 1/2" (12.7 mm).

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine surfaces to receive protection course. Notify architect or engineer if surfaces are not acceptable. Do not begin application until unacceptable conditions have been corrected.

3.02 SURFACE PREPARATION

- A. Prior to application, consult the waterproofing manufacturer to determine whether the polyethylene film facing on one side, or the asphalt-impregnated fiberglass mat on the other side of protection course, is approved as compatible to the specific waterproofing product being placed.
- B. Clean and prepare surfaces to receive protection course in accordance with manufacturer's instructions.
- C. If water testing is required, perform prior to application of protection course.

3.03 APPLICATION

Specifier Notes: To reduce the possible ingress and infiltration of fines to a minimum and provide maximum membrane protection, VIBRAFLEX panels are installed in two layers using the dual layout application theory. This theory, shared by many railroad engineers, states that the longer the ballast is in place, the greater the degree of build up or concentration of fines at the lowest possible level. In this case, the point at which the ballast is in direct contact with VIBRAFLEX. Normal gravitational movement, vibration movement of the ballast, and liquid flowing in the direction of the membrane concentrates these fines, and gradually, a crust-like surface develops on top of the VIBRAFLEX material. Because of the staggered joint system, the fines do not work their way through the full material thickness (since only one half the joint area is present at any one point), so the integrity of the waterproofing membrane is preserved.

- A. Install protection course as soon as permissible by membrane applicator or manufacturer.
- B. Install first layer of protection course directly on the waterproofing membrane, with each edge butted tightly to the next.
- C. Cut to fit all intersecting surfaces and protrusions.
- D. Apply second layer with the butt joints staggered on a half-sheet module to avoid coincidence with the joints of the first layer.

3.04 PROTECTION

- A. Ensure wearing surface is applied as soon as possible following protection course application.

END OF SECTION