



Standard Guide for Standard Details for Adhered Sheet Waterproofing¹

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1. Scope

1.1 This guide covers details for typical conditions encountered in adhered sheet waterproofing on below grade structures and plazas.

1.2 This guide does not cover liquid applied waterproofing.

2. Referenced Documents

2.1 ASTM Standards:

D 1079 Terminology Relating to Roofing, Waterproofing and Bituminous Materials²

3. Terminology

3.1 *Definitions*—For definitions of terms used in this standard, refer to Terminology D 1079.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *adhered sheet waterproofing, n*—a system consisting of one or more plies of organic or glass fiber felts or fabrics applied in hot or cold bitumens or modified bitumens, or one or more plies of a manufactured sheet of modified bitumen that may be reinforced or laminated with scrim or polyethylene, or a polymeric or vulcanized elastomeric membrane. The system is applied directly to concrete or masonry surfaces below grade.

3.2.2 *elevated slab, n*—a framed or suspended concrete slab over a habitable or useable space.

3.2.3 *fillet, n*—liquid applied modified bitumen or mastic used at internal corners before membrane application to form a transition of less than 90°.

3.2.4 *reinforcement, n*—generally, one or more strips of membrane, felts, or fabrics, installed at corners and over construction joints.

3.3 Abbreviations:

3.3.1 *LAM*—liquid applied membrane.

3.3.2 *SS*—stainless steel.

3.3.3 *EJ*—expansion joint.

3.3.4 *NR*—not recommended.

3.3.5 *MTL*—noncorrosive metal.

4. Significance and Use

4.1 This guide illustrates general details for below grade and plaza waterproofing. It serves as a guide that will enable the designer to prepare complete waterproofing details for each specific condition that occurs on a project.

5. Drawings

5.1 This guide is not all inclusive. The designer should detail all typical and special conditions on the project, paying particular attention to transitions in plane and intersection of different details. The applicator should provide shop drawings of each condition to confirm field conditions and to verify his understanding of the design intent.

5.2 Waterproofing membranes and reinforcement are indicated on the figures as a single thick line, regardless of the number of plies.

5.3 Protection layers have been omitted for clarity. See Section 6.

6. Protection

6.1 Protection materials are required over all waterproofing to prevent damage from backfill, reinforcing chairs, and construction traffic, unless the membrane system incorporates an integral protection layer. Protection also is required where membranes terminate above grade and may be exposed to ultra-violet light.

6.2 Materials for protection include: asphalt composition boards, plastic drainage panels, low density expanded polystyrene boards, and extruded polystyrene insulation. Low density expanded polystyrene boards and some types of plastic drainage panels are not suitable for protection on horizontal surfaces. Protection materials are loose-laid on horizontal membranes and attached to vertical membranes with compatible adhesives. They should be installed as soon as possible after the membrane, or each portion of it, is completed or water tested.

7. Reinforcement

7.1 Reinforcement is required for built-up and modified bitumen membranes at transitions, such as internal and external corners and at static concrete construction joints and cracks. Reinforcement also is required where reinforcing bars, pipes,

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² *Annual Book of ASTM Standards*, Vol 04.04.