

Single-ply advice

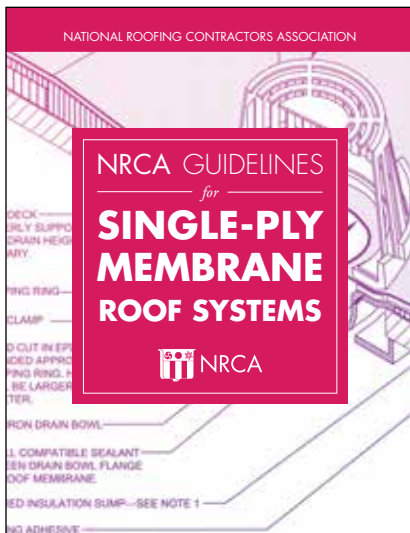
Single-ply roof system guidelines provide NRCA's best-practice recommendations

by Mark S. Graham

NRCA recently published *NRCA Guidelines for Single-ply Membrane Roof Systems*. The document provides NRCA's best-practice guidelines applicable to materials, design and installation of single-ply membrane roof systems in a single volume.

Single-ply guidelines

NRCA Guidelines for Single-ply Membrane Roof Systems is arranged in a 10-chapter format with two appendices.



Chapter 1—Roof System Configurations describes various single-ply roof systems and directs users to other chapters for more detailed descriptions of roof assembly components (roof decks, insulation, membrane types, etc.).

Specific descriptions are provided for adhered; mechanically attached; and ballasted, loose-laid single-ply roof system configurations used in new construction and roof system replacement operations. Separate configuration descriptions are provided for roof re-cover operations. Overall, 15 configuration descriptions are provided.

Chapter 2—Roof Decks provides information and NRCA's recommendations for structural roof decks used as components of single-ply membrane roof assemblies. Recommendations for cementitious wood fiber

panels; lightweight insulating and structural concrete; steel; and wood panels, planks and boards are provided.

Chapter 3—Air and Vapor Retarders provides NRCA recommendations for air and vapors used as components of single-ply membrane roof systems. The use of air retarders often is dictated by the applicable code, and vapor retarders mostly are dictated by building design requirements.

Chapter 4—Rigid Board Insulation provides information about cellular glass, polystyrene, gypsum, stone wool, perlite, polyisocyanurate, wood fiberboard, asphalt core board, cement board, composite boards and tapered insulation used in single-ply membrane roof systems. NRCA recommends insulation boards be designed for a minimum two-layer application and plastic foam insulations be covered with a suitable cover board before membrane application.

Chapter 5—Roof Membranes provides NRCA recommendations for EPDM, PVC, PVC alloys, TPO and KEE membranes used in adhered; mechanically attached; and ballasted, loosely laid configurations.

Chapter 6—Fasteners provides information about fasteners and fastener patterns used in single-ply membrane roof systems. NRCA considers it the designer's responsibility to determine the required fasteners and fastening patterns and clearly indicate this information in a project's drawings and specifications.

Chapter 7—Surfacings provides information about membrane surfacing options applicable to single-ply membrane roof systems, including coatings, aggregate and paver ballast, and vegetative roof system growth media.

Chapter 8—Roof Accessories provides

NRCA's recommendations for equipment curbs, expansion joint covers, skylight and smoke hatches, prefabricated pipe flashings and pipe supports used as components of single-ply membrane roof assemblies.

Chapter 9—Reroofing discusses how to evaluate existing roof systems, building code requirements, roof decks, preparation of existing roof surfaces, and re-cover and replacement guidelines applicable to single-ply membrane roof systems.

Chapter 10—Construction Details provides NRCA recommendations for membrane terminations and 72 typical construction details, including those specific to EPDM and thermoplastic single-ply membrane roof systems.

The appendices provide information about wind-uplift design and rooftop photovoltaic system installations applicable to single-ply membrane roof systems. NRCA considers it a designer's responsibility to determine design wind loads and wind resistances. Designers should not place the responsibility for determining roof system or individual component design wind uplift on manufacturers, component suppliers or installers, or roofing contractors.

Get it

NRCA Guidelines for Single-ply Membrane Roof Systems' digital version is offered to NRCA members free of charge on shop.nrca.net and on the NRCA App, available through the Apple App Store, Google Play or Windows Store. Members and nonmembers can purchase a hard copy at shop.nrca.net. 📱📖

MARK S. GRAHAM is NRCA's vice president of technical services.