We have what you need

NRCA offers essential tools and resources for roofing professionals

by Nick Gallagher

NRCA's Technical Services Section plays an important role in providing tools and guidelines that address the complexities of roof system design, installation and maintenance. By leveraging these resources, roofing professionals can ensure roof systems meet rigorous standards for safety and performance and enhance professionals' capabilities to install high-quality roof systems.

Publications

The NRCA Roofing Manual provides extensive information about the design, materials and installation techniques applicable to almost all types of roof systems. Its current version contains the following four volumes: *The NRCA Roofing Manual: Steep-slope Roof Systems—2025; The NRCA Roofing Manual: Metal Panel and SPF Roof Systems—2024; The NRCA Roofing Manual: Membrane Roof Systems—2023;* and *The NRCA Roofing Manual: Architectural Metal Flashing and Condensation and Air Leakage Control—2022.*

NRCA's other technical publications provide additional information addressing low- and steep-slope roof systems; building code requirements; application guidelines; inspection and maintenance recommendations; and roof system design and practice.

NRCA's *Repair Manual for Low-slope Membrane Roof Systems, 2nd Edition* is a step-by-step guide of industry best practices for the repair of low-slope membrane roof systems, including thermoplastic and thermoset roof membranes, polymer-modified bitumen and built-up roofing, and mechanically attached metal flashings.

The *NRCA Repair Manual for Asphalt Shingle Roof Systems* provides photos, instructions and step-by-step procedures for more than 30 common asphalt shingle roof system repairs.

The *NRCA Waterproofing Manual—2nd Edition* offers guidance about design, quality materials and workmanship, water stops, warranties, material storage and handling, weather considerations, slope and drainage, flashings and more.

The *NRCA Metal Wall Panel Systems Manual* provides industry best practices and technical information concerning the design, materials and installation of metal wall panel systems. It includes information about exterior wall cladding systems constructed with single-skin metal panels, metal composite material panels, aluminum plate panels and insulated metal panels.

All technical publications in electronic format are free for NRCA members to download at nrca.net. Hard copies can be purchased, as well.

Instructions for downloading technical publications are available at nrca.net/bookstore/how-to-download-electronic-purchases.

Edge-metal testing

NRCA maintains separate certifications with two code-approved testing and certification agencies, UL Solutions and Intertek Testing Services NA Inc., based on two standards:

- ANSI/SPRI/FM 4435/ES-1, "Test Standard for Edge Systems Used With Low Slope Roofing Systems"
- ANSI/SPRI GT-1, "Test Standard for External Gutter Systems"

Both are referenced in the *International Building Code,® 2024 Edition*, as test requirements for edge-metal flashing systems and gutters and sometimes referenced in project specifications as a requirement for edge-metal flashings and gutters.

These certifications provide roofing contractors with the ability to fabricate their own edge-metal and gutters if they have the metal fabrication abilities to do so.

For further information about the certifications, visit nrca.net/roofing-guidelines and click Testing of Shop-fabricated Edge Metal.

The certifications are available to NRCA members and nonmembers, but NRCA members receive a significant discount to use the certifications.

EnergyWise Roof Calculator

EnergyWise Roof Calculator can generate reports summarizing a proposed roof assembly design, estimated heating and cooling costs, and required minimum thermal requirements. It is a user-friendly application that prompts users to enter specific roof assembly information such as roof area, climatic region, heating type and cost, roof openings and roofing materials to be used.

EnergyWise Roof Calculator is free for NRCA members and nonmembers. Users can register for an account at energywise.nrca.net.

Roof Wind Designer

Roof Wind Designer is intended to provide an easy-to-use means for determining roof systems' design wind loads for many building types that are subject to building code compliance.

Design-wind loads are derived using ASCE 7, "Minimum Design Loads and Associated Criteria for Buildings and Other Structures." This standard is a widely recognized consensus standard and serves as the technical basis for wind load determination in the International Building Code and NFPA 5000: Building Construction and Safety Code. Roof Wind Designer allows users to choose between ASCE 7's 2005, 2010, 2016 and 2022 editions.

The ASCE 7-22 option includes the most accurate, broadly applicable calculations. One major change to the standard in 2022 was how it addresses tornado loads, which, in some cases, need to be designed with a separate calculation. The update helps users determine whether tornado loads need to be considered and calculated in addition to wind loads.

Roof Wind Designer is free for NRCA members and nonmembers. Users can register for an account at roofwinddesigner.nrca.net.

A complete library

NRCA offers a complete library of roofing guidelines and recommendations for members and nonmembers alike. You can browse the collection at shop.nrca.net.

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