

The background of the entire page is a photograph of several rolled-up architectural blueprints. The blueprints are unrolled in a way that shows various technical drawings, including floor plans, elevations, and sections. The drawings are in black ink on white paper. The blueprints are arranged in a row, with some overlapping others. The lighting is dramatic, with strong highlights and deep shadows, creating a sense of depth and focus on the technical details of the drawings. The overall color palette is dominated by the white of the paper and the black of the ink, with some blue tones from the background lighting.

SCOTT D. BONK ASSOCIATES, INC.
A ROOF AND WATERPROOFING CONSULTING FIRM

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THE BUILDING ENVELOPE

11691 GATEWAY BOULEVARD
SUITE 102
FORT MYERS, FLORIDA 33913
TELEPHONE (239) 768-3654 - TOLL FREE 1-888-995-0661
FACSIMILE (239) 768-1064 - EMAIL: scott@scottbonk.com
WEBSITE: www.scottbonk.com



THE BUILDING ENVELOPE

The Building Envelope consists of the roofing system and façade (walls). Waterproofing these areas is key to eliminating water intrusion inside the building.

ROOFING SYSTEM

The roofing system must be properly designed, specified, inspected and installed for the expected performance. The roofing system should be designed for sustainability (long term use), eliminating a premature costly roof replacement.

Flat roof substrates with a permanently designed slope are desired, eliminating continuing removal and replacement of the sloping components. Roofing membranes over a permanently installed sloped substrate provide long term performance with proper roof maintenance. The end user recognizes savings during the roof replacement process because the permanently designed sloped substrate remains in place. Only the roofing membrane is required to be replaced. High "R" values in the substrate components reduce "green house" gas and result in improved energy savings. Reflectivity (green) of membrane colors add to energy savings.

Sloped roof substrates should be designed to be sustainable and utilize green components for energy savings. Metal panels, shingles, wood shakes, tile and slate can be specified, inspected and installed for long term performance. Insulation can be installed under these components for energy savings, and reflective colors are also available.

Sheet metal flashings are a very important component of any roofing system for performance and sustainability. Metal flashings are available in numerous colors and finishes that require little to no maintenance. Proper design and installation methods are required for long term performance.

FAÇADE

The façade (walls) must be properly designed, specified and inspected for performance. The waterproofing components must be designed for sustainability and green components should be considered in the entire design.

WATERPROOFING THE FACADE

The preparation on all buildings acts as the foundation of the waterproofing components and is critical for the performance of the entire specified system.

Components must be applied on wall surfaces to eliminate chalking following a complete surface preparation. The preparation process includes pressure washing, repair of existing deficient items on the wall surface, surface preparation components, application of sealants, and the final painting or sealing process. Millage, application methods and integrity of application all play a part in the performance of the façade wall waterproofing.

Windows are located on most façade walls and can be a major contributor to water intrusion. Installation of the window for code and manufacturer compliance is critical for the performance of the window. Applying specific components before, during and following the window installation is critical for eliminating water intrusion.

Sealants are a major part of all components of the waterproofing system. Sealant type, method of application, location of the sealant and final painting or sealing application will result in a complete application for the window and/or penetration interfacing with the façade.

Painting or sealing should be specified to consider the environment, voc's, color and type of product for the specific application. Not all painting or sealing products are suitable for every application. Facade type, surface type and environment must be considered by the specifier.

The building envelope can be free from water penetration from the roofing system to the façade walls. Specifying specific components, application methods and creating project specific details followed by field inspections for compliance will complete the process of the Building Envelope.

Roofing systems perform for many years when properly specified, installed and inspected. A typical roofing system warranty is twenty (20) years when properly specified and typically includes all roofing components such as roof insulation and membrane plies and installation.

Waterproofing systems perform when properly specified, applied and inspected. A typical painting application warranty is seven (7) years. Typically additional or new sealants are not required following the initial application, resulting in a cost savings to the end user.

The building envelope should be properly inspected annually for performance and identification of any deficiencies that may occur. Flat roofing manufacturers receive annual inspections for warranty compliance. The building envelope can and should be free from water intrusion.

Scott D. Bonk has been in the roofing and waterproofing industry since 1977 and is the president of Scott D. Bonk and Associates Inc. The firm provides professional consulting services for report analysis, design and specifications and drawings, site inspections for compliance, and expert testimony.



for more information, contact:

SCOTT D. BONK AND ASSOCIATES, INC.

11691 Gateway Boulevard, Suite 102

Fort Myers, Florida 33913

Main Office: (239) 768-3654

Toll Free: (888) 995-0661

Fax: (239) 768-1064

Email: Scott@scottbonk.com

www.scottbonk.com