

TECHNICAL PUBLICATION

FAÇADE WATERPROOFING

All buildings have a façade (the outside building wall) and is the barrier between a living or storage space. Waterproofing measures are implemented to maintain the façade to remain in a watertight condition. Water/moisture enters facades at penetrations, such as windows and doors, stucco bands (decorative bands installed on stucco walls) and through the walls. A lack of maintenance on a stucco façade will allow water/moisture to enter through the cementitious material and eventually penetrate inside the building. Façade maintenance consists of waterproofing the exterior wall to include installing sealants at applicable locations. Proper products and installation methods are two keys items in successfully implementing waterproofing procedures on a façade.

Preparation

The exterior of the façade will require cleaning to remove all dirt, debris, mildew, chalking paint and contaminants. Chemicals mixed with water and water pressure must adhere to specifications to eliminate destroying existing components. Following an adequate application of removal of all foreign materials a thorough rinsing with clear water is required. Without proper preparation, the waterproofing products and sealants will not adhere, resulting in a failed attempt to maintain the façade.

Repair Of Existing Façade Materials

Implementing repairs of existing deteriorated or destroyed materials must be implemented to restore the existing façade to a serviceable condition. Removing deteriorated materials may require extensive shoring (braces) to be installed during the replacement process to eliminate structural failure. Repairs to the existing façade may be only cosmetic or extensive as structural replacement. These repairs act as the foundation to receive the waterproofing materials. Surfaces with delaminated or peeling coating must be treated and may require removal with power tools to achieve a sound condition.

Preparation Of Wall Surfaces

Preparation is essential for the adhesion of all products. New stucco or wood must receive an application of primer prior to applying any waterproofing products. Sealants may be required to be installed at specific locations that encompass the repair. Numerous sealants are available to include one or two part components. Structural sealants are available and are used in specific location.

Cracks in cementitious materials must be properly treated. The size of the crack determines the treatment to be implemented. Power tooling may be required and sealants installed to allow for expansion and contraction. This treatment also acts as the foundation to receive waterproofing materials.

Action should be taken to determine if the cracks are a result of typical movement or if structural movement has occurred. Further investigation may be required.

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Sealants

Sealants are required to be installed at all penetrations to include windows, doors, stucco bands, control joints, change in vertical and horizontal walls and penetrations such as electrical and plumbing protrusions. The proper sealant is required and is key for performance.

Structural sealants are required at specific locations. Existing sealants and rubber closures at glass items may be required to be replaced and the entire glass resealed. These locations are windows, doors and skylights. Adhesion is critical for the sealant to perform and thorough cleaning is required to achieve an acceptable application.

Waterproofing Coating

The selection of the manufacturer and installer will dictate the length of life and guarantee of the products specified and installed. Numerous manufacturers and products are available in the marketplace and can be a maze for the novice to choose from.

All products must be compatible and the installation methods fully understood to result in successfully maintaining a façade. Products vary for wood and cementitious materials. Guarantees vary by manufacturers and specific criteria may be required to qualify for specified guarantees.

Coatings are to be installed in a specified thickness and specified coverage per gallon.

Specifications

Specifications are the first phase of any façade maintenance project following a thorough inspection review. The specifications clearly outline all phases of the work to be implemented. The scope of work defines the intent of the project and the remaining specifications direct the installer with each work phase. Products and product criteria are listed for each project according to the façade type and intent of the work to be implemented. All products have their place and proper specifications and direction to the installer is essential to eliminate installing incorrect products at incorrect locations. Installation methods direct the installer at all relevant locations to achieve the intent of the finished product. The function of the installed products is first and foremost followed by an acceptable aesthetic appearance. Specific details may be required for sealants at the following locations:

- **Glass to Metal**
- **Metal to Concrete**
- **Metal to Stucco**
- **Stucco to Stucco**
- **Stucco to Concrete**
- **Concrete to Concrete**

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Detailed specifications are for maintenance that pertains to the building façade. Generic specifications are not adequate and will not address all of the items on every project. Detailed specifications will clearly direct the installer with products and installation methods that are suited for the building façade.

Guarantees are specifically defined and all criteria must conform to receive the guarantee. A manufacturers and installers guarantee should always be a part of the specification.

Inspections

On site inspections are the second phase of every project. These inspections verify contractor compliance and are a must for validation. The aesthetic appearance may look perfect, however, the underlying treatment may be inadequate. For example, a worker may not properly power tool a crack in a stucco wall and cover the crack with sealant. The sealant will bridge a certain width and then fail, resulting in a void. Inspections will validate all phases of the work that is specified to be implemented. The inspections should be implemented at specific intervals to validate the installed work.

Summary

A building façade is always visible, should function as designed and be aesthetically pleasing. This can be achieved by maintaining the façade on a regular basis. Maintaining the façade will eliminate water intrusion and severe destruction to all components. Severe structural deterioration will result without proper maintenance.

Regular inspections should be implemented annually or every two years by a non-biased third party professional that does not sell products. These inspections should outline deficiencies and estimated remaining life of the waterproofing products installed.

Specifications should be implemented for façade maintenance that clearly directs the installer at all locations on the façade. A generic specification is not adequate. Every building is different and all products and methods will not perform on every building. Specifications should be clear, include details for specific locations and be specifically designed for every building. Regular on site inspections during the course of the project will confirm contractor compliance.

A qualified professional should be engaged to specify, design and field inspect your project.