

# Regular Stucco Inspection and Maintenance

Exterior stucco veneer is a widely used finish material for walls and occasionally as soffits. The cement stucco system is typically a masonry cladding made from sand, cement, and water. It is applied over building paper backed wire lath fastened to wood sheathing in a wood-framed wall assembly. It can also be applied over concrete block or poured-in-place concrete walls. Cement stucco is generally applied in a three-coat system on a wood assembly and in a one- or two-coat application on a concrete substrate. While the control of subsurface moisture varies somewhat for these various substrates, this paper only addresses the maintenance of the surface stucco which has a similarity in all assemblies.

As a clarification, this paper addresses the cement stucco system and not the exterior insulated finish system (EIFS), which is sometimes mistaken for stucco. The EIFS system is generally an acrylic or silicone coating over a polymer-modified cement material over rigid foam panels.

If not maintained and excessive water intrusion not controlled, a breakdown of the surface can occur. This can lead to salt efflorescence, staining or biological growth. This intrusion could also cause a loss of adhesion either between the stucco coats or from the substrate. Trapped water may also freeze and expand causing dramatic failure or it may move into the structural fabric of the building, possibly damaging the interior.

## Recommended Maintenance

- The preventive maintenance program should involve periodic and scheduled inspection of the surface. A good approach in wet or freezing climates is to check all stucco surfaces after the winter season when much of the climate-related damage may occur.
- Always ensure that all roof water (rain or snow melt) is collected from the roof into gutters and drains freely through downspouts away from the building exterior. Diversion flashings should be properly installed at roof and gutter termination points to ensure that water is entering gutters and not leaking between the gutters and the stucco.
- Ensure the entire gutter and downspout system are free from debris to provide adequate water drainage during heavy precipitation.
- When landscape sprinkler systems are installed, direct the spray away from the stucco cladding,

since constant water spraying will cause erosion and possible separation of the finish coat from the basecoat.

- Washing of the plaster surface will keep the surface clean and the color bright. Washing stucco walls is completed as follows:
  1. Prewet the entire wall surface, saturating it with clean water. Water should be applied starting at the bottom and continuing to the top.
  2. Use a garden hose to direct a high-pressure stream of water against the wall to loosen dirt. Start at the top and wash the dirt down the wall to the bottom.
  3. Flush remaining dirt of the wall with a follow-up application of water.
- Prewetting overcomes absorption by the plaster and prevents dirty wash water from being absorbed at the lower elevation, thereby dulling the finish. The use of high pressure spraying equipment and detergents is not recommended but may be necessary to remove accumulated surface contaminates. If used, test a small section of the plaster using low pressure with an appropriate detergent. Keep the stream of water moving over the surface to prevent erosion of the plaster and never use abrasives. Use a fan nozzle to produce a flat spray and angle spray to avoid hitting the surface of the plaster with a perpendicular stream of water.
- Chipped corners and small holes in the plaster can be patched. The patch area should be prewet before patching plaster is applied. Patching plaster should be essentially the same materials used throughout the plaster field. Apply patching materials in thin consecutive layers, troweling each layer until firm, and continue applying thin layers until the base coat plaster has been replaced. The finish coat plaster can then be applied and textured to match the surrounding plaster.

**Contact LCEF to find an Architectural Advisory Committee member near you for additional information.**



*The mission of the Lutheran Church Extension Fund is to support The Lutheran Church—Missouri Synod in the sharing of the Gospel of Jesus Christ by being a Christ-centered servant partner, ensuring that funds and services are available now and in the future.*

#### DISCLAIMER

These white papers are provided "as is" and without warranty of any kind, expressed or implied. Without limitation, there is no warranty of non-infringement, no warranty of merchantability and no warranty of fitness for a particular purpose. All warranties are expressly disclaimed. User assumes the full risk of using this specification. In no event shall LCEF be liable for any actual, direct or indirect, punitive or consequential damages arising from such use, even if advised of the possibility of such damages.