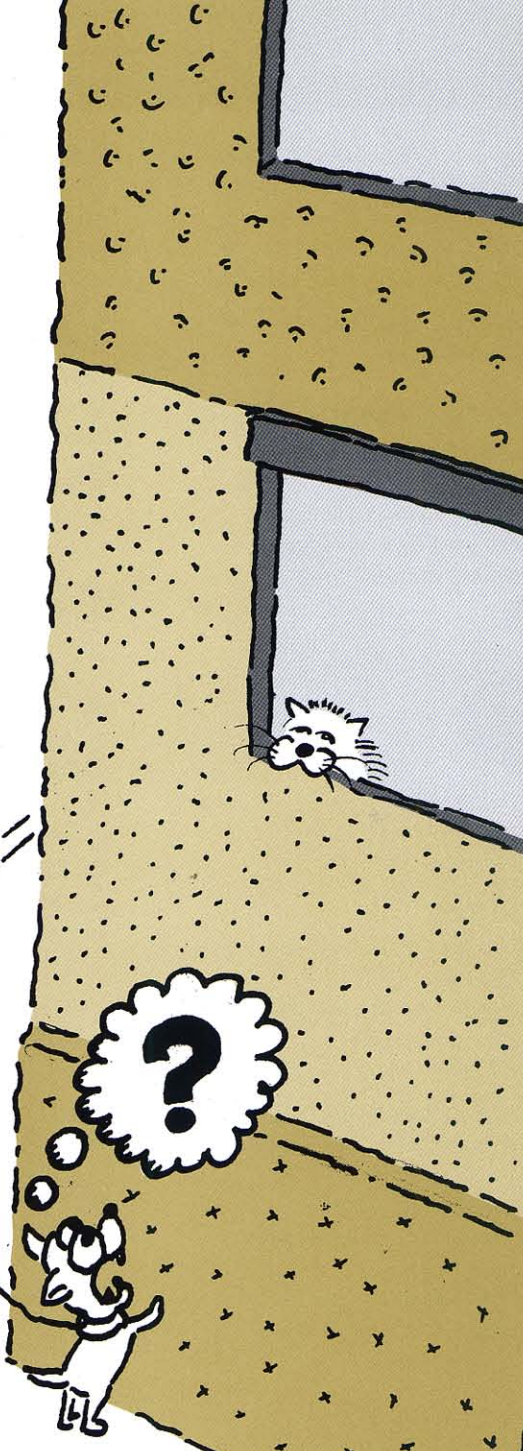




BUILDING ANALYSTS



***Exterior Finish
Misinformation***

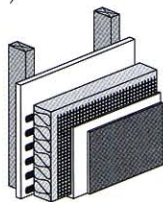
EXTERIOR INSULATION FINISH SYSTEMS (EIFS)

Since certain construction terms are often interchangeably used and misused, this newsletter is intended to clarify the distinct differences between the following: A) The Exterior Insulation Finish Systems (EIFS) B) Single-coat stucco and C) Three-coat stucco.

Each system has some advantages and disadvantages. Here is a brief discussion, with diagrams to assist.

A. THE EXTERIOR INSULATION FINISH SYSTEMS (EIFS)

Exterior Insulation Finish Systems is a "barrier" system where the outer skin of technically advanced materials acts as the water barrier (refer to sketch). In response to some failures, manufacturers have developed Exterior Insulation Finish Systems (EIFS) with secondary drainage backup systems.



ADVANTAGES OF EIFS:

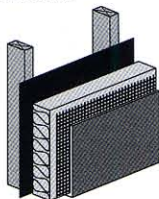
- Complicated shapes and exposed slopes can easily be accommodated.
- EIFS takes less time to install.
- There are multiple systems to choose from depending on the location and cost.
- Lighter overall system weight, lowering structural loads, is a particular advantage for taller structures.

DISADVANTAGES OF EIFS:

- In the past, substrate selection and installation errors, causing deterioration and water leaks, have plagued the building industry.
- Workmanship is critical with a "barrier" system.
- It is critical to properly seal intersections of dissimilar materials.
- The surface can be more prone to damage than single coat stucco or a three-coat stucco, unless enhanced reinforcement is undertaken.

B: SINGLE-COAT STUCCO

This is a modified stucco system consisting of a building wrap, foam insulation board and a single coat of stucco with proprietary additives (refer to sketch), and has been often confused with EIFS.



SINGLE-COAT STUCCO ADVANTAGES:

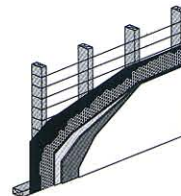
- Since only one coat of stucco is required in these proprietary systems, there is a substantial cost savings in installation time.
- The insulation, usually 1" expanded polystyrene, gives an additional insulation value to the system. (Example: In an insulated 2x4 framed wall a one-coat system can usually produce enough extra insulation value to produce a R-19 value versus a 2x4 insulated wall with a three-coat stucco would yield an R-11 rating).

SINGLE-COAT STUCCO DISADVANTAGES:

- Since there is only one coat, it is important that it is installed strictly in accordance with the manufacturers instructions, materials, and thickness to achieve intended durability. (Often outside corner intersections are too thin).
- Joints with dissimilar materials are critical to seal or flash properly.
- Special care is needed to order window and door frames that accommodate the additional thickness of the system.

C. THREE-COAT STUCCO

Traditional three-coat stucco has been used for well over seventy years and has three separate coats of stucco over a water-resistant barrier (refer to sketch).



THREE-COAT STUCCO ADVANTAGES:

- Provides a hard, durable surface that is capable of lasting the life of the building.
- Simple, widely-available, non-proprietary materials and methods, combined with redundancy of 3 layers, promotes 'tried and true' performance.

THREE-COAT STUCCO DISADVANTAGES:

- Time factor costs money for the curing of each of the three coats.
- Thickness of a 7/8 to 1" is critical to achieve strength. Similar to the one-coat stucco outside corners are often too thin and crack. Moist curing is necessary, especially in a hot, windy climate.
- Control joints are advisable at least at floor levels and large planes.
- Smooth trowel surfaces promote and readily show hairline cracks.

Building Analysts' newsletter is intended to provide general information for those involved in construction litigation. The topics contained in this publication are abbreviated and applicability to a particular situation may vary according to circumstances. Since design and construction technologies change over time, the information contained herein may become outdated. Building Analysts recommends you contact the appropriate design professional for specific information regarding individual projects.

FALL 2003 Next Issue: WHY ROOF EDGES FAIL

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