

EVALUATING, SELECTING AND PRICING METAL ROOFING PRODUCTS



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When considering a standing seam metal roof, view the situation from multiple angles. Product options and project specifics must be considered, and many questions must be asked. To begin, review the construction details and ask questions such as:

- What is the budget?
- What is the roof slope?
- Is the roof assembly steel deck with ISO and underlayment, plywood or open framing?
- What thickness/gauge/spacing is being considered?
- Does the building require additional "safe room" construction in specific areas?
- In what type of environment is this job located?
- Is it low- to mid-rise less than 30-ft. roof line elevation, or above 50-ft. or 100-ft?

Most experienced construction professionals understand that one group of exterior cladding products can be used for low- to mid-rise construction, which often is different than those for high-rise roof cladding at 100-ft. elevation or higher. Additionally, a coastal/salt water exposure site location should prompt a discussion with the design team or owner about the use of aluminum in this aggressive environment.

Consider early in the design stage whether the job is new construction or a reroof/reclad/remodel. A product evaluation path for metal roofing and metal cladding on new construction typically will present more design opportunities for the AEC manager vs. a remodel project. Design limitations can be acutely critical on remodel projects when the owner fully expects to continue occupancy of the building during exterior reroofing/exterior recladding without disrupting or vacating the building. A new set of questions and budget items go into any remodel discussion when the building is being occupied

during construction. Every manufacturing professional and contractor should ask these questions with the AEC manager early in the process, or in some cases with the owner to find a product that fits.

It's important to consider all available products before making a final selection. Most owners want competitive bids, and almost all public projects will require a specification that lists a minimum of three manufacturers' products. Sometimes a performance specification is listed in lieu of product manufacturers. It is critical that each manufacturer can decipher this performance specification in an accurate and timely manner to list the correct product in a bid. Know and understand the nuances of all brands of products. For example, if it's known that one 180-degree mechanically seamed roof panel system is not as user friendly as another, share this information.

Alternatives

When evaluating product options, a rudimentary working knowledge of all roof systems, metal cladding, metal and other siding products is required. An architect, engineer, construction manager or owner should not expect a metal roofing professional to know the ins and outs of a TPO or EPDM membrane system, or a metal cladding system of insulated metal panels, aluminum composite material, metal composite material or new products coming to the North American market from Europe, such as cementitious panels or composite kraft panels.

Premium products such as natural metals should be discussed as well. The Copper Development Association is a great source for learning about copper's long-term value for building owners. Note that contact with dissimilar metals on a job with copper must be considered. The only two metals that should be used in conjunction with copper are copper and stainless steel.

Stainless steel is another natural metal that has been used with success for both standing seam roofing and siding/cladding applications. Stainless steel also is frequently used in internal gutter applications, with welded seam joints at gutter endlaps. The bright shiny look of newly installed stainless steel will turn to a matted, dull gray finish over time, depending on the amount of rainfall the exposed surface receives.

Stainless steel can be used in most applications for standing seam roofing or metal siding/cladding. Stainless steel has a high tensile strength, so ensure an ample budget to cover the costs of tools such as hand shears, tin snips, etc., when planning a bid and labor budget. A good resource for the design, specification and use of stainless steel is the Stainless Steel Industry of North America.

Zinc is another natural metal option for roofing or siding/cladding. This metal has been used in construction since the 1700s, particularly in Europe, and has demonstrated its outstanding value through its long life-cycle which can be 100 years. The most important point in the design and specification of zinc cladding as a roofing system is that zinc must have a breathable underlayment or air space beneath it. This is in addition to a backside primer paint finish that zinc manufacturers are using to mitigate backside



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condensation when used as roofing.

Zinc is now available in several pre-patina shades and colors which give the architect, engineer, construction manager and owner new design choices. Note that Zinc probably will fall in the same budget space or slightly higher on an installed basis as copper or stainless steel, depending on the size of a project and the specific gauge and finish of the natural metal that is selected.

Costs

A sales or construction professional must have at least

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Architectural sheet metal

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a basic working knowledge of each product's cost on an installed basis. It does irreparable harm when an architect, engineer, construction manager or owner cold-calls a manufacturer and asks; "Can you give me a general budget for your product?" and the response is the out-the-back-door cost to a distributor or installer. They are asking, "What is the cost of your product installed on my building?"

David Landis is the Southeast manager of technical services and field inspections for Petersen, which manufactures PAC-CLAD metal roof and wall panel systems.

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