

LEED Specification Guide

Metal-Era is dedicated to providing roof edges that are unsurpassed in quality. Metal-Era also prides itself on remaining current with industry issues and concerns, and educating our customers on these issues.

An increasingly important issue is that of the green movement. A green building is a structure that is designed, constructed, renovated, operated and demolished with minimal environmental impact. The US Green Building Council has created the Leadership in Energy and Environmental Design (LEED) Rating System to assist in green building. LEED's mission is to "encourage and accelerate the global adoption of sustainable building and development practices."

Many federal, state and municipal organizations either require or provide incentives for green building projects. These organizations frequently use

the LEED rating system and require various levels of LEED certification.

While LEED does not certify individual products, certain products may be used to qualify for individual credits. The accumulation of credits allows for the building to become LEED certified.

This document is intended to assist architects, specifiers, and other roofing professionals in understanding how Metal-Era's products fit into this popular rating system. This document is intended as a guide only, and detailed questions should be referred to your local LEED representative.

Sustainable Sites

Credit 7.2—Heat Island Effect: Roof (1 Point)

Intent

Reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impacts on microclimates and human and wildlife habitats.

Requirements

Option 1: Use roofing materials with a solar reflectance index (SRI) equal to or greater than the values in the table below (see LEED documentation) for a minimum of 75% of the roof surface.

Option 2: Install a vegetated roof that covers at least 50% of the roof area

Option 3: Install high-albedo and vegetated roof surfaces that, in combination, meet the following criteria (see LEED documentation for full details).

Metal-Era Solution

Option 1: Over 30 of our paint finishes are Energy Star Compliant, this includes both standard and custom colors. Please contact Metal-Era for specific SRI and emittance values.

Options 2 & 3: Metal-Era offers a variety of drainage accessories to support a vegetative roof. The Garden-Tite Drain Bar and Graden-Tite Inspection Chamber are specifically engineered to provide the maximum drainage necessary for optimal garden roof growth.

Energy & Atmosphere

Credit 1—Optimize Energy Performance (3-21 Points)

Intent

To achieve increasing levels of energy performance beyond the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.

Requirements

Select 1 of the 3 compliance path options described in the LEED documentation. Project teams documenting achievement using any of the 3 options are assumed to be in compliance with EA Prerequisite 2: Minimize Energy Performance.

Metal-Era Solution

Metal-Era's Airflow Solutions ensures the proper amount of passive ventilation underneath the roof covering. This creates a cool roof system, reducing the demand on heating a cooling units and optimizing energy performance.

Energy & Atmosphere

Credit 4—Enhanced Refrigerant Management (2 Points)

Intent

To reduce ozone depletion and support early compliance with the Montreal Protocol while minimizing direct contributions to climate change.

Requirements

Option 1: Do not use refrigerants

Option 2: Select refrigerants and heating, ventilation, air conditioning and refrigeration (HVAC&R) equipment that minimize or eliminate

the emission of compounds that contribute to ozone depletion and climate change.

Metal-Era Solution

LEED documentation includes among its potential technologies and strategies, "Design and operate the facility without mechanical cooling and refrigeration equipment." Metal-Era's Airflow Solutions utilizes passive ventilation to create a cool roof system by ensuring the proper amount of airflow underneath the roof covering. This system will reduce and/or eliminate the need for mechanical ventilation (i.e. fans, power vents, etc.).

Materials & Resources

Credit 3.1—Materials Reuse (1 Point)

Intent

To reuse building materials and products to reduce demand for virgin materials and to reduce waste, thereby lessening impacts associated with the extraction and processing of virgin resources.

Requirements

Use salvaged, refurbished or reused materials, the sum of which constitutes at least 5%, based on cost, of the total value of materials on the project.

Metal-Era Solution

Metal-Era's extruded aluminum bar is able to last past the life of a building's roof. This allows the bar to be removed during the reroofing process, then reattached. New fascia covers can be ordered at this time for a substantial savings over purchasing both the anchor bar and the cover.

Materials & Resources

Credit 4—Recycled Content (1-2 Points)

Intent

To increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials.

Requirements

Use materials with recycled content such that the sum of postconsumer recycled content plus ½ of the preconsumer content constitutes at least 10% or 20%, based on cost, of the total value of the materials in the project. The recycled content value of a material assembly is determined by weight. The

recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.

Metal-Era Solution

Our galvanized steel contains 25%-50% of recycled content (50%-78% is post industrial, and 22%-50% is post consumer). Our 3003 aluminum contains approximately 50% of recycled material (55% is post industrial, and 45% is post consumer). There is 20%-25% recycled content (60% post industrial, and 40% post consumer) in our 5005 aluminum. These figures are averages, and may vary somewhat from mill to mill, and from batch to batch.

Materials & Resources

Credit 5—Regional Materials (1-2 Points)

Intent

To increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of regional economy and reducing the environmental impacts resulting from transportation.

Requirements

Use a minimum of 20% of building materials and products that are manufactured regionally within a radius of 500 miles.

Metal-Era Solution

Metal-Era's corporate headquarters and manufacturing plant is located in Waukesha, WI. Building projects that are located within a 500 mile radius may be eligible for these credits. The below map is intended to give *only* an approximation of locations within this radius.

