

# LEEDv4 ATAS REFERENCE GUIDE



**ATAS International, Inc.**  
Sustainable Building Envelope Technology

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The ATAS product line can help your project qualify for points in numerous categories, including Sustainable Sites (SS), Energy and Atmosphere (EA), Indoor Environmental Quality (EQ), and more.

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## About LEEDv4

For information and resources about LEEDv4, ATAS encourages you to visit the official USGBC website and their resources center:

<http://www.usgbc.org/resources>

## Choosing Your Project-Specific Rating System

Projects pursuing LEEDv4 certification can be categorized into the following rating systems:

### LEED for Building Design and Construction (BD+C):

Buildings that are new construction or major renovation

### LEED for Interior Design and Construction (ID+C):

Interior spaces that are complete interior fit-out

### LEED for Building Operations and Maintenance (O+M):

Existing buildings that are undergoing improvement work or little to no construction

### LEED for Neighborhood Development (ND):

New land development projects or redevelopment projects containing residential uses, non-residential uses, or a mix

### LEED for Homes:

Single family homes, low-rise multi-family (one to three stories) or mid-rise multi-family (four or more stories)

Homes and residential building that are greater than four stories may also use LEED BD+C



IP

### INTEGRATIVE PROCESS CATEGORY

#### INTEGRATIVE PROCESS CREDIT | 1 PT

The energy efficiency attributes of ATAS cool roofs, above sheathing ventilation, insulated metal roof and wall panels, and/or single skin metal roof and wall panel systems can be factored into the energy modeling analysis during the integrative process. This credit can also be applied to InSpire® and InSpire® HP solar air heating panels when assessing thermal comfort.



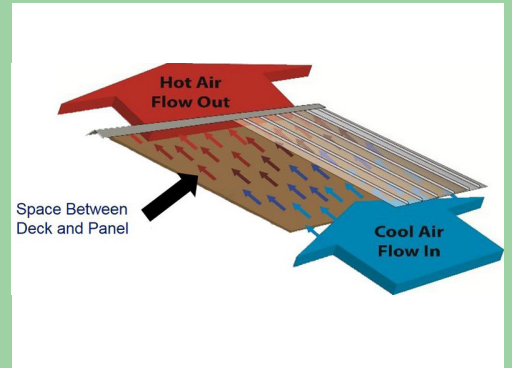
Cool Roof Paint Pigment

SS

### SUSTAINABLE SITES CATEGORY

#### HEAT ISLAND REDUCTION CREDIT | UP TO 2 PTS

Cool pigment paint reflects infrared radiation, keeping the material cooler and reducing urban heat island effect. Many ATAS roofing products comply with the stringent California Title 24 Energy Efficiency Standards. A number of ATAS roof systems can be combined with an above sheathing ventilation strategy to further reduce cooling loads and air conditioning appliance usage (a secondary contributor to urban heat island effect).



Above Sheathing Ventilation

#### RAIN WATER MANAGEMENT CREDIT | UP TO 3 PTS

A rainwater harvesting system integrated into an ATAS roof system will help manage rainwater on-site. Techniques used to harvest or divert rainwater allow for storm water to be used on-site, and decrease the negative impacts of storm water runoff and soil erosion. Metal roofs are an ideal choice for rainwater harvesting applications because metal roofs tend to have lower concentrations of bacteria as compared to other roofing materials. Rainwater harvesting systems can help a LEED registered building project to qualify for the points in this credit.



Above Sheathing Ventilation  
Spacer Shim

WE

### WATER EFFICIENCY CATEGORY

#### OUTDOOR WATER USE REDUCTION CREDIT | UP TO 2 PTS

Rainwater harvesting with an ATAS roof system can be used for landscape irrigation (see option 2: Reduced irrigation). A 2011 study published in the journal "Water Research" concluded that water captured from metal roofs has lower levels of dissolved carbon and carries less bacteria (e.g., coliform) than water collected from other roofing surfaces.

#### INDOOR WATER USE REDUCTION CREDIT | UP TO 6 PTS

To reduce indoor water usage, an ATAS roofing system can be used for rainwater harvesting, which can be integrated into the building's graywater system.

A 2011 study published in the journal "Water Research" concluded that water captured from metal roofs has lower levels of dissolved carbon and carries less bacteria (e.g., coliform) than water collected from other roofing surfaces.



## ENERGY AND ATMOSPHERE CATEGORY

### MINIMUM ENERGY PERFORMANCE | PREREQUISITE

To meet the prerequisite of the Energy and Atmosphere category, a number of ATAS products can be used to help maximize energy efficiency, such as insulated metal roof and wall panels, cool roof systems, and above sheathing ventilation.

### OPTIMIZE ENERGY PERFORMANCE CREDIT | UP TO 18 PTS

Energy efficient cool metal roof and wall systems and insulated metal roof and wall panels can help realize many of the design elements that are key to reducing energy demand. Energy efficient building envelope systems, such as cool roofing, help to reduce heat gain/loss, reduce peak energy demand, and improve energy performance of the building. In warmer climates, light colored reflective roofs can be used to reflect energy away from the building and reduce energy demand for internal cooling. Further, the high thermal emittance of painted metal products means that solar energy that is absorbed into the building space below the roof is quickly re-radiated at night.

Additionally, InSpire® solar air heating wall panels that preheat ventilation air using solar energy can help to optimize a building's energy performance. Introduced in 2020, InSpire® HP offers a 25% to 30% increase in solar heating output than traditional InSpire® panels. The maximum heating temperature of InSpire HP is as high as 90° above ambient.

### RENEWABLE ENERGY PRODUCTION CREDIT | UP TO 3 PTS

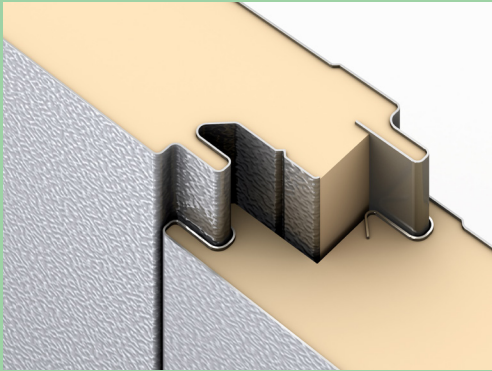
Standing seam metal roofs are the best choice for crystalline PV and thin film solar panels because, unlike other materials, metal offers the longest service life. When installing a crystalline system that typically is warranted for 25 years of power generation, a building owner is going to benefit from a roofing substrate that has a greater life expectancy than that of the solar panels. Standing seam panels also provide a natural platform for attaching crystalline systems without any roof penetrations. Additionally, highly reflective roofs help keep rooftop temperatures cool, which results in better performance from solar panels. Additionally, InSpire® and InSpire® HP solar air heating systems can contribute renewable energy to help achieve points for this credit.



## MATERIALS AND RESOURCES CATEGORY

### CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT PLANNING | PREREQUISITE

The recyclability attributes of ATAS metal roof and wall systems may help to qualify for the Construction and Demolition Waste Management Planning prerequisite.



Isoleren Insulated Metal Panels



Solar-Ready Roof Systems



InSpire® HP Solar Air Heating

"Transpired collectors provide the most reliable, best performing, and lowest cost solar heating for commercial and industrial buildings available on the market today."

- U.S. Department of Energy

## BUILDING LIFE CYCLE IMPACT REDUCTION CREDIT | UP TO 5 PTS

An industry-wide Life Cycle Assessment of the metal roof and wall cladding products and processes, as well as the manufacturing process for insulated metal panels (IMP), was conducted by the Metal Construction Association. The life cycle inventory of the environmental impact data from the LCA project can be used in a whole-building LCA as required in the credit.

## BUILDING PRODUCT DISCLOSURE AND OPTIMIZATION

### ENVIRONMENTAL PRODUCT DECLARATIONS (EPD) CREDIT | 1 PT

Use at least 20 different permanently installed products sourced from at least five different manufacturers that meet the disclosure criteria below.

Environmental product declarations which conform to ISO 14025 and EN 15804 or ISO 21930 and have at least a cradle to gate scope.

- Industry-wide (generic) EPD - Products with third-party certification (Type III), including external verification, in which the manufacturer is explicitly recognized as a participant by the program operator are valued as one half ( $\frac{1}{2}$ ) of a product for purposes of credit achievement calculation under LEEDv4, and valued as one whole product credit under LEEDv4.1 (LEEDv4.1 is still in beta testing).

*ATAS International participated in the Metal Construction Association (MCA) EPD for Roll Formed Aluminum and Steel Wall and Roof Cladding Systems - Declaration #4789289084.103.1 - Issued 4/1/20 - Valid for five years for 70% PVDF coated panels*

## BUILDING PRODUCT DISCLOSURE AND OPTIMIZATION

### SOURCING OF RAW MATERIALS CREDIT | UP TO 2 PTS

Steel has a high recycled content, which can help to contribute to minimum thresholds of recycled content of groupings of building materials used in a project.

The USGBC has ruled on the use of industry-average recycled content of materials. As of January 1, 2013, recycled content claims must now be "... specific to the installed product", where the term 'specific product' refers to "a unique product distinguished by color, type, and/or location of manufacturer as identified to the consumer SKU or other means". For the purposes of LEED, steel has a previously established industry average of 25% post-consumer recycled content, which does not require documentation on a per product basis. It is, in essence, a default minimum value if a product-specific value is unavailable. In ATAS' manufacturing process the recycled content of our steel products is directly related to the recycled content of the steel coil we utilize. Therefore, the default recycled content for ATAS products utilizing standard steel is 25% post-consumer when calculating for LEED.<sup>1</sup>

ATAS also uses aluminum coil. The post-consumer recycled content of the aluminum coil must be documented by the aluminum mill source for compliance in LEEDv4.<sup>2</sup>

"Metal roofs typically have a minimum of 25% recycled content. This level of recycled content allows metal roofing to be routinely included on listings for "green" and recycled content products. It is also 100% recyclable when ultimately removed as part of building renovation or demolition. Other roofing materials are routinely removed and disposed of in a landfill, but metal roofing can be recycled in its entirety. Metals are exceptional building materials that can credibly claim both recycled content and recyclability by recognized definitions."  
- Metal Roofing Alliance

### ATAS Products and Recycled Content

1. ATAS sources materials based on availability and price.
2. Recycled content varies from supplier to supplier and may range from 0 to 85%.



“....metal panels may be recycled when their useful life ends after many years of service and they can contribute again to a future product’s recycled content ”  
- Metal Roofing Alliance

When a certain recycled content is required by the customer, the material can be sourced, however extended lead times and increased costs may be incurred. ATAS is certified to ISO 9001:2015 with design and development and has complete traceability on all materials used in the production of primary products.

## **CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT CREDIT | UP TO 2 PTS**

ATAS roof or wall panel systems that are fully recyclable and used on a LEED-registered project will contribute to the building project qualifying for this credit given the recyclability of the ATAS products. One of the primary goals of the credit is to divert construction and demolition waste from landfills. Segregating recyclable waste or debris from metal panels on a construction site helps to divert that material from landfills.



## **INDOOR ENVIRONMENTAL QUALITY CATEGORY**

### **MINIMUM ACOUSTIC PERFORMANCE | PREREQUISITE**

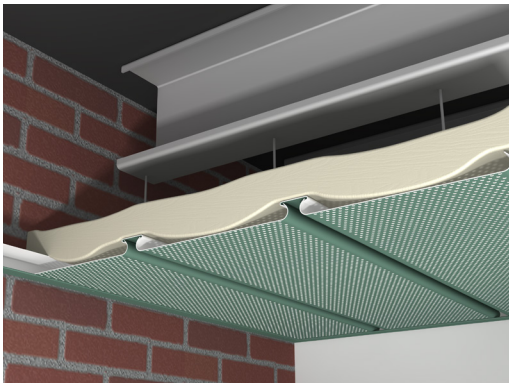
LEED-School projects using ATAS insulated metal panels and/or perforated acoustical suspended ceiling panels can benefit from their acoustic performance advantages in trying to meet the criteria for the Minimum Acoustic Performance prerequisite.

### **ACOUSTIC PERFORMANCE CREDIT | 1 PT**

ATAS insulated metal panels can help the building project meet the LEED criteria for composite sound transmission class (STC) ratings. LEED registered projects can qualify for the points in this credit by using ATAS insulated metal panels and/or perforated acoustical suspended ceiling panels.

### **LOW EMITTING MATERIALS CREDIT | UP TO 3 PTS**

ATAS wall panel systems can help a LEED-registered project comply with this credit if the wet-applied sealants and adhesives meet the LEED criteria for VOC levels and content for both exterior and interior applications. Products must be tested and determined compliant in accordance with California Department of Public Health (CDPH) Standard Method v1.1-2010 using the applicable exposure scenario. All adhesives and sealants wet-applied on site must meet the applicable chemical content requirements of SCAQMD Rule 1168, July 1, 2005 Adhesive and Sealant Applications, as analyzed by the methods specified in Rule 1168. The provisions of SCAQMD Rule 1168 do not apply to adhesives and sealants subject to state or federal consumer product VOC regulations. If a product cannot reasonably be tested as specified above, testing of VOC content must comply with ASTM D2369-10, ISO 11890 part 1, ASTM D6886-03, or ISO 11890-2.



Acoustical Ceiling Systems

## THERMAL COMFORT CREDIT | 1 PT

Based on the excellent thermal performance of insulated metal panels, ATAS wall and/or roof systems can be designed to meet standards and can help a LEED-registered project to qualify for this credit.

The ATAS InSpire® and InSpire HP solar air heating panels should be considered as an HVAC accompaniment when thermal comfort, energy costs and indoor air quality are being assessed. The InSpire® and InSpire HP transpired solar collector generates solar-heated air, which is tied into the building's HVAC, supplementing the existing heat sources with solar heated outside air and reducing the risk of sick building syndrome.



Isoleren Insulated Metal Panels

IN

## INNOVATION CATEGORY

### INNOVATION CREDIT | 5 PTS

If a LEED registered project can go above and beyond the LEEDv4 requirements, there are a number of ways in which points can be earned for meeting the Innovation Credit requirements. ATAS insulated metal roof and wall panels, InSpire® and InSpire® HP wall panels, and metal roof panel systems can be integrated into a building's overall design to help qualify for points in this credit, assuming the building's design team utilizes ATAS products to surpass the requirements of various credit categories and/or innovative performance not specifically addressed by LEED.

"The InSpire® wall has proven to be the best money spent for LEED credits on this project. Its returns beat our other sustainable energy and efficiency technologies hands-down!"

- Brett Grout

Facilities Director  
JWO Transit Center  
Greenfield, MA

RP

## REGIONAL PRIORITY CATEGORY

### REGIONAL PRIORITY - SPECIFIC CREDITS | UP TO 4 PTS

This credit is available for enhancing the ability of LEED project teams to address critical environmental issues that may be particular to a locale.

## LEEDv4 PROJECT CHECKLIST

For additional information and resources about LEEDv4, visit the official USGBC website and their resources center:

<http://www.usgbc.org/resources>

LEED v4 for BD+C: New Construction and Major Renovation				Project Name:
Project Checklist				Date:
Y	?	N		
			Integrative Process	1
0	0	0	<b>Location and Transportation</b>	<b>16</b>
			Credit LEED for Neighborhood Development Location	16
			Credit Sensitive Land Protection	1
			Credit High Priority Site	2
			Credit Surrounding Density and Diverse Uses	5
			Credit Access to Quality Transit	5
			Credit Bicycle Facilities	1
			Credit Reduced Parking Footprint	1
			Credit Green Vehicles	1
0	0	0	<b>Sustainable Sites</b>	<b>10</b>
			Prereq Construction Activity Pollution Prevention	Required
			Credit Site Assessment	1
			Credit Site Development - Protect or Restore Habitat	2
			Credit Open Space	1
			Credit Rainwater Management	3
			Credit Heat Island Reduction	2
			Credit Light Pollution Reduction	1
0	0	0	<b>Water Efficiency</b>	<b>11</b>
			Prereq Outdoor Water Use Reduction	Required
			Prereq Indoor Water Use Reduction	Required
			Prereq Building-Level Water Metering	Required
			Credit Outdoor Water Use Reduction	2
			Credit Indoor Water Use Reduction	6
			Credit Cooling Tower Water Use	2
			Credit Water Metering	1
0	0	0	<b>Energy and Atmosphere</b>	<b>33</b>
			Prereq Fundamental Commissioning and Verification	Required
			Prereq Minimum Energy Performance	Required
			Prereq Building-Level Energy Metering	Required
			Prereq Fundamental Refrigerant Management	Required
			Credit Enhanced Commissioning	6
			Credit Optimize Energy Performance	18
			Credit Advanced Energy Metering	1
			Credit Demand Response	2
			Credit Renewable Energy Production	3
			Credit Enhanced Refrigerant Management	1
			Credit Green Power and Carbon Offsets	2
0	0	0	<b>Materials and Resources</b>	<b>13</b>
			Prereq Storage and Collection of Recyclables	Required
			Prereq Construction and Demolition Waste Management Planning	Required
			Credit Building Life-Cycle Impact Reduction	5
			Credit Building Product Disclosure and Optimization - Environmental Product Declarations	2
			Credit Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
			Credit Building Product Disclosure and Optimization - Material Ingredients	2
			Credit Construction and Demolition Waste Management	2
0	0	0	<b>Indoor Environmental Quality</b>	<b>16</b>
			Prereq Minimum Indoor Air Quality Performance	Required
			Prereq Environmental Tobacco Smoke Control	Required
			Credit Enhanced Indoor Air Quality Strategies	2
			Credit Low-Emitting Materials	3
			Credit Construction Indoor Air Quality Management Plan	1
			Credit Indoor Air Quality Assessment	2
			Credit Thermal Comfort	1
			Credit Interior Lighting	2
			Credit Daylight	3
			Credit Quality Views	1
			Credit Acoustic Performance	1
0	0	0	<b>Innovation</b>	<b>6</b>
			Credit Innovation	5
			Credit LEED Accredited Professional	1
0	0	0	<b>Regional Priority</b>	<b>4</b>
			Credit Regional Priority: Specific Credit	1
			Credit Regional Priority: Specific Credit	1
			Credit Regional Priority: Specific Credit	1
			Credit Regional Priority: Specific Credit	1
0	0	0	<b>TOTALS</b>	<b>Possible Points: 110</b>
				Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110