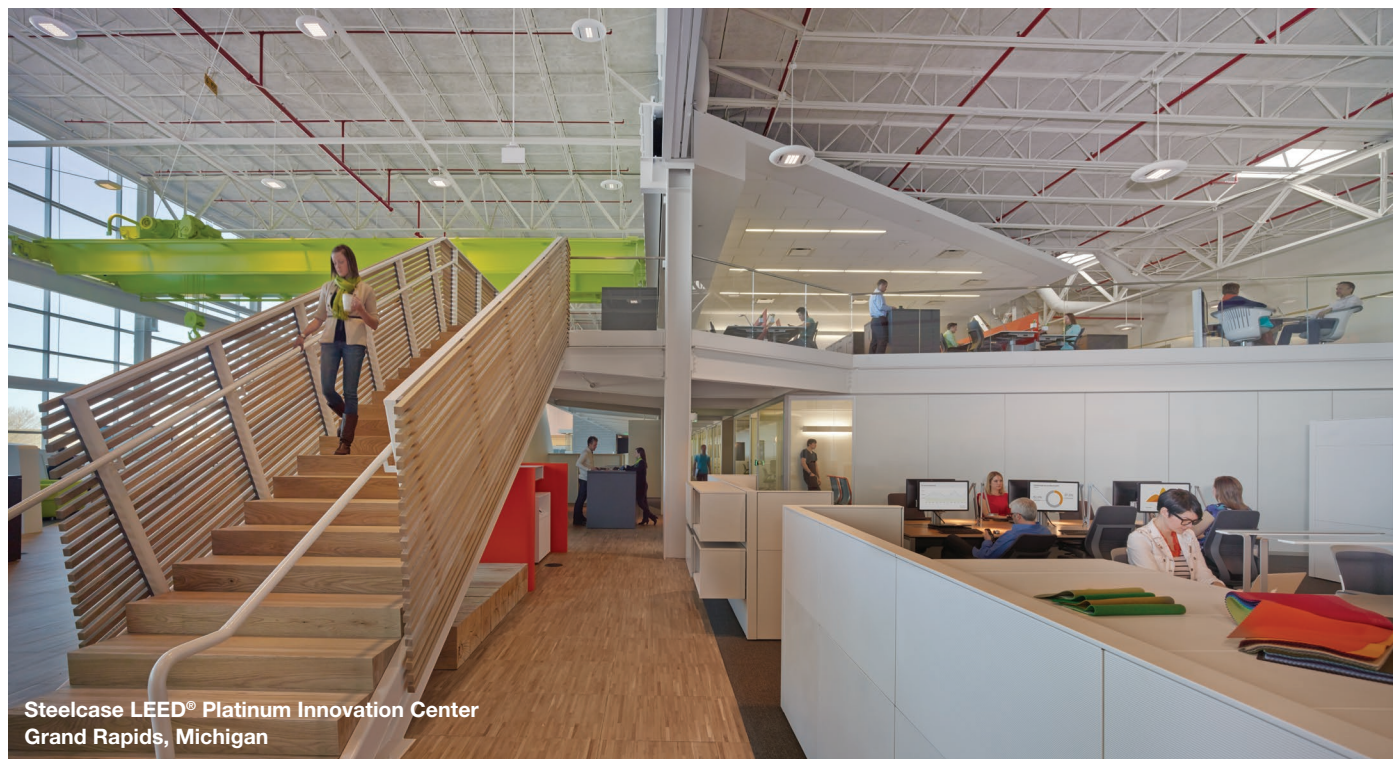


WHITE PAPER



Understanding LEED® Version 4

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GREEN BUILDINGS IN CONTEXT

In successful enterprises throughout the world, sustainability permeates strategies, business plans and operations. Leading organizations recognize that when they align the social, economic and environmental impacts of business decisions with their company's purpose and values, the outcomes can be substantial: improved business results, enhanced reputation, and optimized value proposition for all stakeholders.

As important as products, services, and operations are to sustainable practices, buildings are also a crucial factor to consider. Buildings exert tremendous impact on materials consumption, energy use and waste output, which directly influences the environmental

health, quality of life and social fabric of communities. Notably, the building sector uses more of the world's energy demand than either the manufacturing or transportation sectors - buildings account for 41 percent compared to 30 percent and 29 percent respectively¹. In addition to environmental burdens, buildings and interior spaces design can have direct financial impacts to occupants or owners. Examples would include HVAC & electricity expenses, user productivity, and the investment return or loss from attracting and retaining talent or lessees.

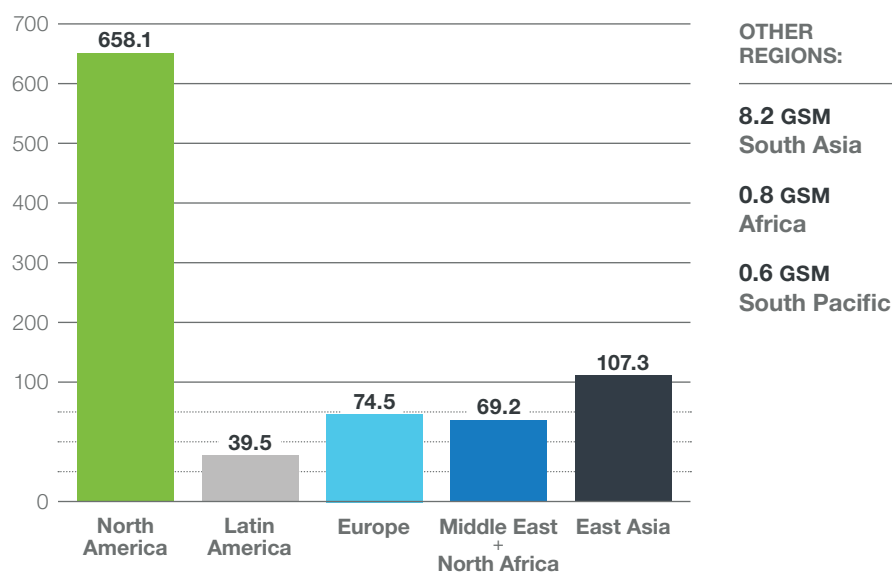
For more than two decades, growing awareness of the impact of buildings has driven new standards, legislation and certifications. LEED® (Leadership in Energy & Environmental Design) was launched in the United States in 1998 by the United States Green Building Council (USGBC), a coalition of leaders representing several building industry sectors. Today there are many programs for green buildings in countries throughout the world, with LEED being perhaps the better known and most followed, with projects in 140 countries and territories.²

Looking ahead, the most substantial area of "green building" growth is expected to occur in new commercial construction. Robust growth is also anticipated in existing building retrofits and new schools and hospitals (institutional construction).³

CHANGES IN LEED V4

To set an even higher standard for improved environmental outcomes, the U.S. Green Building Council has changed the LEED Green Building Rating System. All projects registered after October 31, 2016, are to be evaluated under the LEED v4 rating system. According to USGBC, LEED v4 is designed to drive innovation in every aspect of the building lifecycle, enabling project teams to make more informed decisions that will have greater overall benefit for the environmental, human health, and communities.⁴

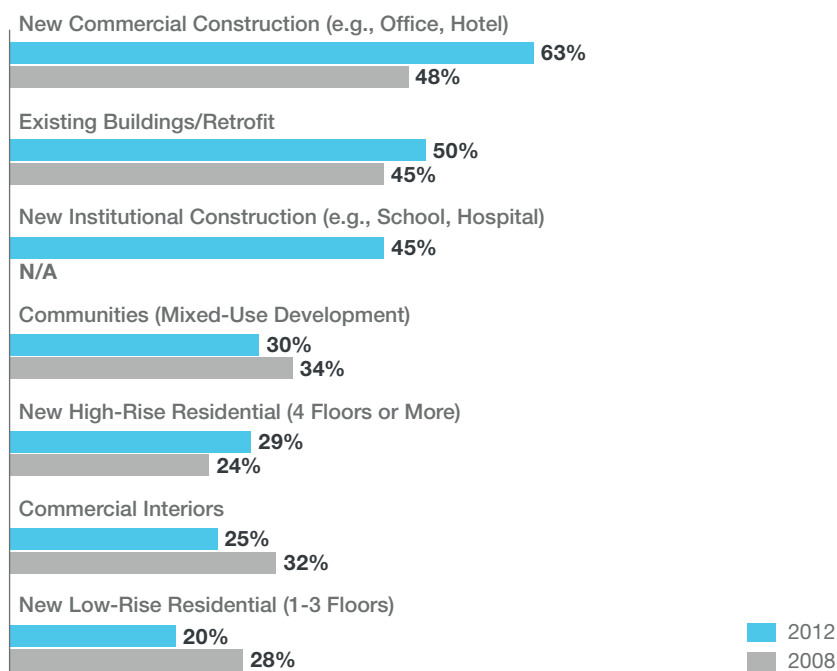
NUMBER OF LEED PROJECTS REGISTERED AND CERTIFIED IN TOP REGIONS BY GROSS SQUARE METERS (GSM)



Gross square meters (GSM) are reported in millions. Includes projects registered through the USGBC, GBCI, Canada GBC, and Indian GBC (partial data). National Trust for Historic Preservation, 2011

SECTORS WITH PLANNED GREEN BUILDING ACTIVITY OVER THE NEXT THREE YEARS

According to Global Firms in 2008 and 2012



Source: McGrawHill Construction, 2013

With this broadened perspective however, the rating system becomes significantly more complex. A few key examples can be illustrated in the changes that some of the new credits are written and weighted:

- Certain credits from LEED 2009 are incorporated as subset options of larger, multi-attribute credits in v4.
- Major parts of Materials and Resources credit weightings have changed from calculating by percentage spend, to the requirement of selecting at least twenty products sourced from five different manufacturers that meet the criteria.
- And overall, contributions to the Materials and Resources section has been elevated to require rigorous product and manufacturer information that only a limited number of companies have actively acquired.

While these changes encourage project teams to more holistically include a wider diversity of material and product contributions, this also narrows the potential contributions from any individual manufacturer or supplier.

USGBC states that LEED v4 encompasses international requirements to achieve these high-level goals:

- Reduce contribution to global climate change
- Enhance individual human health (new emphasis)
- Protect and restore water resources
- Protect and enhance biodiversity and ecosystem services (new emphasis)
- Promote sustainable and regenerative material cycles (new emphasis)
- Build a green economy (new emphasis)
- Enhance community quality of life (new emphasis)

LEED V4 RATING SYSTEM CATEGORIES

Among LEED v4's overarching changes is the creation of new system categories to assure LEED fits the unique aspects of projects such as data centers, hospitality facilities, distribution centers, warehouses, and other specialized buildings.

As illustrated here, the LEED v4 rating system addresses 4 major rating systems divided into 21 market sectors:

Building Design and Construction

- New Construction
- Core & Shell
- Schools
- Retail
- Hospitality
- Data Centers
- Warehouse & Distribution Centers
- Healthcare
- Homes
- Midrise

Interior Design and Construction

- Commercial Interiors
- Retail
- Hospitality

Neighborhood Development

- Neighborhood Development Plan
- Neighborhood Development

Building Operations and Maintenance

- Existing Buildings: Operations & Maintenance
- Schools
- Retail
- Hospitality
- Data Centers
- Warehouses & Distribution Centers

NEW LEED V4 CREDITS

LEED v4 comprises a significant number of credit changes. While some are merely relocations of previous-version credits into different categories, there are also brand-new credits, prerequisites and categories. Another noticeable change to the navigation of the rating system is the elimination of credit numeration. This was intended by the USGBC to direct the focus of users to the purpose of the credit, rather than the order it falls into the LEED checklists.

As an example, two new credit categories—Location & Transportation and Integrative Process—place more focus on location and early analysis of energy and water systems to inform design of New Construction projects. To follow, there are new prerequisites present in the evolved rating systems that require metering energy and water use, emphasizing a project's performance post-construction or renovation. Another example to cite is the renaming of Innovation & Design credit category to just be called "Innovation" to reflect v4's broader perspective.

(See figure 1 next page)

Another adaption in LEED v4 is a heavier emphasis to the Long-Term Commitment credit - exclusive to Commercial Interiors, Retail Commercial Interiors and Hospitality Commercial Interiors. It awards one point for making a written commitment to remain in the same location for at least 10 years.

A NEW FOCUS ON MATERIALS AND RESOURCES

Especially significant for Steelcase customers are the substantial changes in the Materials & Resources credit opportunities, found within Building Design and Construction and Interior

LEED 2009 CREDIT CATEGORIES	LEED V4 CREDIT CATEGORIES
	Integrative Process (<i>new!</i>)
Sustainable Sites	Location & Transportation (<i>incorporates Sustainable Sites</i>)
Water Efficiency	Water Efficiency
Energy & Atmosphere	Energy & Atmosphere
Materials & Resources	Materials & Resources
Indoor Environmental Quality	Indoor Environmental Quality
Innovation & Design	Innovation
Regional Priority	Regional Priority

Figure 1

NEW LEED V4 CREDITS

Design and Construction rating systems. While continuing to focus on waste reduction and reuse, LEED v4 sets a more demanding, higher standard with new required prerequisites and more challenging optional credits that offer a range of points.

In previous versions of LEED, credit criteria focused on information covering recycled content data, VOC (volatile organic compound) off gassing levels and Forest Stewardship Council (FSC) wood. In comparison, LEED v4 builds onto these categories to award new credit points for selecting products from manufacturers that provide: comprehensive material transparency; product life cycle assessment results; as well as selecting products designed for flexibility in multiple

uses. In addition, the definition of locally sourced products has become narrower (100-mile radius in v4 compared to 500-mile radius in LEED 2009), and responsible sourcing criteria has been expanded to raw material sourcing and extraction reporting.

LEED v4 also makes changes within the Building Operations and Maintenance: Existing Buildings rating system as it relates to building Materials and Resources, including furniture. Though less extensive than the changes to the other major rating systems, similar changes can be seen throughout these credits such as awarding points for sourcing products that have inventoried and / or assessed chemical ingredients.

Within Materials & Resources for BD+C, NC, and O+M rating systems, waste-management planning is a part of an expanded set of prerequisites. Another distinct change is that many contributions of the LEED 2009 MR credits (true for some EQ credits, as well) are integrated into the newly named credits, but with added guidelines – resulting in the multi-attribute credits that have been mentioned.

As an example, the BD+C New Construction rating system, has this new prerequisite, and five new multi-attribute credit options in v4 that replace seven in LEED 2009, as illustrated in figure 2 below.

LEED 2009 NEW CONSTRUCTION AND MAJOR RENOVATIONS (14 TOTAL POSSIBLE POINTS)			LEED V4– BD+C: NEW CONSTRUCTION AND MAJOR RENOVATIONS (13 TOTAL POSSIBLE POINTS)		
MRp1	Storage and collection of recyclables	Required	Prereq	Storage and collection of recyclables	Required
MRc1.1	Building reuse—maintain existing walls, floors and roof	3 possible points	Prereq	Construction and demolition waste management planning	Required
MRc1.2	Building reuse—maintain interior nonstructural elements	1 possible point	Credit	Building life-cycle impact reduction	5 possible points
MRc2	Construction waste management	2 possible points	Credit	Building product disclosure and optimization—environmental product declarations*	2 possible points
MRc3	Materials reuse	2 possible points	Credit	Building product disclosure and optimization—sourcing of raw materials*	2 possible points
MRc4	Recycled content	2 possible points	Credit	Building product disclosure and optimization—material ingredients*	2 possible points
MRc5	Regional materials	2 possible points	Credit	Construction and demolition waste management	2 possible points
MRc6	Rapidly renewable materials	1 possible point	*if products meeting criteria for this credit are also locally sourced (i.e. extracted, manufactured, and purchased within 100 miles of the project site) they are valued at 200% of actual cost for purposes of credit calculation.		
MRc7	Certified Wood	1 possible point			

Figure 2 | Source: USGBC LEED credit library, <http://www.usgbc.org/credits>

Life cycle impact reduction

Most of the changes for the Materials & Resources credits are paralleled in both the Interior Design and Construction and Building Design and Construction rating systems. One major exception is the Life Cycle Impact Reduction credit. Furniture falls within the scope of the interiors version of this credit, which encourages furniture reuse and designing for flexibility to increase the useful life of a space. This credit emerged from the LEED 2009 credit that encouraged new applications for existing interior elements.

Within Materials & Resources, three new Building Product Disclosure and Optimization (BPDO) credit options are directly related to interior furnishings selections. All three encourage selecting interior architecture products, furniture, and materials for which life-cycle information is available. In addition, all three offer a bonus for locally sourced materials: If products are extracted, manufactured and purchased within 100 miles of the project site, they are valued at 200 percent of actual costs in the credit calculation.

BPDO credit for Environmental Product Declarations (up to 2 points)

This LEED v4 credit recognizes Environmental Product Declarations (EPDs) as third-party-verified documentation to communicate the calculated results of a life cycle assessment for a product. One point is awarded for collecting EPDs on twenty different products, sourced from five different manufacturers. Another point is available for showing that product impact is reduced below industry averages. As referenced, this is one example of how LEED has evolved from single-

attribute contributions, to a more holistic assessment of environmental impact across the entire life cycle of a product.

BPDO Credit for Sourcing of Raw Materials (up to 2 points)

This credit rewards selecting products from manufacturers that publicly report their raw material suppliers and extraction locations. One point is awarded for using at least twenty different permanently installed products sourced from at least five different manufacturers that meet the criteria; in effect, this means the potential contribution from a single manufacturer is reduced in comparison to LEED 2009).

Another point is available for choosing products that meet at least one of six responsible sourcing criteria:

- Extended producer responsibility
- Bio-based materials
- Wood products
- Materials reuse
- Recycled content
- USGBC-approved program meeting leadership extraction criteria

These products must account for at least 25 percent of the total value of permanently installed building products. Designed to prompt more transparency and examination of supply chains, this credit is another example of how LEED v4 is aspiring to shift expectations and market realities.

BPDO credit for Material Ingredients (up to 2 points)

This credit promotes choosing products that have disclosed ingredients through reporting programs such as Cradle to Cradle Certified™, Health Product Declarations, GreenScreen benchmark, or other reporting programs. One point

can be earned by using at least 20 different permanently installed products from at least five different manufacturers that demonstrate the inventory of a product to at least 0.1 percent (1,000 parts per million). Other point options recognize documentation that products have avoided using materials that are known hazards to human or environmental health. Qualifying products must equal at least 25 percent of the total value, by cost, of permanently installed product.

Low-emitting materials (up to 2 points)

Within this credit, LEED v4 continues to recognize Low-Emitting Materials in the Interior Environmental Quality section, but has essentially combined several categories of materials (paints, adhesives, flooring, ceiling, walls, and furniture) into one comprehensive credit. While outside of the Materials and Resources category, the focus is to test and limit the volatile organic compound (VOC) emissions from products and materials to indoor air environments. Low-emitting furniture is one of the six possible categories under the Building Design and Construction system, and Building Operations and Maintenance rating system, and one of five categories under the Interior Design and Construction rating system.

Interior lighting (up to 2 points)

The purpose of this credit is to allow user lighting control of lighting while encouraging productivity and comfort through lighting quality. There are several qualitative factors and quantitative measurements to consider in pursuit of the prescribed strategies of this credit, though most are targeted towards illuminance and controllability of lighting fixtures. However, furniture surface reflectance is called out in option two of this credit as one of several

strategy options to choose from. Contributions will be limited here, as project teams must select four of these strategies for one possible point.

Pilot credits (varying point opportunities)

Pilot credits are contribution areas that are being tested within the rating system for potential inclusion in the future. Most pilot credits available just offer one point, typically focusing on a more granular extension of an existing LEED category. As an example, the “Environmentally preferable interior finishes and furnishings” pilot seeks to “increase the use of interior finishes and furnishings with verified multi-attribute environmental profiles.”⁵ Products must demonstrate compliance to the ANSI/BIFMA e3 Sustainability Standard, through level® certification, in order to contribute to this pilot.

STEELCASE CONTRIBUTIONS TO LEED

While the LEED v4 rating system sets the bar significantly higher than in past LEED versions, a long-standing commitment to insight-led product design positions Steelcase favorably to assist project teams that are seeking LEED certification. Steelcase products and applications have contributed to countless client LEED projects since 1998, and continued support is available to provide guidance and training programs to customers on how the product portfolio can contribute to LEED v4 criteria. Helping our customers to succeed in their businesses and meet their sustainability goals has been a driving force for Steelcase and its partners.

Furniture and interior architecture products can contribute to credits for LEED v4 in the Materials &

Resources, Indoor Environmental Quality, some Pilot credit categories, and Innovation categories.

The new emphasis in LEED v4 on life-cycle impact and comprehensive materials transparency, gives credit for design strategies that Steelcase has been deploying for nearly two decades through the company’s sustainability design initiatives of materials chemistry, life-cycle assessment, and product reuse and recycling. At the same time, the contributions of any furnishings manufacturer, including Steelcase, have been reduced in LEED v4 Materials & Resources, which now awards points for the use of twenty permanently installed products from five different manufacturers that meet defined guidelines. This is true for other select credit categories, as mentioned for the Environmental Quality – combining the calculation of several unique credits into one Low Emitting Materials credit.

While LEED4 presents some new challenges, it also presents some new opportunities. In particular, the emphases on designing for flexibility, material ingredient reporting, and Environmental Product Declarations are credit opportunities that various Steelcase products can help achieve.

The charts on the following pages outline Steelcase’s direct and indirect contributions to pursuit of LEED certification across the Building Design & Construction, Interior Design & Construction and Operations & Maintenance systems.

For full credit language and additional details on the USGBC and the LEED rating systems visit <http://www.usgbc.org/credits>

Steelcase LEED-Certified Facilities

Leadership Community /
Global Headquarters
Grand Rapids, Michigan

Steelcase University
Learning Center
Grand Rapids, Michigan

WorkLab
LEED CI Platinum Certified
Grand Rapids, Michigan

Innovation Center
LEED CI Platinum Certified
Grand Rapids, Michigan

Steelcase WorkLife Center
Merchandise Mart
Chicago, Illinois

Coalesse Showroom
Merchandise Mart
Chicago, Illinois

Steelcase WorkLife Center
Washington, D.C.

Steelcase WorkLife Center
Toronto, Ontario, Canada

Global Business Center
Kuala Lumpur, Malaysia

BUILDING DESIGN + CONSTRUCTION: MATERIALS AND RESOURCES CREDITS

LEED CREDITS / PREREQUISITES	CREDIT	CREDIT HIGHLIGHTS STEELCASE CONTRIBUTIONS
Prerequisite Expanded	Construction and Demolition Waste Management Planning	<ul style="list-style-type: none"> Requires setting a project target for waste management. Requires reporting waste diversion rates. Steelcase and Dealer Partners can help project teams estimate the weight of packaging from their furniture shipments.
Credit (New)	Building Product Disclosure and Optimization— Environmental Product Declarations	<ul style="list-style-type: none"> Addresses transparency in environmental life-cycle impacts and selecting products with improved life cycles. Rewards the use of products with Environmental Product Declarations (EPD). Steelcase has several EPDs for the Europe, Middle East, Africa (EMEA) market, and is developing more in this market, as well as for the North American market.
Credit (New)	Building Product Disclosure and Optimization— Sourcing of Raw Materials	<ul style="list-style-type: none"> Addresses transparency in raw material sourcing and selecting materials that have been appropriately sourced. Rewards products from manufacturers that have provided information on land use practices, extraction locations, labor practices, etc. Steelcase continually works with its supply chain on sustainability material sourcing topics like phasing out materials of concern and conflict mineral reporting, as well as participates in GRI reporting as part of our annual Corporate Sustainability Report. However, due to the scope of work, the Steelcase CSR does not report comprehensively on raw material source and extraction reporting- thus is not applicable to option 1 of this credit at this time. Steelcase Phase 2 Program meets the Option 2 “Extended Producer Responsibility” criteria. Steelcase products can help meet the “recycled content” and “materials reuse” criteria. Select Steelcase materials have the potential to meet the “wood products” criteria. A limited selection of surface materials have the potential to meet the “bio-based materials” criteria.
Credit (New)	Building Product Disclosure and Optimization— Material Ingredient Reporting	<ul style="list-style-type: none"> Addresses transparency in material ingredients and selecting products with optimized materials. Rewards the use of products with ingredient reporting in programs such as Cradle to Cradle™ certification and Health Product Declarations. Steelcase Cradle to Cradle™ certified products have the potential to meet this credit requirements. Contribution weightings will depend on level of certification.
Removed credit	Recycled Content	LEED 2009 Credit requirements moved to “Building Product Disclosure and Optimization—Sourcing of Raw Materials.”
Removed credit	Regional Materials	Credit requirements moved to the “Building Product Disclosure and Optimization” credits.

BUILDING DESIGN + CONSTRUCTION: MATERIALS AND RESOURCES CREDITS CONTINUED

LEED V4	CREDIT	CREDIT HIGHLIGHTS STEELCASE CONTRIBUTIONS
Removed credit	Rapidly Renewable Materials	Rapidly renewable materials addressed by “Building Product Disclosure and Optimization—Sourcing of Raw Materials”
Removed credit	Certified Wood	Credit requirements moved to “Building Product Disclosure and Optimization—Sourcing of Raw Materials”.
Updated Healthcare Credit	Furniture and Medical Furnishings	<ul style="list-style-type: none"> • Use at least 30% by cost, of all freestanding furniture and medical furnishings that meet the criteria in one of three options. • Under Option 1: Steelcase components that constitute at least 5% (by weight) of the furniture assembly contribute when they meet 4 of the 5 requirements for limited chemical content in the following groups: <ul style="list-style-type: none"> • urea formaldehyde • heavy metals including antimony, cadmium, lead, and mercury • hexavalent chromium • non-stick treatments derived from perfluorinated compounds (PFCs) or perfluorooctanoic acid (PFOA) • Added antimicrobials <p>For Option 1 Steelcase products that have gone through a thorough materials chemistry assessment have the potential to contribute, after confirming the chemical inventory of the products selected.</p> <p>Steelcase products may contribute via Option 2 by complying with 3 of the 5 criteria above plus ANSI/BIFMA e3-2010 Furniture Sustainability Standard, Sections 7.6.1 and 7.6.2, as represented in SCS Indoor Advantage™ Gold certifications (depending on product options).</p> <p>Or under Option 3, Steelcase products may meet the criteria via:</p> <ul style="list-style-type: none"> - select products with Environmental Product Declarations (EPDs) - if products are reused - recycled content valuation - Extender Producer Responsibility (Steelcase Phase 2 Program) - “bio-based” and “wood products” criteria, for which select materials can qualify, as defined in the “Sourcing of Raw Materials” credit
Updated Healthcare Credit	Design for Flexibility	<ul style="list-style-type: none"> • Use demountable partitions for 50% of applicable areas. • Use movable or modular casework for at least 50% of casework and custom millwork. <p>Most Steelcase products, specifically architectural solutions and casegoods, are specifically designed for flexibility of space and to be demounted and/or reconfigured, to meet today’s and tomorrow’s needs.</p>

BUILDING DESIGN + CONSTRUCTION: INDOOR ENVIRONMENTAL QUALITY CREDITS

LEED V4	CREDIT	CREDIT HIGHLIGHTS STEELCASE CONTRIBUTIONS
Credit: Updated and consolidated	Low-Emitting Interiors	<ul style="list-style-type: none"> • Credit is a combination of the “Low-Emitting Materials” credits. • Requirements based on VOC emissions rather than VOC content. • Systems approach to emissions within a space. • Added requirement for TVOC disclosure. • Modified requirements for formaldehyde. <p>Steelcase furniture certified for SCS Indoor Advantage™ may contribute depending on options. Products that contribute will demonstrate certification compliance to:</p> <ul style="list-style-type: none"> - ANSI/BIFMA Standard Method M7.1 - ANSI/BIFMA e3 Furniture Sustainability Standard, Credits 7.6.1 and 7.6.2 - California Specification 01350 for classrooms
Credit: Updated and Renamed	Quality Views	<ul style="list-style-type: none"> • Credit title renamed from “Daylight and Views—Views”. • Added requirement for quality view, defined by the LEED 2009 exemplary performance criteria. <p>Steelcase offers several products and thought starters to help achieve the requirements of this credit – yet, several other factors play into achieving this credit, beyond the scope of furniture.</p>
Credit (New)	Acoustic Performance	<ul style="list-style-type: none"> • Added requirements for room noise levels, speech privacy and sound isolation, reverberation time, and paging, masking, and sound reinforcement systems. • Harmonized ANSI and ASHRAE standards. <p>While Steelcase has sound-tested architectural and workstation products, as well as sound masking products, contributions are limited due to the various other factors that can come into play for this credit.</p>
Credit expanded	Interior Lighting	<ul style="list-style-type: none"> • Two options centered around controllability and quality of interior lighting • Asks for a weighted average surface reflectance threshold of 45% of work surfaces and 50% for moveable partitions <p>Some Steelcase products may contribute to this strategy in Option 2 of this credit; however, contribution is very dependent on surface material options selected for each product.</p>

INTERIOR DESIGN + CONSTRUCTION: MATERIALS AND RESOURCES CREDITS

LEED V4	CREDIT	CREDIT HIGHLIGHTS STEELCASE CONTRIBUTIONS
Prerequisite Expanded	Construction and Demolition Waste Management Planning	<ul style="list-style-type: none"> Requires setting a project target for waste management. Requires reporting waste diversion rates. <p>Steelcase & dealer partners can help project teams estimate the weight of packaging from their furniture shipments.</p>
New	Interiors Life Cycle Impact Reduction	<ul style="list-style-type: none"> Credit is a combination of LEED 2009 “Materials Reuse” and “Materials Reuse – Furniture and Furnishings” Encourages reuse of materials Added option for Design for Flexibility. <p>Steelcase products are designed to be long-lasting and durable—often making reuse a feasible option, depending on project needs and desirability.</p> <p>Most Steelcase products, specifically architectural solutions and casegoods, are specifically designed for flexibility of space and to be demounted and/or reconfigured, to meet today’s and tomorrow’s needs.</p>
New	Building Product Disclosure and Optimization— Environmental Product Declarations	<ul style="list-style-type: none"> Addresses transparency in environmental life-cycle impacts and selecting products with improved life cycles. Rewards the use of products with Environmental Product Declarations (EPD). <p>Steelcase has several EPDs for the Europe, Middle East, Africa (EMEA) market, and is developing more in this market, as well as for the North American market.</p>
New	Building Product Disclosure and Optimization— Sourcing of Raw Materials	<ul style="list-style-type: none"> Addresses transparency in raw material sourcing and selecting materials that have been appropriately sourced. Rewards products from manufacturers that have provided information on land use practices, extraction locations, labor practices, etc. <p>Steelcase continually works with its supply chain on sustainability material sourcing topics like phasing out materials of concern and conflict mineral reporting, as well as participates in GRI reporting as part of our annual Corporate Sustainability Report. However, due to the scope of work, the Steelcase CSR does not report comprehensively on raw material source and extraction reporting—thus is not applicable to option 1 of this credit at this time.</p> <ul style="list-style-type: none"> Steelcase Phase 2 Program meets the Option 2 “Extended Producer Responsibility” criteria. Steelcase products can contribute to the “recycled content” and “materials reuse” criteria. Select Steelcase materials have the potential to contribute to the “wood products”. A limited selection of surface materials have the potential to contribute to the “bio-based materials” criteria.

INTERIOR DESIGN + CONSTRUCTION: MATERIALS AND RESOURCES CREDITS CONTINUED

LEED V4	CREDIT	CREDIT HIGHLIGHTS STEELCASE CONTRIBUTIONS
New	Building Product Disclosure and Optimization— Material Ingredient Reporting	<ul style="list-style-type: none"> • Addresses transparency in material ingredients and selecting products with optimized ingredients. • Rewards the use of products with ingredient reporting in programs like Cradle to Cradle™ certification and Health Product Declarations. <p>Steelcase Cradle to Cradle™ certified products have the potential to contribute to this credit requirements. Contribution weightings will depend on level of certification.</p>
Removed credit	Recycled Content	LEED 2009 Credit requirements moved to “Building Product Disclosure and Optimization—Sourcing of Raw Materials.”
Removed credit	Regional Materials	Credit requirements moved to the “Building Product Disclosure and Optimization” credits.
Removed credit	Rapidly Renewable Materials	Rapidly renewable materials addressed by “Building Product Disclosure and Optimization—Sourcing of Raw Materials”
Removed credit	Certified Wood	Credit requirements moved to “Building Product Disclosure and Optimization—Sourcing of Raw Materials”.
Revised Credit	Construction and Demolition Waste Management	<ul style="list-style-type: none"> • Added an option for waste reduction strategy. • Requires waste diversion from multiple material types. <p>Steelcase and dealer partners can help project teams estimate the weight of packaging from their furniture shipments.</p>

INTERIOR DESIGN + CONSTRUCTION: INDOOR ENVIRONMENTAL QUALITY CREDITS

LEED V4	CREDIT	CREDIT HIGHLIGHTS STEELCASE CONTRIBUTIONS
Credit: Updated and consolidated	Low-Emitting Interiors	<ul style="list-style-type: none"> • Credit is a combination of the “Low-Emitting Materials” credits. • Requirements based on VOC emissions rather than VOC content. • Systems approach to emissions within a space. • Added requirement for TVOC disclosure. • Modified requirements for formaldehyde. <p>Steelcase furniture certified for SCS Indoor Advantage™ may contribute depending on options. Products that contribute will demonstrate certification compliance to:</p> <ul style="list-style-type: none"> - ANSI/BIFMA Standard Method M7.1 - ANSI/BIFMA e3 Furniture Sustainability Standard, Credits 7.6.1 and 7.6.2 - California Specification 01350 for classrooms
Updated and Renamed Credit	Quality Views	<ul style="list-style-type: none"> • Credit title renamed from “Daylight and Views—Views”. • Added requirement for quality view, defined by the LEED 2009 exemplary performance criteria. <p>Steelcase offers several products and thought starters to help achieve the requirements of this credit – yet, several other factors play into achieving this credit, beyond the scope of furniture.</p>
New	Acoustic Performance	<ul style="list-style-type: none"> • Added requirements for room noise levels, speech privacy and sound isolation, reverberation time, as well as paging, masking, and sound reinforcement systems. • Harmonized ANSI and ASHRAE standards. <p>While Steelcase has sound-tested architectural and workstation products, as well as sound masking products, contributions are limited due to the various other factors that can come into play for this credit.</p>

BUILDING OPERATIONS + MAINTENANCE: MATERIALS AND RESOURCES CREDITS

LEED V4	CREDIT	CREDIT HIGHLIGHTS STEELCASE CONTRIBUTIONS
Updated and Renamed	Purchasing— Facility Maintenance and Renovations	<ul style="list-style-type: none"> • Credit title changed from Sustainable Purchasing—Facility Alterations and Additions. • Incorporates purchasing requirements for furniture from the Sustainable Purchasing—Durables Goods credit. • Added an option that rewards projects for having no alternations or furniture purchasing. • All Steelcase contributions will be centered around Option 2. Furniture. <p>Steelcase products are designed to be long-lasting and durable—often making reuse a feasible option, depending on project needs and desirability.</p> <p>Steelcase Cradle to Cradle™ certified products have the potential to contribute to this credit requirement. Contribution weightings will depend on level of certification.</p> <p>Steelcase furniture certified for SCS Indoor Advantage™ may contribute depending on options. Products that contribute will demonstrate certification compliance to:</p> <ul style="list-style-type: none"> - ANSI/BIFMA Standard Method M7.1 - ANSI/BIFMA e3 Furniture Sustainability Standard, Credits 7.6.1 and 7.6.2 - California Specification 01350 for classrooms <ul style="list-style-type: none"> • Steelcase Phase 2 Program meets the Option 2 “Extended Producer Responsibility” criteria. • Steelcase products can contribute to the “recycled content” and “materials reuse” criteria. • Select Steelcase materials have the potential to contribute to the “wood products”. • A limited selection of surface materials have the potential to contribute to the “bio-based materials” criteria.
Credit	Solid waste management — ongoing	<ul style="list-style-type: none"> • Maintain a waste reduction and recycling program that reuses, recycles, or composts various materials. <p>Steelcase's Victor 2, is an in-office recycling center that provides options for easy sorting and collection of compost, paper, plastics, returnables, other recyclable materials, and waste.</p>

PILOT CREDITS

The following credits are potential contribution points for Steelcase products and applications.

As a reminder, an additional credit point is available in the **Innovation** category for “achieving one pilot credit from the USGBC’s LEED Pilot Credit Library.”

LEED V4	CREDIT APPLICABLE RATING SYSTEMS	CREDIT HIGHLIGHTS STEELCASE CONTRIBUTIONS
New Pilot Credit	Environmentally Preferable finishes and furnishings BD+C, ID+C	<ul style="list-style-type: none"> • Use finishes and furnishings that have verified multi-attribute environmental certifications • Focus is on sourcing products that meet the ANSI/BIFMA e3 Sustainability Standard <p>Dozens of Steelcase products are level® certified. Documentation can be found on Steelcase’s website (www.steelcase.com). Steelcase’s certified products span from level® 1, 2, or 3, depending on product style and options selected.</p>
New Pilot Credit	Social equity in the supply chain BD+C	<ul style="list-style-type: none"> • Promotes fair trade, respect for human rights & equity, and healthier environments • Asks for documentation of tier 1 supplier signature to the end-manufacturer’s supplier code of conduct <p>— or —</p> <ul style="list-style-type: none"> • Documentation of compliance to ANSI/BIFMA e3 Social Equity section <p>Steelcase can provide documentation of compliance to ANSI/BIFMA e3 Sustainability Standard – Social Responsibility sections 8.7.2.1 and 8.7.2.2</p>
New Pilot Credit	Design for active occupants BD+C, ID+C, O+M	<ul style="list-style-type: none"> • Strategy 10. Provide equipment or exercise opportunities for at least 5% of FTE occupants that can be used at workstations, to allow for physical activity while working at their desks • Includes tread-desks, stationary bicycles, exercise ball chairs, etc. <p>Steelcase WalkStation and Turnstone Buoy promote the active movement of the user during work, and are solutions that can help, in part, to achieving this pilot credit.</p>

WORLDWIDE GREEN BUILDING STANDARDS & RATING SYSTEMS:

The LEED green building rating system was launched by the United States Green Building in 1998, and has since evolved into an international program supported by the World Green Building Council. While the LEED rating system has been diffusing across the globe, it is important to recognize that there are numerous other programs for green buildings around the world.

Some examples of current programs include those listed below:

U.S. Green Standards and Rating Systems

2030 Challenge

Created as a research organization by Edward Mazria in 2003, Architecture 2030 issued 2030 Challenge in 2006 as a voluntary target posed to the global architecture and building community to achieve 50% or better than average building efficiency now and full carbon neutrality by the year 2030. To date, seventy-three percent (73%) of the 20 largest Architecture / Engineering (A/E) firms, have now adopted and are implementing the 2030 Challenge.

ASHRAE 189

Announced in 2007, ASHRAE 189 is a joint effort of ASHRAE, IESNA (Illuminated Engineers Society of North America) and USGBC to provide a green standard for the Design of High Performance, Green Buildings.

Energy Star

A joint program of the U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE), Energy Star measures products and buildings for their energy efficiency. The Energy Star

labeling program was founded in 1992 but did not include buildings until 1995.

Title 24 - California Regulations

Title 24 is a California energy and efficiency standard for residential and nonresidential buildings. It is considered to be more stringent than the ASHRAE standard addressed in LEED. It was introduced in 1978 but it has been revised continuously since then, as recent as July 2014.

International Green Building Systems

Living Building Challenge

In 2005, the Cascadia Region Green Building Council developed the Living Building Challenge that aims to pushing projects to the limits of using sustainable building practices and cutting edge technology – it is not intended to compete with LEED but rather is a complementary voluntary challenge. Projects can achieve three types of certification: Living Building Challenge, Petal Recognition or Net Zero Energy Building Certification. To date there are over 200 Living Building Challenge registered projects in 12 countries.

BREEAM

Developed in the early 1990's, the Building Research Establishment's Environmental Assessment Method was introduced by the Building Research Establishment, an organization funded mainly by the UK government. It measures sustainable design and construction with environmental performance standards.

Many international projects pursue both BREEAM and LEED certification. Since 2012, the USGBC has accepted BREEAM Energy points under the LEED Energy & Atmosphere credits.

Versions of BREEAM are available for the United Kingdom, the Gulf and Europe.

Canada LEED

In 2003, Canada licensed the LEED Green Building Rating System®. It operates under the guidance of the Canadian Green Building Council (CaGBC). The LEED program has been tailored specifically for Canadian climates, construction practices and regulations.

Green Globes

The origins of the Green Globes dates back to 1996 when BREEAM (see International) was introduced in Canada. The program morphed into in the Green Globes and in the U.S. it is now managed by the Green Building Initiative (GBI). Over 220 projects have used this voluntary building environmental design and management assessment and rating system.

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In order to condense this section, The World Green Building Council (WGBC) website has been listed. The WGBC is a network of national green building councils in more than one hundred countries.

Visit <http://www.worldgbc.org/worldgbc/members> for a listing of Countries with Green Building Systems that are either: Established, Emerging, Prospective or part of an Associated Group.

Visit the WGBC website and enter the country of origin, workplace or region of interest to learn more about the Green Building rating systems globally.

REFERENCES

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³“The Greenest Building: Quantifying the Environmental Value of Building Reuse,” National Trust for Historic Preservation, 2011.

⁴“A Closer Look at Materials and Resources in LEED v4,” U.S. Green Building Council, accessed January 10, 2015: <http://www.usgbc.org/articles/green-building-facts>

⁵LEED Credit Library, U.S. Green Building Council, accessed March 17, 2015: <http://www.usgbc.org/node/4742780?return=/credits>



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