WHAT’S NEW IN LEED V4.1

What the Masonry Industry Should Know

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What's New in LEED v4.1

We will try to answer...

- Who
- What
- Where
- When
- Why
LEED v4.1

- Several credits in LEED v4 proved difficult to achieve or beyond the market’s capabilities.
- Materials and Resources credits were particularly problematic
- LEED v4 not widely used
LEED v4.1

- 2018 Call for Proposals
- Late 2018 O+M Rating System
- Early 2019 BD+C Rating System, Residential, IDC, Cities
- LEED v4 still available
- LEED v4.1 “Beta” Rating System
- Vote on v4.1 late 2019 or 2020
LEED v4.1

- New projects can register under v4.1
- Current projects can switch entirely or do credit substitution

v4.1 EPD credit -> Replace v4 EPD credit
LEED v4.1

WHAT

- Updated code references
- Increased accessibility
- Expanded to different building and space types
- Improved performance and measurement
Updated code references

- **ENERGY** – prerequisite (minimum)
  - Updated to ASHRAE 90.1-2016
    - v4 was 5% better than 90.1-2010
    - Approx 3% more stringent +/-
  - Updated ASHRAE Design Guides

- **MATERIALS** – referenced programs
  - Updated Cradle to Cradle, HPD, Declare, etc.
Increased accessibility of credits

- Lowered thresholds
- Simplified point system
- Added incremental levels
Different building/space types

- Different levels (thresholds) for warehouses
Credit changes

- The specifics....
v4.1 Sustainable Sites

- Credit: Heat Island Reduction
  - New Solar Reflectance standard for roofs
  - Pavers: must have initial SR of 0.33
    - Eliminated 3-year aged value
Prerequisite: Minimum Energy Performance
- Updated to ASHRAE 90.1-2016

Credit: Enhanced Commissioning
v4.1 Energy & Atmosphere

- Credit: Optimize Energy Performance
  - Using ASHRAE 90.1 App. G

**WHAT**

**Energy Cost Reduction**
1 – 9 points for 5% to 50% reduction

**Greenhouse Gas Emission Reduction**
1 – 9 points for 5% to 100% reduction
v4.1 Materials & Resources

- Limit on Structure and Enclosure contribution removed
- 200% multiplier for 100 mile, 100% local materials is retained
- Several credits have new thresholds; tiers added; simplified point structure
v4.1 Materials & Resources

- Credit: Building Life Cycle Impact Reduction
- Option 3: Building and Material Reuse – now 2 paths
  - Path 1, Combination of Structural and Non-structural Elements, essentially same as LEED v4
  - Path 2, Separates Exterior and Interior Elements, essentially same as LEED 2009
4.1 Materials & Resources

- Credit: **Building Life Cycle Impact Reduction**

- Option 4: **Whole Building Life Cycle Assessment** – now 4 paths
  - Path 1, do WB LCA
  - Paths 2 and 3, do WB LCA and show 5 or 10% reduction
  - Path 4, do WB LCA, show 10% reduction and building re-use or salvaged materials
v4.1 Materials & Resources

- Credit: Environmental Product Declarations

- Option 1: **EPD** – simplified point system
  - use 20 products from at least 5 manuf
    - 10 EPDs for Core and Shell projects
  - All EPDs = 1 product, except
    - Type III, product specific, 3rd party certified and verified, external review = 1.5 products
Credit: Environmental Product Declarations

Option 2: Multi-attribute Optimization
- use either
  - 10 products from 3 manufacturers
  - 10% (was 50%) by cost products that meet one of several criteria
v4.1 Materials & Resources

- Credit: Environmental Product Declarations
- Option 2: Multi-attribute Optimization – reduced threshold
  - Life Cycle Impact Reduction Action Plan = 50% by cost or ½ product
  - Life Cycle Impact Reductions in Embodied Carbon:
    - 1, 1.5, 2 products or 100, 150, 200% value
  - Impact Categories
v4.1 Materials & Resources

- Credit: Sourcing Raw Materials
- Option 1: Source and Extraction — deleted
- Option 2: Responsible Sourcing of Raw Materials (new name)
  - Recycled content, bio-based, salvaged, etc
  - 3 manuf, 20% by cost (was 25%) = 1 pt
  - 5 manuf, 40% by cost = 2 pts
    - Material reuse = 200% value
    - Recycled content value — LEED 2009 calc
v4.1 Materials & Resources

- Credit: Material Ingredients
- Option 1: Material Ingredient Reporting – updated C2C, Declare
  - HPD no significant changes
- Option 2: Material Ingredient Optimization – new paths, tiered weighting
  - 10 products from 3 manuf (NEW)
  - 10% by cost (was 25%)
- Option 3: Supply Chain – deleted
v4.1 Materials & Resources

- Credit: Material Ingredients
- Option 2: Material Ingredient Optimization
  - Material Ingredient Screening and Optimization Action Plan = ½ product or 50% value
  - Advanced Inventory & Assessment = 1 product, 100% value
  - Material Ingredient Optimization = 1.5 products, 150% value
Credit: Construction & Demolition Waste Management

Option 1: Diversion
- added options in both paths to comply using a certified commingled recycling facility

Option 2: Total Waste
- Separated requirements for construction waste and demolition waste. Modified to create separate rate for warehouses and increased the threshold for other building types
v4.1 Indoor Environmental Quality

- Credit: Low-Emitting Materials
  - Simplified calculations
  - Points based on # of compliant categories (up to 3 pts)
  - Reused and salvaged products added as non-emitting
Credit: Acoustic Performance

- Generally weakened the requirements = Less of an advantage for masonry materials
- Considers HVAC Background Noise, Sound Transmission, Reverb. Time
  - Meet 2 = 1 pt; 3 = 2 pts
    - previously required all 3 for 1 pt
  - Removed STC requirements for residential, hotel/motel occupancies and replaced with more generic space labels, lower requirements
- Added confirmation of compliance via calcs, measurement or expert
Summary

What’s New?

- A lot has changed!
- Hopefully easier to comply
- More options for manufacturers
- Tiered / stepped approach

Resources:

- [https://new.usgbc.org/leed-v41#bdc](https://new.usgbc.org/leed-v41#bdc)
Thanks!

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What’s New in LEED v4.1

**v4.1**
- EA: ASHRAE 90.1-2016
- EA: Energy performance
  - Energy use cost reduction: 1-9 pts
  - GHG emissions reduction: 1-9 pts

**v4.0**
- EA: ASHRAE 90.1-2010
- EA: Energy performance
  - Energy use cost reduction: 1-18 pts
What’s New in LEED v4.1

v4.1

- MR EPDs: Option 1
  - 20 products/5 manf
  - 10 for CS
  - most EPDs = 1 product
  - Type III, certified = 1.5
- MR EPDs: Option2
  - 10 products or 10%
    - Action Plan
    - Embodied Carbon Reduction
    - Impact Categories

v4.0

- MR EPDs: Option 1
  - 20 products/5 manf
  - EPDs = ¼, ½, or 1 product
- MR EPDs: Option2
  - 50% by cost that are below industry average in at least 3 impact categories
What’s New in LEED v4.1

MR Sourcing Raw Materials

- Option 1: Responsible Sourcing
  - 20% by cost, 3 manf = 1 pt
  - 40%, 5 manf = 2 pts
- recycled content value calc like LEED 2009
- material reuse = 200%

MR Sourcing Raw Materials

- Option 1: Source and Extraction Reporting
- Option 2: Leadership Extraction Practices
  - 25% by cost = 1 pt
What’s New in LEED v4.1

v4.1

- MR Material Ingredients
  - Option 1: Material Ingredient Reporting
    - CASRN, HPD, C2C, etc
    - Updated versions
  - Option 2: Material Ingredient Optimization
    - 10 products from 3 manuf
    - 10% by cost
    - Action Plan; Advanced Inventory & Assessment; or Material Ingredient Optimization

v4.0

- MR Material Ingredients
  - Option 1: Material Ingredient Reporting
    - CASRN, HPD, C2C, etc
  - Option 2: Material Ingredient Optimization
    - 25% by cost
    - Optimization
  - Option 3: Supply Chain Optimization
What’s New in LEED v4.1

- MR Construction & Demolition Waste Mgmt
  - Option 1: Diversion
    - 50% or 75% diversion, separate or commingled streams
  - Option 2: Reduction of Total C+D Waste
    - 7.5 lb/sf limit for new construction
    - 2.5 lb/sf limit for new constr warehouses
    - 75% diversion for Demo reqd

- MR Construction & Demolition Waste Mgmt
  - Option 1: Diversion
    - 50% or 75% diversion, separate streams
  - Option 2: Reduction of Total Waste
    - 2.5 lb/sf limit