



LEED v4 Construction Waste Prerequisite and Credit Review

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LEED Basics

- LEED: Leadership in Energy and Environmental Design
- Rating Systems by Building/Use Type:
 - BD+C: Building Design and Construction
 - ID+C: Interior Design and Construction
 - EB O+M: Existing Buildings Operations and Maintenance
 - Others include: Schools, Homes, Retail
- LEED v4 released November 2013, as successor to v2009
- After **10/31/2016** all new projects will be registered in v4

MA & Boston Statistics: (As of Feb 2015)

- 182 LEED Certified Projects (Boston)
- 257 LEED Registered Projects (Boston)
- 681 LEED Certified Projects (Massachusetts)
- 859 LEED Registered Projects (Massachusetts)

Rating System Basics

- All rating systems include both Prerequisites and Credits
 - LEED v4 makes significant updates C&D waste requirements
 - NEW PREREQUISITES: Construction Waste Plan (B/I D+C) or Facility Maintenance & Renovation Policy (EB O+M)
 - Multiple streams must be diverted (B/I D+C)
 - Alternative Daily Cover is not considered diversion
 - Source Reduction is a new option for compliance (B/I D+C)
 - Waste to Energy may be counted, if it meets certain requirements (B/I D+C)
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C&D Waste Management Planning Prerequisite (ID+C, BD+C)

- Create a C&D Waste Management Plan
 - ID at least 5 materials targeted for diversion
 - Specify whether materials will be source separated or commingled
 - Describe diversion strategies for each:
 - Where they will be taken
 - How the facility will process them
 - Provide a final report detailing all major waste streams from the project and disposal and diversion rates
 - ADC and land-clearing debris cannot be counted as contributing to waste diversion (but should be addressed in plan if needed!)
 - Incineration may count as diversion if other methods are not available (and if it meets certain conditions)
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Facility Maintenance and Renovation Policy (EB O+M)

- Write and implement a building-wide policy addressing maintenance and renovation waste
 - Maintenance Waste:
 - Identify methods to safely store and recycle materials (MEP, etc.)
 - Renovation Waste:
 - Apply to at least: HVAC upgrades, tenant fitouts, and building improvements
 - Set procedure for crafting specific plans for individual projects
 - Identify 5 waste streams for diversion
 - Set a target diversion rate
 - Set up storage areas as needed
 - Explain where commingled wastes will be taken, how they will be sorted and processed
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C&D Waste Management Credit (ID+C, BD+C)

- 1-2 points available
 - Option 1:
 - Divert 50% AND 3 material waste streams (1 pt)
 - Divert 75% AND 4 material waste streams (2 pts)
 - Option 2:
 - Generate less than 2.5lbs construction waste per square foot of the building's floor area (2 pts)
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C&D Waste Management Credit (ID+C, BD+C), continued

- Data is required: weights or volumes, diversion methods, sorting and processing information.
 - Commingled waste must either:
 - Provide diversion specific to the project's waste
 - Provide average facility diversion rate, IF that rate is regulated by local or state authority AND if that rate excludes Alternative Daily Cover.
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Example Calculations

| Material stream | | Diverted waste per report date | | | | Total | Units |
|---|------------------------|--------------------------------|------|-----|------|-------|-------|
| | | Sept | Oct | Nov | Dec | | |
| Material streams contributing toward credit | Plastic | 1.25 | 2.5 | 10 | 5 | 18.75 | yards |
| | Carpet | 2.5 | 2.5 | 2.5 | 0 | 7.5 | yards |
| | Paper/Cardboard | 5 | 2.5 | 2.5 | 5 | 15 | yards |
| | Clean Wood | 0 | 25 | 0 | 1.25 | 26.25 | yards |
| | Metal | 1.25 | 2.5 | 5.5 | 7 | 16.25 | yards |
| | Sheetrock | 2.5 | 2.5 | 4 | 5 | 14 | yards |
| | Brick/Concrete Masonry | 10.5 | 2.5 | 5.5 | 8.75 | 27.25 | yards |
| | Asphalt Shingles | 10 | 0 | 0 | 0 | 10 | yards |
| Total diverted waste | | | | | | 135 | yards |
| Material streams not contributing toward credit | Landfill | 10.75 | 7.5 | 15 | 10 | 43.25 | yards |
| | Screen Fines (ADC) | 5 | 1.25 | 0 | 2.5 | 8.75 | yards |
| | 6" Minus (ADC) | 1.25 | 1.25 | 5 | 5.5 | 13 | yards |
| Total landfill/ADC waste | | | | | | 65 | yards |
| Total waste | | | | | | 200 | yards |
| Percent (%) diverted | | | | | | 67.5 | % |

Maintenance and Renovation C&D Waste Management (EB O+M)

- Divert at least 70% of waste from facility maintenance & renovation activities
 - Performance Period v. Ongoing
 - Exclude furniture/furnishings that pose health concerns (eg, mold); non-base-building elements; mechanical, electrical, and specialty items (eg, elevators)
 - Customize plan for large projects
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Takeaways

- C&D waste has increased prominence in LEED v4
 - Confirm which rating system a client is using for a project
 - Adjust for v4 requirements
 - Exclude ADC as diversion method
 - Partner with clients on waste diversion plans
 - Identify individual streams for recycling
 - Provide details about treatment methods
 - Clients will need detailed data
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