CASE STUDY

CHALLENGE
In May 2009, The Meridian Park Office Building underwent a renovation to obtain LEED EB-O&M certification, and needed assistance with managing and measuring the project.

Building type
Four-Story Structural steel

Architect/Engineer
Davis Design

General Contractor
Clark Contracting Inc.

Owner
Ameritas Life Insurance

Project duration
12 months

Project size
66,800 sq. ft.

SOLUTION
Nebraska Recycling Council (formerly WasteCap Nebraska) developed a waste management plan for tenant renovation, calculated the building’s waste baseline, and identified recycling options.

Overview
Meridian Park Office Building is a four-story office building, certified LEED Silver in 2010 under LEED O+M: Existing Buildings v3 - LEED 2008. Nebraska Recycling Council was contracted by Davis Design to manage the construction and demolition project and document the waste diversion rate for this project so they could qualify for LEED certification.

Waste Reduction Program Results

<table>
<thead>
<tr>
<th>Waste diversion rate:</th>
<th>77%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste diverted for reuse:</td>
<td>45%</td>
</tr>
<tr>
<td>Recyclables diverted from landfill:</td>
<td>18.85 Cu. Yd.</td>
</tr>
<tr>
<td>Cost savings by recycling:</td>
<td>$825.21</td>
</tr>
</tbody>
</table>

Key Program Elements

Good planning and working with project crew on a daily basis was key. Workers helped modify the recycling plan once they understood the process and goals for the project.

<table>
<thead>
<tr>
<th>Material</th>
<th>Weight (tons)</th>
<th>Volume (cu. yd)</th>
<th>Recycled/Reused (cu. yd)</th>
<th>Landfilled (cu. yd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cabinets</td>
<td>0.52</td>
<td>3.46</td>
<td>3.46</td>
<td></td>
</tr>
<tr>
<td>Carpet</td>
<td>0.51</td>
<td>1.71</td>
<td></td>
<td>1.71</td>
</tr>
<tr>
<td>Ceiling Tiles</td>
<td>0.28</td>
<td>3.24</td>
<td>2.44</td>
<td>0.8</td>
</tr>
<tr>
<td>Drywall</td>
<td>0.77</td>
<td>3.12</td>
<td></td>
<td>3.12</td>
</tr>
<tr>
<td>Metal</td>
<td>1.27</td>
<td>10.5</td>
<td></td>
<td>10.5</td>
</tr>
<tr>
<td>Dishwasher</td>
<td>0.03</td>
<td>0.43</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>Doors (2)</td>
<td>0.02</td>
<td>0.14</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td>Insulation</td>
<td>0.01</td>
<td>1.88</td>
<td></td>
<td>1.88</td>
</tr>
<tr>
<td>% Recycled or Reused</td>
<td></td>
<td></td>
<td></td>
<td>77%</td>
</tr>
</tbody>
</table>
**Implementation**

*A step-by-step approach to implementing a C&D reuse and recycling program*

1. **Get a commitment**—Management should commit to a C&D waste diversion program by creating a policy that specifies a minimum percentage rate of diversion for all waste generated on construction projects.
2. **Include recycling specifications in all contracts and sub-contracts.**
3. **Establish a project authority or coordinator**—This is usually the construction project manager or general contractor. They will need to control all project waste, provide dumpsters and hauling services for the project, and enforce recycling rules with all contractors. The coordinator educates staff and subcontractors on materials handling protocols.
4. **Imbed waste reduction, reuse and recycling from the start**—Order building materials “just-in-time”; consider methods to reduce, reuse and recycle waste during construction and insert them into contracts; ask suppliers to reduce packaging, use recyclable packaging, or take back their packaging; discuss and encourage reduction, reuse and recycling at pre-construction meetings.
5. **Identify target materials**—Identify target materials at the job site that can be recovered from the waste stream during construction, demolition, and site preparation.
6. **Write a request for proposal (RFP) for waste hauling and recycling**—Specify materials and how they must be prepared to be accepted by the end markets. Require that documentation of recycling and trash quantities and weights be provided monthly. Require that training and education of crews, and dumpster signs be included.
7. **Write a waste management plan**—Include a waste diversion goal, targeted materials, selected service providers, end markets, site logistics, education and training plan, auditing and documentation procedures.
8. **Educate and Train**—Educate every person that comes onto the job site, and provide an instruction sheet (one page) that explains materials separation requirements. Include waste management as a topic at every job site meeting.
9. **Signage**—Post explicit signs on each dumpster. Your hauler(s) should help provide these signs. Create a sign for the perimeter fence that details progress in the program, and reminds work crews and the public that this project is diverting waste for reuse and recycling.
10. **Documentation**—Track all materials taken off-site for reuse, recycling or solid waste. Ask haulers to provide, at least monthly, how much material is being removed, by weight and volume, and at what cost. Provide this data to all stakeholders on an ongoing basis throughout the project.

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**Nebraska Recycling Council (NRC)** is a statewide nonprofit organization supporting collaboration between communities, businesses, solid waste and recycling industries to improve recycling collection and infrastructure. NRC provides an online Nebraska Recycling Guide, recycling equipment grants, education and training, community and business waste assessments, green team training, and more. Visit [www.nrcne.org](http://www.nrcne.org) or call (402) 436-2384 for more information.

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*Above: Ceiling tiles ready for recycling*

*Below: Workers’ beverage cans collected on the job site*