



**Mortenson Construction  
JohnsonDiversey**

Final Recycling Report  
November 2007

WasteCap Wisconsin collected records from haulers to document the weight of trash, reusable and recyclable materials removed from the project site; and created summaries from these records to report the quantity of each material recycled and reused.

**Recycling Results.** Table 1 shows the waste and recycling results during the project. A total of 201.35 tons of debris was generated from this project. 83.63 tons of debris was actually landfilled from this project. The rest was recycled or reused – metal recycled into new metal products; cabinetry, countertops, and flume hoods donated to a local college or stored for reuse; mechanical and electrical components and doors reused on the project.

The recycling rate for the project was **58.47% by weight and 62.93% by volume**.

**Table 1: Demolition Waste Reuse and Recycling Results.**

Material	Trash		Recycling and Reuse	
	Weight (tons)	Volume (cubic yards)	Weight (tons)	Volume (cubic yards)
Trash	83.63	750		
Reuse			69.04	604.21
Metal			48.69	669.21
<b>Total</b>	<b>83.63</b>	<b>750</b>	<b>117.72</b>	<b>1,273.42</b>
<b>Recycling Rate by weight</b>				<b>58.47%</b>
<b>Recycling Rate by volume</b>				<b>62.93%</b>

**Conversion Figures.** In order to calculate the volume or the weight of materials for which complete data was not available, conversion figures were used. In order to come up with the most accurate conversion numbers, we used numbers from US EPA. The conversion numbers used shown in Table 2.

**Table 2: Conversion Figures**

EPA Conversion (1)	Trash	Cardboard	Metal	Wood	Concrete
Average Yards Per Ton	6.67	28.57	8.27	6.25	2.00
Average Tons Per Yard	0.15	0.035	0.12	0.16	0.50

EPA Standard Volume-to-Weight Conversion Factors:  
[http://www.epa.gov/recycle.measure/docs/guide\\_b.pdf](http://www.epa.gov/recycle.measure/docs/guide_b.pdf).



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**Recycling Cost and Savings.** WasteCap collected data from haulers and processors regarding the actual costs paid by this project for hauling and disposal fees for trash and recyclable materials and rebates for materials where applicable. Companies who provided information included Veolia Environmental Services; Miller Compressing; Grunau Company, Inc; and other miscellaneous haulers. To calculate the costs without reuse or recycling, a haul cost of \$115 per haul plus \$32 per ton tipping fee was used. For metal, a credit of \$100 per ton was used unless actual credit was provided. Table 3 shows a summary of costs with and without recycling.

As shown below, the project saved **\$16,659** by reusing and recycling materials rather than landfilling all materials.

**Table 3: Summary of Costs**

<b>Material</b>	<b>Actual Cost</b>	<b>Cost if Trash</b>
Trash	\$6,250.00	\$6,250.00
Metal	-\$6,681.00	\$4,258.00
Reuse	\$0.00	\$5,720.00
<b>Total</b>	<b>-\$431.00</b>	<b>\$16,228.00</b>
<b>Savings By Recycling/Reuse</b>		<b>\$16,659</b>