IOWA CASE STUDIES:
ALTERNATIVE METHODS USED TO MANAGE WASTE FROM DEMOLITION PROJECTS

Executive Hills Deconstruction & Demolition Project

Location: Des Moines, Iowa
Project Manager: Iowa Department of General Services
Demolition Contractor: Scott Dillard Demolition, Indianola, Iowa

Estimated Savings: $20,800

Salvaged building materials auction, Capitol Complex, Des Moines, Iowa

Project Description: Demolition of two buildings on the Iowa State Capitol complex in 2001, referred to as "Executive Hills", was necessary to make room for the construction of a new state building. Executive Hills was originally constructed in the 1958 as an apartment complex built on, what was at that time, private property along the south border of the Iowa State Capitol complex. The state purchased the property in 1969 and converted it into office space for many state agencies. The early estimations were that the high amount of hazardous materials used in the Executive Hills construction, which would have to be removed and disposed of in a responsible manner, would render the buildings useless for traditional demolition recycling.

Project Data: The Iowa Department of General Services (DGS) was able to reuse and recycle a total of nearly 700 tons of materials after the buildings were taken over from the occupants. A combination of some relatively unique recycling techniques (deconstruction, salvaging) was successful in recapturing 98% of those structural materials available for recycling.

Description	Tons	Materials
1. Building Contents Recycled & Reused	9.0	Books, notebooks, copy machine, security safe, 75 air conditioning units
2. Building Materials Reused	427.0	Deconstruction materials (dimensional lumber, plywood sheathing, concrete block, brick, etc.), fixtures, cabinets
3. Building Materials Abated & Recycled	0.2	Fluorescent tubes and ballasts
4. Building Materials Recycled	258.0	Shingles, insulation, concrete
Total tons recycled/reused =	**694.2**	**$20,800.00 in estimated project savings**

The Principal Financial Group Demolition Recycling Project

Location: Des Moines, Iowa
Project Manager: The Principal Financial Group

Estimated Savings: **$40,000**

Project Description: In 1993, The Principal Financial Group began construction of a new office building in downtown Des Moines. The company was committed to recycling as many materials as possible during the demolition and removal of the existing property at the building site. Part of the selection criteria for the demolition contractor was the contractor's ability to recycle the materials removed from the site.

By recycling demolition debris, The Principal Financial Group reduced by 65 percent the total number of cubic yards of demolition materials taken to local landfills. As a result, the company saved over $40,000 in landfill disposal fees.

Project Data: The existing structure was a 70,000 square-foot office building.

Description	**Tons**	**Materials**
Building Materials Recycled		
1. Ferrous materials recycled through salvage yards	322.0	Cast piping, trusses, I-beams and roof decking
2. Non-ferrous materials recycled through salvage yards	2.2	Copper & aluminum
3. Concrete & asphalt	1,911	Concrete & asphalt were ground up and recycled into road base used in new street and highway construction
4. Brick	455	Brick were reused at area facilities in the construction of temporary roads
Total tons recycled/reused =	**2,690.2**	**$40,000.00 in estimated project savings**

Kingsley Pierson Middle School Demolition Project

Location: Pierson, Iowa (Woodbury County)
Demolition Contractor: Bohle Construction Company

Estimated Savings: **$4,000**

Project Description: The Kingsley Pierson Middle School was a 3-story building built in 1913. According to Dean Bohle, Owner, Bohle Construction his company originally bid on the project as a traditional demolition project with all waste being landfilled. Prior to awarding of the contract landfill fees had increased an additional $4.00 per ton at the Woodbury County landfill. Instead of increasing its bid price, Bohle Construction set out to find ways to save project costs by finding alternative outlets for some building components.

Project Data: The contractor was given 10 days to salvage materials from the project prior to demolition. Non-structural building materials were auctioned prior to salvaging and demolition.

Description	Revenue/Savings	Materials
Building Materials Auctioned	$2,000	Shelving, hardwood flooring, windows, light fixtures
Building Materials Salvaged & Recycled	$4,000	Lumber was salvaged, ground and sold to a local hog farmer as bulking material for composting mortalities. Ground lumber was also used as a mulch material for the new construction project. Concrete was pulverized and used for new driveway construction. Rebar (1 ¾") was recycled at a local metals recycler.
Total revenue/savings =	**$6,000**	