

OAC2



Construction & Demolition (C&D) Waste

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Hennepin County



Slide 1

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Olivia A Cashman, 2/18/2022

Introduction

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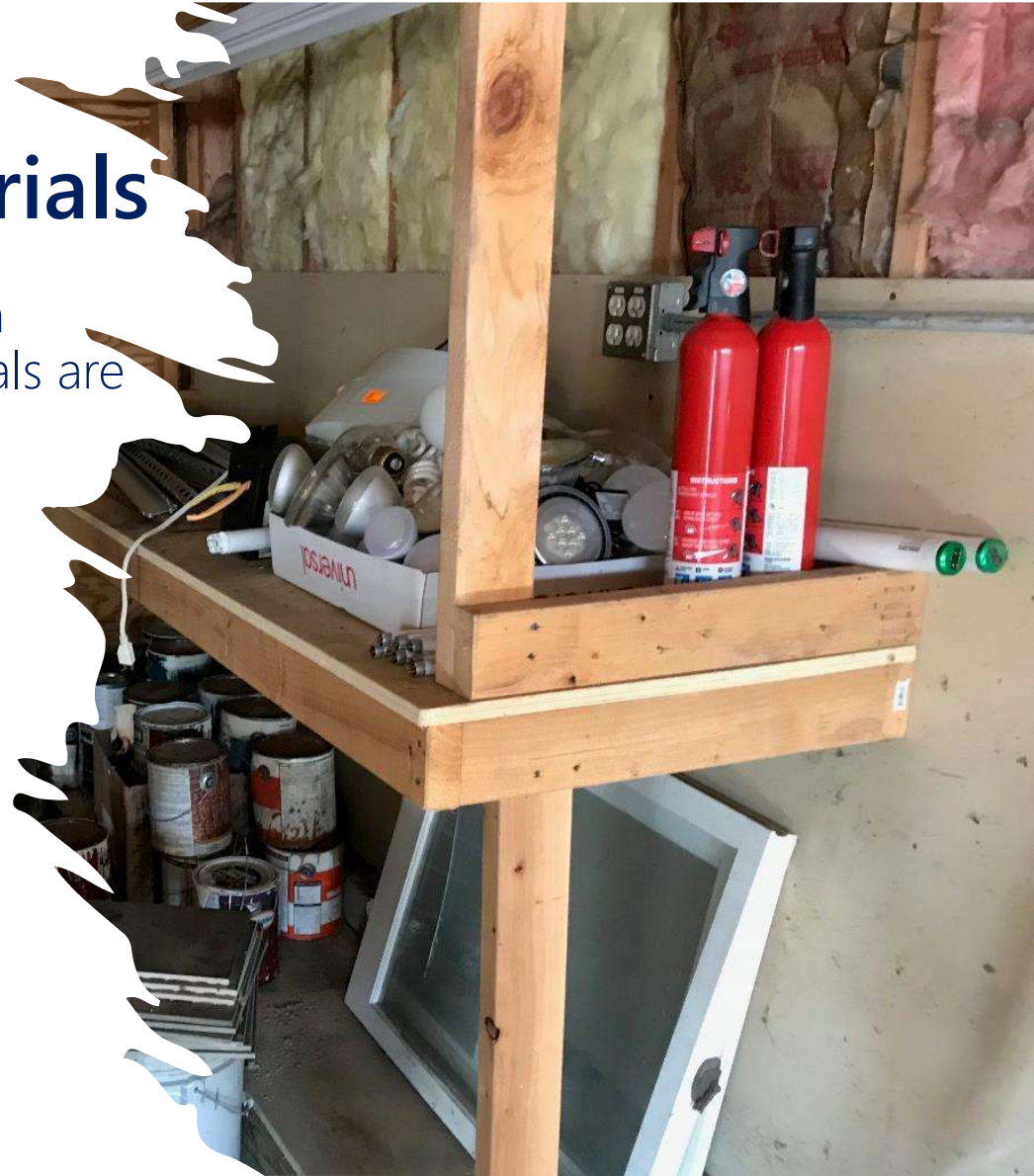
What is C&D waste?

Construction and demolition (C&D) waste is generated during construction, renovation, & demolition of buildings or structures.

- Asphalt & concrete
- Bricks
- Cabinetry
- Doors & windows
- Drywall
- Flooring
- Metals
- Wood & lumber

Hazardous building materials

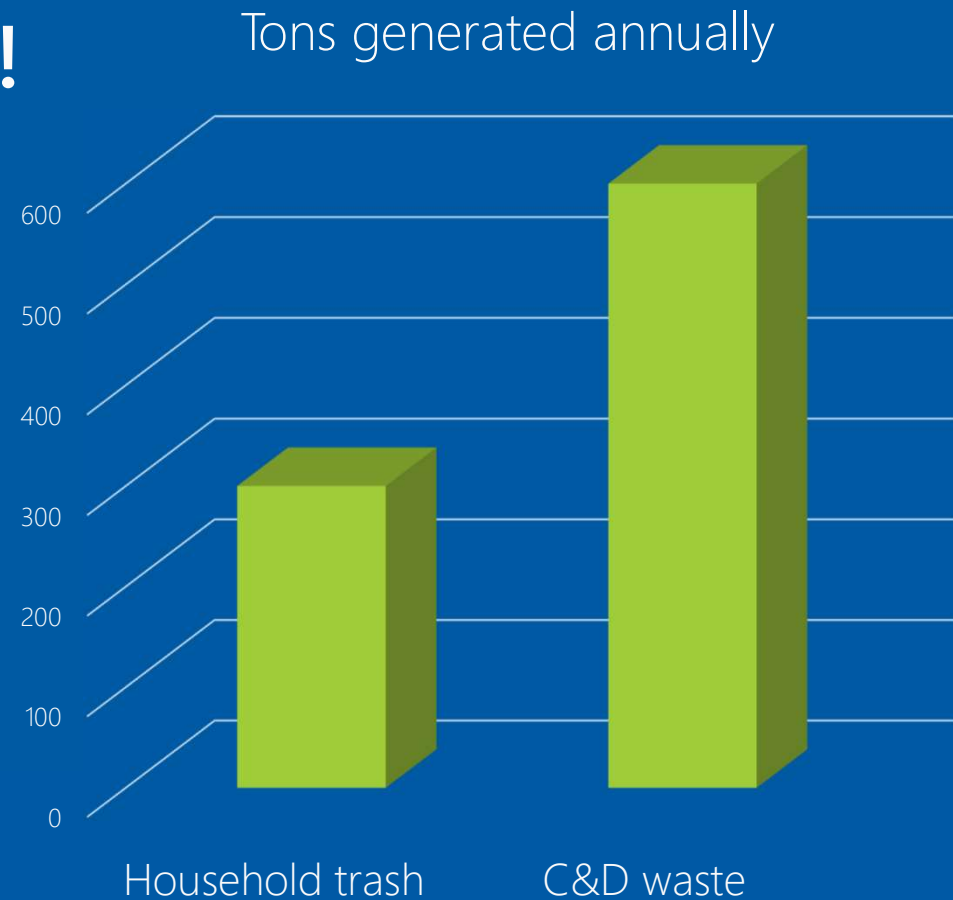
- Hennepin County pre-demolition inspection program verifies hazardous building materials are properly managed, including:
 - Appliances
 - Asbestos-containing materials
 - Electronics
 - Fluorescent light bulbs
 - Paints and oils
 - Pesticides
- www.hennepin.us/salvage



There is a lot of C&D waste!

600 million tons of C&D waste generated in the U.S. in 2018

1.6 million tons of C&D waste is landfilled in MN annually



Why is there so much C&D waste?

- Redevelopment!
 - 90% of C&D waste from demolitions
- C&D waste is big and bulky
- Challenging end-markets
 - Example: carpet and drywall



A construction worker wearing a white hard hat, a brown jacket, and dark pants is carrying a large, long wooden beam. He is standing in a snowy environment with a brick building and a snow-covered evergreen tree in the background. The scene is a demolition site, with the wooden frame of a building visible in the background.

Deconstruction:

Carefully dismantling a building structure to preserve building materials so they can be **reused**.

With deconstruction, about **85%** of the materials in a typical demolition project could be kept out of landfills.



Benefits

- Prevents usable materials from going to the landfill.
- Can preserve historical building materials.
- Makes used building materials available to the community.
- Provides jobs.
- Supports local reuse retailers.
- Reduces dust from job sites compared to mechanical demolition.

Hennepin County

- Avoid embodied carbon associated with production of new materials.
- Pre-war era buildings (1890 - 1940) tend to have high-value, unique fixtures such as hardwood floors, molding, and built-ins.
- Old growth vs. new growth lumber

Longer growth periods → more tree rings





Residential deconstruction process



Where do materials go after deconstruction?



Then what?



We need to USE salvaged building materials!

- Unique, time-period pieces to match or add character
- Closes the loop and reduces waste
- Avoids embodied emissions with new materials
- Supports local reuse retailers

Building material reuse organizations

The following organizations and businesses offer reuse and salvage opportunities for building materials. This list does not constitute approval of any of the firms identified nor do we claim the list is complete. This list was last reviewed January 2023. Call first to verify hours, materials accepted and sold, and guidelines. Note: most salvage outlets require nails and screws be removed from wood prior to donation or sale.

Name	Location	Phone	Website	Items accepted and/or sold
A Plus Appliances	St. Paul	651-771-0336	aplusappliance.org	Appliances
Accent Store Fixtures	Minneapolis	612-379-2788	asfmn.com	Retail fixtures including: shelving and storage units, gridwall
Architectural Antiques	Minneapolis	612-332-8344	archantiques.com	Various building materials, unique/historical artifacts
Art & Architecture	Minneapolis	612-904-1776	artandarc.com	Various building materials, unique/historical artifacts
Bauer Brothers Salvage 	Minneapolis	612-521-9492	bauerbrotherssalvage.com	Various building materials including: cabinets, commercial items, doors, lighting, plumbing, windows
Better Futures Minnesota 	Minneapolis	612-351-8657	betterfuturesminnesota.com	Building materials including: appliances, cabinets, doors, lighting, lumber, plumbing, tile
Big Wood Timber Frames	St. Paul	651-298-8776	bigwoodtimberframes.com	Dimensional lumber, timber, wood flooring
Bridging	Bloomington	952-888-1105	bridging.org	Furniture, household items
The Birch Group (Scrapbox Salvage) 	Minneapolis	612-323-9333	thebirchgroup.org and scrapboxsalvageco.com	Various building materials including: cabinets, commercial items, doors, lighting, plumbing, windows
City Salvage	Minneapolis	612-627-9107	citysalvage.com	Various building materials, unique/historical artifacts



Deconstruction organization

hennepin.us/salvage



Hennepin County offers grant funding to encourage reuse of building materials.

Next are grant details & project examples!

Hennepin County building reuse grants

	Residential deconstruction	Commercial deconstruction	Structural moves	Used building material installation
Goal	Reuse building materials from residential properties.	Reuse materials from commercial properties.	Relocate entire structure to preserve building.	Increase use and demand of used building materials.
Reuse requirements	✓ 5+ different types of interior fixtures reused ✓ 1,000+ pounds of lumber reused	✓ 5+ different types of interior fixtures reused ✓ 1,000+ pounds of lumber reused	✓ Structure (aside from foundation) must be relocated	✓ 5+ different types of used interior fixtures installed ✓ 500+ pounds of used lumber installed
Funding available per project	\$5,000 maximum (up to \$2/square foot)	\$10,000 maximum (up to \$2/square foot)	\$15,000 maximum (up to \$5/square foot)	\$5,000 maximum (up to \$2/square foot)

Residential deconstruction

Materials salvaged:

- 970 square feet walnut and cedar paneling
- 400 square feet oak wood flooring
- Full kitchen set
- 3 light fixtures
- 9 doors
- 3 toilets
- 3 sinks
- Cast iron bathtub

3.57 tons of
materials reused
1.24 tons of
materials recycled





Residential deconstruction



Hennepin County





Used building material installation

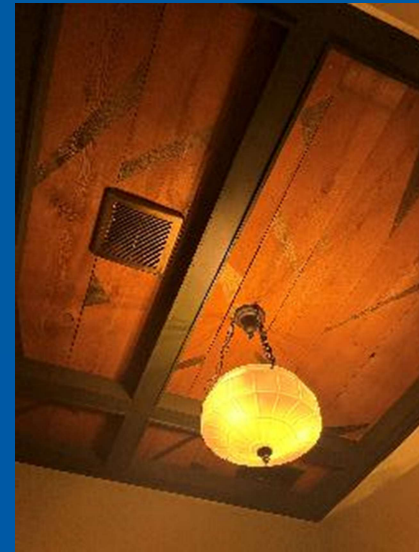
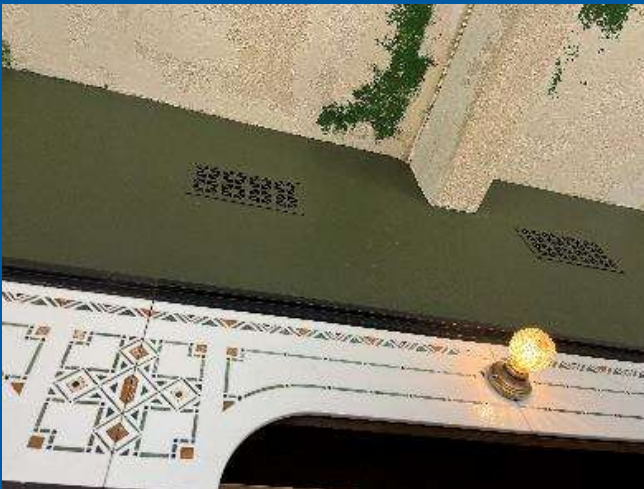


DUTCH BAR
Central and Lowry

Guided Salvage Antiques
architectural elements and other cool stuff...

JOS. F. PALEN CO.
since "1915"
1055 North Fifth Street
Minneapolis, Minnesota 55411
612.338.7409 Fax 371.0218

 **ReStore**
Twin Cities Habitat for Humanity



Hennepin County Environment and Energy

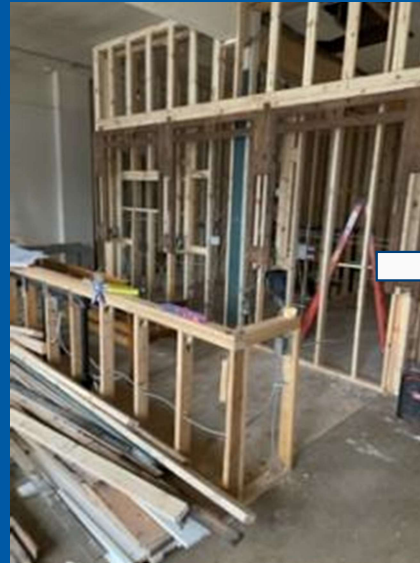


Used building material installation

Year Built: 1928 • Property type: Commercial
Neighborhood: Holland (NE Minneapolis) • Organization: Gus, LLC



DUTCH BAR
Central City Liquor



Full house move

Year Built: 1900 • Neighborhood: Near North / Jordan (Minneapolis)
Waste diverted: 220 tons • Organization: Jepsen, Inc.



Construction & Demolition Recycling Processing Facilities



- Recover materials for recycling (better than sending to landfill).
- Facilities accept loads from both residents and contractors.
- Comparable price to sending to a landfill.
- C&D recycling facilities diverting at least 65% of material:
 - LRS (formerly Atomic Recycling) – Minneapolis
 - Dem-Con – Shakopee



Final thoughts

- Talk to your networks about building material reuse and recycling
- Close the loop! Use salvaged building materials
- Learn more – see Chapter 6 of the MRC Manual for additional resources
- Connect with us!

Questions?

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