

# Oregon Department of Environmental Quality Materials Management Grant Deconstruction Grant Program Final Report

DEQ Agreement #015-17

November 15, 2017



1644 N Emerson St



Salvaged Lumber Retail

**Submitted by the Bureau of Planning and Sustainability, City of Portland**

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City of Portland, Oregon  
Ted Wheeler, Mayor • Susan Anderson, Director



**Background:**

The Bureau of Planning and Sustainability (BPS) began its Deconstruction Grant Program in September 2015 to increase deconstruction activity in Portland. Initial funding for the grant program came from the Bureau of Planning and Sustainability (\$50,000). DEQ awarded BPS a Materials Management Grant (\$50,000) that provided additional funding in October 2016, shortly before the new Deconstruction Ordinance (requirements) went into effect. The Deconstruction Ordinance is now a year old and the deconstruction grants played an important role in the success of the Ordinance and the deconstruction/salvage industry to date.

**Program Goals Accomplished:**

The goals of the grant program were:

- Increase deconstruction as an alternative to mechanical demolition.
- Build capacity within the salvage industry.
- Promote community awareness of deconstruction.
- Collect and share project data and case studies.

**Deconstruction Activity.** The Deconstruction Grant Program has helped increase deconstruction activities in Portland. Beneficiaries of the grants included builders, home owners, and deconstruction contractors. In many cases, builders and home owners decided to deconstruct because the grant funds helped cover the increased costs over traditional demolition. This directly translated into more projects being deconstructed. A total of 24 houses were fully deconstructed under the grant program.

**Industry Capacity.** In terms of building capacity within the industry, the grant program has allowed new contractors to enter the field with an added safety net of grant funds. Two new companies were formed in response to the new Deconstruction Ordinance and both received funds from the grant program. Grant funds have also benefited the contractors by providing training opportunities for new employees and deconstruction workforce development.



Deconstruction workforce training at a grant-funded site



**Community Awareness.** All grant-funded projects are required to post a sign at the active deconstruction site with a program sign. The sign served to recognize the project as well as indicate to neighbors that the materials are being salvaged for reuse. This typically prompted conversations between neighbors and workers on the site. Once neighbors understand what is happening, they are much more comfortable with the removal of the house because the materials are salvaged and there is less dust when compared to mechanical demolition.



**Data and Case Studies.** Data and qualitative information from individual project reporting provided BPS with valuable information that would not typically be shared without the benefit of a grant. Examples included project costs, number of labor hours, hazmat encounters and lessons learned. This information will be shared with the public through case studies. BPS has completed three case studies. The three case studies are in Appendix B. Additional case studies will be posted on the BPS deconstruction webpage [www.exploredacon.com](http://www.exploredacon.com) once completed.

#### **Project Challenges:**

Numerous small grants require a significant amount of administrative time related to contract management, insurance requirements, project tracking/reporting, and final payment to grant recipients. The majority of the \$50,000 budget was allocated to actual grants with only \$3,000 allocated to staff costs. In hindsight, \$3,000 was not a significant enough amount to cover necessary staff time related to contracting and program management. However, this issue did not impact the success of the program and no changes were made to the program during its course.

An additional challenge was confusion between project reporting requirements for the grant program and reporting requirements related to Portland’s Deconstruction Ordinance. After individual deconstruction project completion, some grant recipients completed reporting for the permit, but needed reminding to complete requirements for the grant. The confusion resulted in additional effort on behalf of both the grant recipient and City staff.

#### **Successful Components:**

The grant program helped inform what elements to include in the Deconstruction Ordinance, including site signage and reporting requirements (e.g., salvaged items, receipts). Knowing that these elements did not present problems during the grant program, City staff was confident that they would not present problems with rolling out the deconstruction requirements.

A typical concern associated with deconstruction is the additional cost when compared to mechanical demolition. The availability of grant funds for deconstruction projects helped ease some of the financial burden borne by property owners. As the deconstruction industry has grown over the past year, additional competition has resulted in more competitive bidding – making the reliance on grants less of a factor. Similarly, the grants helped ease the financial risk of deconstruction contractors as they tried new techniques, trained new hires, and/or perfected new business practices.

#### **Unsuccessful Components:**

Both the grant application form and reporting form were developed in *Survey Monkey* (a web-based survey development program). While the application and reporting forms were simple to access and navigate, they lacked attachment functionality. This meant photographs or receipts couldn’t be uploaded/attached to the form, which required the applicant to email attachments to staff and reference the site address. When it came time to develop the web-based portal for the Deconstruction Ordinance, BPS used a different program that had file attachment capability.

#### **Budget and Expenditures:**

The grant amount for this project was \$50,000. Since the deconstruction grant program was already operational when BPS received the DEQ grant, no money was needed for program development. As such, \$47,000 was directly allocated to deconstruction grant recipients and \$3,000 was allocated to staff time, for a total of \$50,000. No real property or equipment was acquired as part of this grant.

Expenditure	Quantity	Cost	Subtotal
Deconstruction Projects	2	\$2,500	\$5,000
Deconstruction Projects	14	\$3,000	\$42,000
Personnel	--	\$3,000	\$3,000
Total			\$50,000

**Feasibility of Replication:**

The deconstruction grant program could easily be replicated by other jurisdictions for the purpose of providing a voluntary incentive-based approach to advancing deconstruction activity. This would be especially true in the Portland Metro region given the availability of Certified Deconstruction Contractors. BPS is willing to consult with other jurisdictions and could share electronic copies of program collateral including site signage, application criteria, and reporting requirements (all of which are included in Appendix A).

It should be noted that since BPS already had the grant program running when it received the DEQ grant, no program development was required. A jurisdiction starting from scratch would need to dedicate a fair amount of time to developing collateral to support a similar grant program. Additionally, fully understanding the contracting component of issuing small grants is important and determining ways of streamlining the process is advisable.

**Conclusion:**

The grant funds were instrumental in promoting deconstruction as an alternative to mechanical demolition, supporting and helping the deconstruction industry expand, and directing more materials to reuse. The grants also helped test elements later found in the Ordinance and providing voluntary incentives in advance of actual requirements.

Since October 2016, sixteen different projects received grants using DEQ funds. Two projects received \$2,500 and the remainder received \$3,000 each. Total dollars spent on the 16 projects was \$47,000 plus an additional \$3,000 for personnel costs, totaling \$50,000.

*Appendix A* includes program collateral and additional information associated with the grant program.

*Appendix B* includes project case studies completed to date.

## ***Appendix A – Program Collateral***

The following are images or copies of collateral that was developed as part of the deconstruction grant program. Additional information includes news articles covering the grant program and project images.



**Site Signage** – All grant projects had to post provided signage that indicated the house was being deconstructed and materials were being salvaged for reuse.



**Post Cards** – Post cards (double sided) were developed and distributed in the Permit Center as a way to promote availability of the grants. A poster in similar style was also printed and placed in the Permit Center.

## Removing a house?

Salvage valuable material for reuse through deconstruction

**Grant funds are available for deconstruction projects**

- Applications accepted beginning Sept. 8, 2015.
- Visit [www.ExploreDecon.com](http://www.ExploreDecon.com) for application instructions.



**Deconstruction benefits:**

- Our community.
- Our environment.
- Our economy.

[www.ExploreDecon.com](http://www.ExploreDecon.com)

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City of Portland, Oregon  
Christa Blake, Mayor • Susan Anderson, Director



## To apply for grant funds:

- The project must include the complete removal of a house or duplex, regardless of zoning.
- Anyone associated with the project may apply (owner, builder, contractor).
- Historic properties may apply, however additional criteria will need to be addressed.

**In addition:**

- Applications are reviewed and selected within approximately seven days from application date.
- Partnerships between demolition contractors and deconstruction contractors are encouraged.
- A licensed/bonded/insured contractor must perform the salvage work.

[www.ExploreDecon.com](http://www.ExploreDecon.com)



**Grant Application (7 Pages)** – The online grant application was produced in Survey Monkey with ranked questions.



## Deconstruction Grant Program

### 1. Application

Please fill out the information below in order to be considered for a deconstruction project grant. The application form has been designed to be simple and easy to fill out. Responses should be detailed but brief, taking approximately 30 minutes to complete the full application.

If you would like a paper copy of the application form, or would like assistance with completing the form, please contact [Shawn.Wood@portlandoregon.gov](mailto:Shawn.Wood@portlandoregon.gov) or 503-823-5468. Translation services are available.

Once your information is submitted, we will let you know if you have been selected within 7 business days. Applications are reviewed and selected based on the weighted criteria below, in addition to other criteria such as geographic distribution and project type. Selection of applications is at the discretion of the selection committee.

If you have other questions regarding this application, please contact Shawn Wood ([shawn.wood@portlandoregon.gov](mailto:shawn.wood@portlandoregon.gov) or 503-823-5468). Thank you for applying!

#### \* 1. Applicant

Name

Mobile phone

Office phone

Email

#### 2. Applicant's relationship to project (check all that apply)

☐ Owner

☐ Contractor

☐ General contractor

☐ Developer/Owner's representative

Other (please specify)

### 3. Project information

Site address (must be within the City of Portland)

Building square feet (total, including basement if finished)

Year built

### 4. Have you applied for a grant under this program before?

☐ Yes

☐ No

If you answered "yes" above, please provide a brief description of the outcome.

### 5. Please select one (1) project scope.

☐ Full deconstruction

☐ Partial deconstruction (non-structural)



## Deconstruction Grant Program

### 2. Application

### 6. What is the estimate of your project costs to remove the entire building?

Deconstruction cost

Backfill / foundation  
removal cost

Full mechanical demolition  
cost, including foundation  
removal  
and backfill, if known.



## Deconstruction Grant Program

### 3. Application

7. What is the estimate of your project costs to remove the entire building?

Deconstruction cost

Backfill / foundation  
removal cost

Full mechanical demolition  
cost, including foundation  
removal  
and backfill, if known.



### Deconstruction Grant Program

### 4. Application

8. Deconstruction timeline (approximate)

Start date

Complete date

9. Names of contractor(s) assigned to project

10. Are all the contractors licensed and insured?

☐ Yes

☐ No

11. Please send three (3) photos of structure (two (2) exterior sides and one (1) interior) to [shawn.wood@portlandoregon.gov](mailto:shawn.wood@portlandoregon.gov). Photos must be received before your application is processed.

☐ Images sent (reference site address in subject line)



### Deconstruction Grant Program



## 5. Application

***Please be thorough but brief in your responses.***

### 12. Project narrative – 25 Points

Describe the scope of your project (full or partial deconstruction) including what makes your project / approach / team unique and why a financial incentive for your project would be valuable. If proposing partial deconstruction, please explain why full deconstruction is not being used.

### 13. Project criteria – Innovation – 10 Points

Describe any innovations (e.g., tools, machinery, or techniques) you are using that will help reduce project cost and / or time, and increase salvage yield.

#### 14. Project Criteria - Salvage Information - 25 points

	Select reusable materials that exist on your project site.	Select materials that will be salvaged.
Appliances / Equipment	<input type="checkbox"/>	<input type="checkbox"/>
Cabinets	<input type="checkbox"/>	<input type="checkbox"/>
Doors	<input type="checkbox"/>	<input type="checkbox"/>
Wood Flooring	<input type="checkbox"/>	<input type="checkbox"/>
Insulation	<input type="checkbox"/>	<input type="checkbox"/>
Light Fixtures	<input type="checkbox"/>	<input type="checkbox"/>
Plumbing Fixtures	<input type="checkbox"/>	<input type="checkbox"/>
Posts and Beams	<input type="checkbox"/>	<input type="checkbox"/>
Siding	<input type="checkbox"/>	<input type="checkbox"/>
Trim	<input type="checkbox"/>	<input type="checkbox"/>
Wall Sheathing	<input type="checkbox"/>	<input type="checkbox"/>
Roof Sheathing	<input type="checkbox"/>	<input type="checkbox"/>
Windows	<input type="checkbox"/>	<input type="checkbox"/>
Wood Framing (2x)	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

#### 15. Project Criteria - Salvage Information

Estimate how much material (% of reusable material)  
will be salvaged.

% of weight - *or* -

% of volume

**16. Project Criteria – Salvage Information**

Describe method for determining estimated and actual amount of salvage material.

**17. Project Criteria – Deconstruction / construction experience and / or training – 10 Points**

Describe contractor(s) experience and / or training in deconstruction and / or construction.

**18. Project Criteria - Equity and Community - 15 Points**

Describe how your project advances equity and / or community engagement.

**19. Project Criteria - Program / Project Promotion - 15 points**

Describe how you will promote the deconstruction grant program as well as your individual deconstruction project.

**20. Historic Resource Status:** Does your structure have historic resource status (or has it had historic resource status at any time on or after Sept. 1, 2010)?

- ☐ Yes
- ☐ No
- ☐ Don't Know





## Deconstruction Grant Program

### 6. Application

21. Describe why receiving grant money for this project would advance historic preservation and how your project would accomplish this:

22. Describe alternatives that were explored for the structure (including rehabilitation or relocation) and why they were not chosen.

\* 23. If I am selected to receive grant funds, I agree to:

1. Post provided signage on the site during active deconstruction.
2. Attend a pre-deconstruction meeting at the site.
3. Accommodate site visits by City of Portland deconstruction grant staff during course of deconstruction.
4. Allow project information, including photographs, to be used / shared by the grant program.
5. Submit a final report form that summarizes the outcomes of the project, including amount salvaged, final project cost and duration.
6. Notify abatement contractor upon discovery of hazardous materials so that material can be safely abated.
7. Maintain and submit building material recycling, sale and donation receipts.
8. Perform in accordance with approved application and applicable local, state, regional and federal regulations or risk losing all or some of the grant money.

☐ Accept

## Deconstruction Grant Program Reporting Form

### Project Summary

**This information is required for invoice.**

**Note: Filling out the survey should not take longer than 30 minutes. Keep responses descriptive but brief.**

**\* 1. Applicant**

Name

Mobile phone

Office phone

Email

**\* 2. Project Information**

Site address

Demolition permit number  
(example 15-123456)

Date of final inspection  
(mm/dd/year)

**\* 3. Project Time**

Deconstruction (total labor  
hours)

Remaining building  
removal (include backfill  
and foundation removal)  
(total labor hours)

Total project duration  
(week(s))

**\* 4. Project Costs**

Deconstruction cost (labor  
only)

Salvage value (approx.)

Remaining building  
removal cost (include  
backfill and foundation  
removal)

**\* 5. Salvage Information.**

Salvaged materials will be (check all that apply):

- ☐ Sold
- ☐ Donated to a non-profit
- ☐ Reused on site
- ☐ Don't know

**\* How much material (% of reusable material) was salvaged?**

% of weight – or –

% of volume

**\* 6. Documentation**

Please send three (3) project photos of different stages of deconstruction AND scan and send all receipts for materials (sale, donation, or photos of on-site reuse) to [shawn.wood@portlandoregon.gov](mailto:shawn.wood@portlandoregon.gov).

- ☐ Photos sent (reference site address in subject line)
- ☐ Receipts sent (reference site address in subject line)

**\* 7. Post-project survey**

Was this your first deconstruction project?

- ☐ Yes
- ☐ No

If Yes, please explain whether or not you would consider deconstruction for future projects and why.

If No, please describe how this project was different in terms of innovation (e.g., improvements in process, technique, communication, diversion, etc.).

**\* What are some lessons learned on this particular project (what would you do the same and what would you do differently)?**



\* Did any unforeseen circumstances contribute to less salvage than anticipated, increased cost and/or increased timeline (e.g., rot, mold, condition)?

☐ Yes

☐ No

If Yes, please describe the circumstance and how it impacted the project.

\* Were unabated hazardous materials encountered during course of deconstruction?

☐ Yes

☐ No

If Yes, what did you do?

\* Did selection of your application for grant funding play a key role in this project being deconstructed rather than mechanically demolished?

☐ Yes

☐ No

If Yes, briefly explain how it made a difference?

If No, what played a key role in the decision to deconstruct (e.g., high value materials, neighborhood relations, environmental benefits, etc.)?

10/10/2017

Apply for a deconstruction grant | \*Deleted\* | The City of Portland, Oregon

## Planning and Sustainability

Innovation. Collaboration. Practical Solutions.

Phone: 503-823-7700 Curbside Hotline: 503-823-7202 1900 SW 4th Ave, Suite 7100, Portland, OR 97201  
More Contact Info (<http://www.portlandoregon.gov/bps/article/136170>)



# Apply for a deconstruction grant



In April 2015 the Bureau of Planning and Sustainability (BPS) convened a Deconstruction Advisory Group (DAG) to advise BPS on the development of incentives and methods to increase deconstruction as an alternative to mechanical demolition. At a June 3, 2015 City Council hearing, BPS recommended establishing a deconstruction grant program as a first step. City Council unanimously supported the recommendation and asked BPS to return in January 2016 with a status report on the grant program and recommendations for next steps. Maximum grant awards are \$3000 for full deconstruction; \$500 for partial projects.

Application Support Available: If you would like to discuss a potential project with program staff before applying, please contact Shawn.Wood@portlandoregon.gov (<http://www.portlandoregon.gov/mailto:Shawn.Wood@portlandoregon.gov>) or 503-823-5468. Staff can help develop ideas, answer questions or make recommendations for a successful application. Hard copies of the form can be requested and translation services are available.

## Frequently Asked Questions | Application Instructions | Start Application

<https://www.portlandoregon.gov/bps/article/542973>

1/4

(<http://www.portlandoregon.gov/>)What is expected of a grant-funded project?

Post provided signage on the site during active deconstruction.

Attend a pre-deconstruction meeting at the site.

Accommodate site visits by City of Portland deconstruction grant staff during course of deconstruction.

Allow project information, including photographs, to be used / shared by the grant program.

Submit a final report form that summarizes the outcomes of the project, including amount salvaged, final project cost and duration.

Notify abatement contractor upon discovery of hazardous materials so that material can be safely abated

Maintain and submit building material recycling, sale and donation receipts.

Perform in accordance with approved application and applicable local, state, regional and federal regulations or risk losing all or some of the grant money.

Why grants for deconstruction?

To promote deconstruction as an alternative to mechanical demolition.

To gather data on deconstruction to help inform future policies.

To build capacity within the industry and encourage new participation and efficiencies/innovation.

To increase salvage of building materials for reuse.

Who may apply?

Anyone associated with the project may apply – homeowner, contractor, project manager.

The program encourages partnerships between contractors (e.g., demolition and deconstruction/salvage).

A licensed / bonded / insured contractor must perform the salvage work.

Where can projects be sited?

Projects must be located within Portland city limits.

All zoning areas.

What kind of projects qualify?

Project must be associated with the complete removal of a house or duplex.

Demolition permit required before work begins.

Projects classified as alterations are not eligible.

Historic resource properties are eligible, however, additional criteria will apply.

When?

Applications accepted beginning Sept. 8, 2015.

Applications will be reviewed and selected within approximately 7 business days from application date.

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## APPLICATION INSTRUCTIONS

<https://www.portlandoregon.gov/bps/article/542973>

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**Important Notes:**

The application form has been designed to be simple and easy to fill out. Responses should be detailed but brief – taking approximately 30 minutes to complete the full application.

The application form cannot be saved as a draft, so we recommend that you have all your application information and responses ready before you begin filling out the application.

Please gather this information before you begin the application:

**Address:** Site address where work will be performed

**House size:** House square footage (including basement if finished)

**Year built:** The year that the original building was constructed.

**Note:** You can use [www.Portlandmaps.com](http://www.Portlandmaps.com) to determine this information (Click on Property tab, then Summary tab).

**Costs:** Deconstruction project cost (Break out by deconstruction cost and foundation removal/backfill cost). Mechanical demolition cost if known (lowest bid obtained).

**Dates:** Deconstruction start/complete dates (approx.)

**Contractor name(s):** List contractors associated with the removal of the structure only. Contractors must be licensed/insured. Projects required to deconstruct as part of the deconstruction requirements must use a Certified Deconstruction Contractor.

**Photos:** At least three (3) photos of the structure (two (2) exterior sides and one (1) interior). Images must be sent in a separate email to [shawn.wood@portlandoregon.gov](mailto:shawn.wood@portlandoregon.gov).

**Project narrative:** You will need to describe the scope of your project (full or partial deconstruction) including what makes your project / approach / team unique and why a financial incentive for your project would be valuable. If proposing partial deconstruction, please explain why full deconstruction is not being used.

**Innovation:** You will need to describe any innovations (e.g., tools, machinery, or techniques) you are using that will help reduce project cost and / or time, and increase salvage yield. Innovation could also include additional steps to reduce hazardous material exposure or monitoring levels onsite or within close proximity to the site.

**Salvage information:** You will need to estimate how much material (% of reusable material) will be salvaged (indicate whether by weight or volume). You'll need to know what reusable materials are present in the structure and which ones you plan to salvage. You'll need to know the method for determining estimated amount of salvage material. You can contact The ReBuilding Center for a free salvage assessment or you can use another method such as building material weight tables.

**Equity and community:** You will need to describe how your project will advance equity and / or community engagement. Examples include using a state-certified M/W/ESB contractor, hiring minority employees, engaging with the community by attending a neighborhood meeting, allowing neighbors access to materials, etc.

**Deconstruction / construction / experience and / or training:** You'll need to describe your team's experience in deconstruction/salvage. If no experience in deconstruction/salvage, describe your team's experience with construction or demolition. Training in deconstruction/salvage should also be included. Projects required to deconstruct as part of the deconstruction requirements must use a Certified Deconstruction Contractor.

**Program / project promotion:** A goal of the grant program is to promote deconstruction and the deconstruction industry. You'll need to describe how your project will promote the deconstruction grant program as well as your particular project. Examples include site signage in addition to that provided by the program; a social event at the site; media/web promotion, etc.

Historic resource status: Does the building have current historic resource status or did it have historic resources status within the past 5 years? If you are uncertain, email [shawn.wood@portlandoregon.gov](mailto:shawn.wood@portlandoregon.gov) with your site address for confirmation. Current status can be confirmed at [www.portlandmaps.com](http://www.portlandmaps.com). In Portland Maps, enter the property address, click on Maps, then Zoning. If Historic Resource Type is populated, check Yes on the application and answer the associated historic resource criteria. If the structure has been removed from the Historic Resource Inventory (HRI) within the past five (5) years, also answer Yes and answer the associated historic resource criteria.

Historic criteria: Describe why receiving grant money for this project would advance historic preservation and how your project would accomplish this. Examples include donating materials to neighborhood groups/museums, reusing materials in the new project and identifying them with signs. Describe alternatives that were explored for the structure such as rehabilitation or relocation and why these were not chosen.

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## START APPLICATION

Go to online application now. (<https://www.surveymonkey.com/r/explorededcon>)

### Remember!

The application form has been designed to be simple and easy to fill out. Responses should be detailed but brief – taking approximately 30 minutes to complete the full application.

The application form cannot be saved as a draft, so we recommend that you have all your application information and responses ready before you begin filling out the application.

If you would like a paper copy of the application form, or would like assistance with completing the form, please contact [Shawn.Wood@portlandoregon.gov](mailto:Shawn.Wood@portlandoregon.gov) (<http://www.portlandoregon.gov/mailto:Shawn.Wood@portlandoregon.gov>) or 503-823-5468. Translation services are available.

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## Portland Promotes Deconstruction Over Demolition

BY JEN KINNEY | SEPTEMBER 1, 2016



(Credit: Lovett Deconstruction)

When it comes to building materials, Portland doesn't just want to promote recycling; the city is making efforts to mandate reduction and reuse. This summer, the city council unanimously passed **an ordinance** expected to triple the number of buildings that are manually deconstructed — rather than **mechanically demolished** — each year. Starting October 31, anyone seeking a demolition permit on a designated

Full Article - <https://nextcity.org/daily/entry/portland-promotes-deconstruction-over-demolition>



# Deconstruction grants still up for grabs

By: Garrett Andrews in Construction January 19, 2016 3:44 pm

The city of Portland has around \$25,000 remaining in grant money available to people interested in deconstructing their home.

The grants are offered to promote the salvage of reusable materials and discourage the waste associated with mechanical demolition.

The previous funding period ended Dec. 31. The **Bureau of Planning and Sustainability** has accepted applications for the current funding period since September, and about half the allotted money has already been awarded.

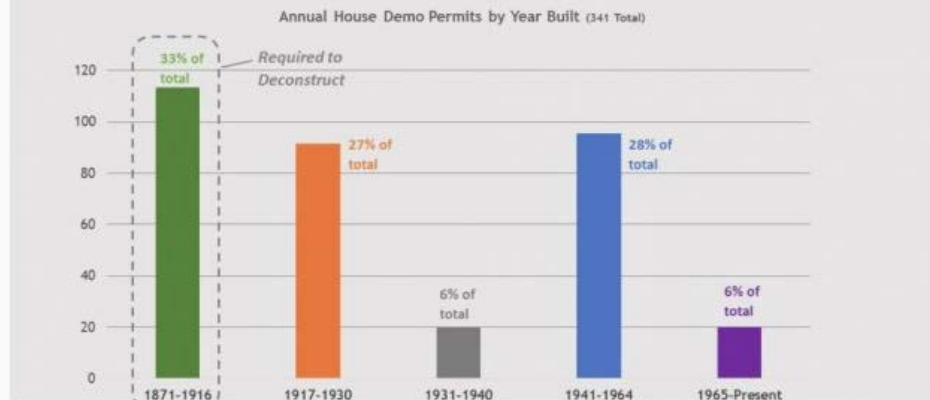
The maximum grant size is \$2,500 for full deconstruction, and \$500 for partial projects. Applications are limited to houses or duplexes within Portland city limits. People interested in grant money can apply online by visiting [www.exploredacon.com](http://www.exploredacon.com).

Though the current funding period doesn't have an end date set, the money could run out by spring, said Shawn Wood, the city's construction materials specialist.

BPS has applied for an additional \$50,000 for deconstruction grants from the state **Department of Environmental Quality**. DEQ will announce the grant recipients next month.

Full Article - <http://djcoregon.com/news/2016/01/19/deconstruction-grants-still-up-for-grabs/>

## Demolitions by Age of Structure



## Portland Prepares for Deconstruction Requirement

By Dirk Wassink, BMRA Newsletter June 2016

On October 31 of this year Portland plans to implement a policy requiring deconstruction on any demolition of a house or duplex which was built in 1916 or earlier. Pre-1917 houses currently account for approximately one-third of the 300+ demolitions taking place in the city each year.

A number of BMRA members have been involved with the effort to develop, pass and implement a deconstruction ordinance in Portland. BMRA member Sara Badiali, of the Reclamation Administration and also a member of the City of Portland Deconstruction Advisory Group touts the pioneering aspect of this effort:

"The City of Portland, Oregon's Deconstruction Ordinance is unique as the very first in the world to lawfully require dismantling buildings for reuse. Its historical precedence lays the foundation for other laws to be created to close the loop in our building material waste streams. I am honored to be on the team that created the Deconstruction Ordinance and I am thrilled for the future of the planet."

Full Article - <https://bmra.org/portland-prepares-deconstruction-requirement/>



## New Portland, Oregon, ordinance requires deconstruction

Historic homes and those built before 1916 must be fully deconstructed.

July 20, 2016

CDR Staff



Demolition

Legislation & Regulations

Portland (Oregon) City Council has adopted an ordinance, including code language, which requires projects seeking a demolition permit of a house or duplex to fully deconstruct that structure if it was built in 1916 or earlier or is a designated historic resource. With Council's unanimous approval of that ordinance, Portland says it has become the first city in the country to ensure that valuable materials from its demolished houses and duplexes are salvaged for reuse instead of crushed and landfilled.

"Our existing older houses are assets: They preserve our built history and contribute to neighborhood character," said Portland Mayor Charlie Hales. "If they must come down, materials from these houses can live on in new buildings. By keeping valuable materials out of the landfill, we ensure the least amount of impact on the environment and neighbors. Deconstruction reduces our carbon footprint; prevents harmful air pollution caused by demolition; and creates good, family wage jobs."

Full Article - <http://www.cdrecycler.com/article/portland-oregon-deconstruction-ordinance/>

## Momentum Building to Reduce Demolition Waste

by: Jordan Jordan on: ~~October 7, 2015~~

With outcry intensifying over the stream of waste being generated by demolitions in Portland, the Mayor's office and City bureaus have been working to develop regulatory responses intended to address some issues of concern. Two initiatives have recently been announced: one designed to incentivize higher rates of reuse of materials from buildings slated for demolition, and the other seemingly intended to serve as a blunt deterrent to developers considering demolishing viable existing housing stock.

In September, the City announced the availability of grant funds for developers who choose **deconstruction** for homes slated to be razed in single dwelling zones. Deconstruction allows for meaningful rates of salvage and reuse of building materials, diverting waste from the landfill and allowing quality architectural components to continue to serve a purpose. Currently, only two percent of Portland's residential demolition waste is salvaged for reuse.

The **grant program** was developed with the assistance of the **Deconstruction Advisory Group (DAG)**, convened in April 2015 to advise the City on the development of incentives and methods to increase deconstruction as an alternative to mechanical demolition. Maximum grant awards are \$2,500 for full deconstruction and \$500 for partial projects, with a total allocation of \$50,000 for the first round of funding.

Restore Oregon serves on the DAG to advocate for a balanced approach to deconstruction that is respectful of historic resources.



Deconstruction of framing (Photo courtesy City of Portland).

Full Article - <https://restoreoregon.org/demolition-alternatives/>

# Shifting the Paradigm from Demolition to Reuse: New Tools

By **Special Contributor** posted 02-16-2017 17:12

1 RECOMMEND

By [Will Cook](#) and [Tom Mayes](#)

## Deconstruction in Portland

This past year, the city of Portland, Oregon, adopted [a new Deconstruction of Buildings Law](#), which Brandon Spencer-Hartle, senior city planner for the Bureau of Planning & Sustainability, discussed at the Denver forum. The new law, which Portland's [city council passed unanimously](#), doesn't require the reuse of entire buildings, but encourages building reuse by requiring [the salvage and reuse of materials](#) in place of destructive mechanical demolition. The regulations, which went into effect in October, apply to houses built before 1916 as well as those designated as landmarks. A companion change to the state's residential building code will soon allow for deconstructed houses to serve as "organ donors"—their lumber will be used in new houses and remodels. Although from a preservation perspective deconstruction is not as beneficial as wholesale building reuse, rigorous deconstruction requirements are a disincentive to demolition—for property owners who decide not to rehabilitate or reuse an existing building—and an important step in the right direction.

Portland based its ordinance on factual findings that support the city's [Climate Action Plan](#) Update and [Comprehensive Plan](#) Update, thereby broadening the ordinance's reach and linking it with broader land-use goals. These findings, which the city incorporated into the ordinance text, note that deconstruction (1) maximizes the salvage of valuable building materials for reuse, (2) reduces carbon emissions associated with demolition, (3) reduces the amount of demolition waste in landfills, and (4) minimizes the adverse impacts associated with building removal. According to Spencer-Hartle, "Portlanders are becoming increasingly aware that Oregon's old growth forests are still standing in our old buildings."

It is important to note, too, that Portland city leaders also considered deconstruction as a job engine. Although rehabilitation of an older building—one that is neither demolished nor deconstructed—is likely to [generate more jobs than deconstruction](#), supporters of the ordinance noted that deconstruction will provide six to eight jobs for every one job associated with traditional mechanized demolition. Furthermore, although it doesn't compare to the reuse of an entire building, deconstruction will provide carbon-reduction benefits by preserving the embodied energy of at least some existing building materials and by cutting the greenhouse gasses associated with sending waste to landfills.

Portland also provides grants ranging from \$500 to \$2,500 to promote deconstruction; build capacity within the deconstruction industry by allowing salvaged materials to be sold, donated, or reused on site; and encourage innovation. As Portland Mayor Charlie Hales has said, "Our goal is to preserve neighborhood character and affordability by discouraging demolitions. But when buildings must come down, that work should still serve the public good."

Full Article - <http://forum.savingplaces.org/blogs/special-contributor/2017/02/16/shifting-the-paradigm-from-demolition-to-reuse-new-tools>



***2008 SW Taylors Ferry Rd – Deconstruction of a former dairy barn converted to residential structure***





*1644 SE 52<sup>nd</sup> Ave – Deconstruction of an architect's personal residence*





*Salvaged Material from Various Grant Projects*



## ***Appendix B – Completed Case Studies***

The following are completed case studies.



## Deconstruction Grant Program

# 928 NE 28th

March 2017

**Contractor** Lovett Deconstruction

**Square footage** 1,100

**Year built** 1905

**Deconstruction cost** \$8,500

Estimated percentage  
material salvaged

60% → 50%  
pre-project post-project

**Labor cost** \$4,900

**Deconstruction labor hours** 224

**Project duration** 2 weeks



### Project Uniqueness

Other structures on the property came down mechanically, so the team strategized on ways to utilize their machinery to do some of the heavy lifting, such as pulling off the roof and knocking over walls to then be pulled apart for salvage. Much of the "how-to" came from working out details on-site and could serve as valuable lessons for future hybrid deconstruction.

### Innovations

The greatest time-saving technique is that the debris will be sorted separately into piles on site and materials will be loaded mechanically into appropriate drop boxes (wood, brick/concrete, and garbage).

### Materials salvaged

- ☒ \* Appliances/equipment
- ☒ \* Cabinets
- ☒ Doors
- ☒ \* Insulation
- ☒ Light fixtures
- ☒ Plumbing fixtures
- ☒ Posts and beams
- ☒ Roof sheathing
- ☐ Siding
- ☐ Trim
- ☒ Wall sheathing
- ☐ Windows
- ☒ \* Wood flooring
- ☒ Wood framing

\* Not present in structure

### Project Promotion Strategy

- Feature on Lovett Deconstruction's website
- Lovett Deconstruction social media
- Lawn sign and literature
- Proximity to office/warehouse offered opportunities for promotion

### Lessons Learned

Having the demolition company do the heavy lifting of putting the debris and clean wood in their boxes saved an immense amount of time. However, a stronger partnership with the demolition company would increase the amount salvaged. We could also train our crew to run the back hoe so we can have more control of what is saved.

### Unforeseen Circumstances

Roosting pigeons in the attic did a number on the building materials, and less than one-third of the ship lap siding was recoverable due to damage.

**Hazmat Discovery** ☒ Yes ☐ No



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## Deconstruction Grant Program

# 6821 N Van Houten

March 2017

**Contractor** Good Wood  
**Square footage** 660  
**Year built** 1885  
**Deconstruction cost** \$7,825

Estimated percentage  
 material salvaged  
 75% → 70%  
 pre-project post-project

**Labor cost** \$6,300  
**Deconstruction labor hours** 110  
**Project duration** 2.5 weeks



### Project Uniqueness

We are a new company formed in response to the ordinance. We pay wages that are high for this industry but also necessary for skilled people to live and work here in Portland, elevating the work force from low-pay, high-turnover laborers to committed, invested deconstructors who take pride in their work. This grant provides us with breathing room to undergo much-needed on-the-job management training and learn how to be a conductor of sorts, playing our crew like the fine instrument it can be, and for that we need practice.

### Innovations

We developed an efficient and intelligent roof removal strategy, which does not require anyone to be on the roof but does require a high level of coordinated teamwork, to accomplish our tight three-day goal and increase safety.

### Materials salvaged

- ☒ Appliances/equipment
- ☒ Cabinets
- ☒ Doors
- ☐ Insulation
- ☒ Light fixtures
- ☐ Plumbing fixtures
- ☒ Posts and beams
- ☐ Roof sheathing
- ☒ Siding
- ☒ Trim
- ☒ Wall sheathing
- ☒ Windows
- ☐ Wood flooring
- ☒ Wood framing

\* Not present in structure

### Project Promotion Strategy

- Social media
- Word of mouth
- Interviews

### Lessons Learned

We learned to slow down on particular tasks in order to minimize loss of salvageable material and debris pile-up, as well as to utilize particular members of the crew for specific tasks in order to make use of their strengths.

### Unforeseen Circumstances

No unforeseen circumstances were encountered.

**Hazmat Discovery** ☐ Yes ☒ No



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## Deconstruction Grant Program

# 4557 NE 60th

April 2017

**Contractor** ReBuilding Center

**Square footage** 1,562

**Year built** 1942

**Deconstruction cost** \$16,070

Estimated percentage  
material salvaged

70% → 80%  
pre-project post-project

**Labor cost** \$4,800

**Deconstruction labor hours** 240



### Project Uniqueness

A 1,562-square foot house and a 500-square-foot detached garage were deconstructed. The team wanted to be Earth conscious and reclaim any useable materials to minimize their environmental impact instead of saving money and contributing to the landfill.

### Innovations

The ReBuilding Center's a team of deconstruction technicians uses the most modern equipment and handheld tools to make the job efficient and save time and energy. The team ensured no materials entered the sewer system or household trash. The old water heaters as well as and heating and cooling sources from the 1990s were removed and will be replaced with tankless water heaters and energy-saving heating and cooling systems in the new building.

### Materials salvaged

- ☒ Appliances/equipment
- ☒ Cabinets
- ☒ Doors
- ☒ Insulation
- ☒ Light fixtures
- ☒ Plumbing fixtures
- ☒ Posts and beams
- ☒ Roof sheathing
- ☒ Siding
- ☒ Trim
- ☒ Wall sheathing
- ☒ Windows
- ☒ Wood flooring
- ☒ Wood framing

### Project Promotion Strategy

- Word of mouth via family, friends, and community
- Publicized environmental and economic benefits of deconstruction

### Lessons Learned

The team appreciated the ease of coordinating a project with a good excavating contractor to close out a demolition permit.

### Unforeseen Circumstances

No unforeseen circumstances were encountered.

**Hazmat Discovery** ☐ Yes ☒ No



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