Metro Resourceful Renovation - Background

The Metropolitan Service District (Metro) is the directly elected regional government that serves Clackamas, Multnomah and Washington counties and the 24 cities that make up the Portland metropolitan area. Metro is responsible for solid waste management, operation of the Metro Washington Park Zoo, transportation and land-use planning, urban growth boundary management, and, through the Metro Exposition-Recreation Commission, management of the region's convention and spectator facilities

Because of growth and poor public accessibility and parking, Metro's current leased office space no longer meets the agency's space needs. Beginning in 1990, a Metro task force analyzed office options. They considered building new offices, purchasing and renovating the former Sears building and leasing a larger building. Given long-term costs, public accessibility, parking availability, ownership, location and growth potential, the Sears building option was determined to be the best long-term choice. The cost of renovating is competitive with the cost of new construction, and purchasing rather than leasing will save the region \$7.7 million over 30 years. The Sears option also allows Metro to contribute to the rejuvenation of inner Northeast Portland by "recycling" a building that has been vacant since 1984. Reduced financing costs based on low bond market interest rates were also a factor.

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After careful analysis, the Metro Council approved purchase of the Sears building and parking garage in December 1991. Hoffman Construction and Thompson Vaivoda/Cole Architects were selected as the design/build team for the project through a design competition. Coincidentally, Hoffman Construction built the original building in 1929.

The building is comprised of four levels that are being renovated to include offices, public meeting space, a child-care facility, and an exercise room totalling 190,700 total square feet. The basement and most of the first level will be converted into approximately 170 parking spaces. This space can be converted into office space if needed in the future.

The building design is distinguished by a pedestrian-friendly main entrance on the North plaza and exterior glass that lets light in and makes the interior visible from the street. The existing tower, the building's most distinctive feature, is being preserved for use as a staff lunch area, and the former water tank is being converted into a "thank tank" conference room.

Metro also purchased the adjacent 470-space parking garage at NE Grand and Irving which is Up to 346 spaces are leased to the State of Oregon through a 30-year lease. The garage will also be used for overflow parking for events at the Oregon Convention Center and the Memorial Coliseum. The garage will become self supporting. After eight years, it is expected to generate more than \$100,000 per year.

The building purchase and renovation cost is \$15,683,000, or \$82.24 per square foot. The parking garage purchase and renovation cost is \$3,699,000. Financing costs total \$4,246,000.

The headquarters project is financed by \$22,990,000 in general revenue bonds. Property taxes are not used to repay general revenue bonds. They are repaid with Metro revenues from parking facilities; garbage disposal fees; zoo admissions and concessions; planning grants; and exposition and recreation facilities user fees, rentals and concessions according to a cost allocation plan based on use of of facility space.

Metro's net occupancy cost during the first full year of normal operating costs is expected to be \$16.70 per square foot. Lease rates for comparable office space range from \$17.28 to \$21.51 per square foot. Metro's currently net occupancy rate, which would have increased if lease was renewed, is \$15.50 per square foot.

Resourceful Renovation elements

Metro's "recycled" headquarters building will be a role model for other commercial building projects, thanks in part to an EPA grant. EPA has given Metro a \$30,000 grant to document the "resourceful renovation" as a demonstration project.

Through the renovation process, 80 percent of the mass of the original building has been maintained. Waste generated in the demolition and construction phases is being salvaged, reused or recycled whenever possible. Approximately 600 tons of metal, wood, doors, fixtures, paneling, carpet, hardware and plant material have been recovered for reuse or recycling to date.

Recycled building and landscaping materials are being incorporated where possible. They include paint, plastic restroom partitions, dry wall, ceiling tiles, rubber play surfaces, yard debris compost, glass fill materials, and other products. To facilitate recycling once the building is operational, recycling chutes for office paper are being installed in existing shafts. The chaft system will efficiently transport sorted paper to storage bins located near the loading dock.

Metro staff are working with the landscape architect to identify areas where water conserving plants and irrigation systems can be used. Energy saving elements have also been developed, through a Pacific Power and Light program, to minimize the building's energy consumption.

The EPA grant funds a part-time, on-site project coordinator, a how-to manual for contractors and an educational slide show. Signs posted outside the construction site are updated regularly to report tons of material recycled or reused over the course of the project. Metro plans to conduct workshops and building tours for the construction industry.

Construction/demolition debris, much of which is recyclable, makes up approximately 17 percent of the metro area waste stream. The Metro project will provide a real-life example of how those materials can be recovered and how much can be saved through avoided landfill disposal fees.

Metro Headquarters Project: Resourceful Renovation

520 tons of material reused or recycled to date

In constructing a new headquarters building, the Metropolitan Service District is practicing what it preaches. The U.S. Environmental Protection Agency thinks the message is worth repeating.

Metro, the agency responsible for regional solid waste planning and recycling education, is reusing the former Sears store in inner northeast Portland rather than constructing its new headquarters on vacant land. In the process, much of the waste produced in the renovation process is being recovered for reuse or recycling, and recycled building materials are being incorporated whenever possible. To facilitate recycling once the building is operational, a recycling chute for office paper will be installed in an existing mechanical shaft and recycling storage space has been designed for easy access to the loading dock.

Because Metro and EPA want the project to be a role model for other commercial construction projects, EPA has awarded Metro a \$30,000 grant to document the process. The grant will fund a part-time, on-site project coordinator, a how-to manual for contractors and developers and an educational slide show. Sign posted outside the construction site are updated regularly to reflect tons recycled or reused on the project. Metro plans to conduct workshops and building tours for the construction industry that focus on the resourceful renovation elements.

Construction/demolition debris, much of which is recyclable, makes up approximately 17 percent of the metro-area waste stream. The Metro project will provide a living example of how those materials can be recovered and how much can be saved through avoided landfill disposal fees.

Key to the success of the project is the cooperation of the design/build team of Thompson Vaivoda/Cole Architects and Hoffman Construction. From the beginning, the architect and the contractor have been "on board" with the project goals of maximizing waste reduction, reuse and recycling. The architects have preserved for reuse beautiful cast medallions from the original exterior, curving oak bannisters, a two-story water tank that will be transformed into a "think tank" meeting room, and existing shafts that will house recycling chutes.

Hoffman and Metro staff worked together to develop an overall waste management plan for the project and a waste management form that all subcontractors must complete. Metro provides construction site recycling guides and technical assistance to help subcontractors develop their waste management plans. Waste disposal and recycling reports from all subcontractors allow Metro to track the quantities of materials recycled or disposed of over the life of the project. Hoffman's project superintendent, Don Nail, is an enthusiastic advocate of reuse and recycling. Before demolition began, he worked with Metro to ensure all salvageable materials were removed from the building. The Salvation Army and The Wherehouse Project removed 9 tons of carpet, and Hippo Hardware took away 2 tons of doors, fixtures, paneling and hardware. 20 tons of maple flooring that could not be re-incorporated into the building were removed for use in a building being renovated nearby.

Nail has organized crews to carefully sort waste materials to maximize their recyclability. To date, 301 tons of metal and 184 tons of wood have been recycled. 4,000 tons of rubble (damaged bricks, concrete and aggregate) were recovered for use in capping the St. Johns landfill or as fill at other sites. And when 50 shrubs (4 tons) had to be removed from the existing landscaping, Nail found a home for them in Vancouver. 132 tons of waste have been disposed of as garbage. As construction activity increases, Hoffman and Metro expect to recover large quantities of wood, drywall, metal, cardboard, cement and asphalt for recycling.

Plans for recycled materials to be used in construction are being finalized. Possible recycled products include drywall, ceiling tile, ceramic tile, plastic bathroom partitions, countertops and paint. To be considered, materials must meet quality and performance standards, fall within price guidelines, and be readily available.

6/16/92

Metro Headquarters Project "Resourceful Renovation"

The Metropolitan Service District (Metro) is renovating the former Sears department store at 600 NE Grand Avenue in the Lloyd District to replace its leased office space in downtown Portland.

Need

- Long-term financial benefits of public ownership vs. leasing.
- Accommodate existing staff and allow for growth.
- Improve public accessibility.
- Create permanent home for regional government.

Considerations

- Options were building new offices, purchasing and renovating the former Sears building or leasing a larger building.
- Selection criteria were long-term cost, public accessibility, parking availability, ownership benefits, location and growth potential.
- Purchasing a building rather than continuing to lease will save the region \$7.7 million over 30 years. Lease payments escalate over time, while debt service payments remain constant.
- Renovation cost is competitive with new construction cost.
- "Recycling" existing structure contributes to rejuvenation of inner Northeast neighborhood and activates a site that has been vacant since 1984.

Building Description (see attached photo of model)

- Two levels of offices, public meeting space and a day care facility (95,700 square feet).
- Internal basement and street level parking (approximately 170 spaces) and plaza and street level retail space.
- Street level space can be converted into office space when needed.
- A pedestrian-friendly main entrance is located off the Northwest plaza.
- Exterior glass brings light into the building and makes the interior visible from the street.
- The tower is being preserved for use as a staff lunch area and the former water tank is being converted into a "think tank" conference room.

Adjacent Parking Garage

- 470 parking space garage at NE Grand and Irving is currently managed by Pacific Development under a contract with Metro.
- Up to 346 spaces are leased to the State of Oregon through a 30-year lease. The garage is also used for Oregon Convention Center and Memorial Coliseum overflow parking.
- The garage will be self-supporting. After eight years, it is expected to generate more than \$100,000 per year.

Resourceful Renovation Elements

- Waste produced in the renovation is being salvaged, reused or recycled whenever possible.
- A variety of recycled building materials, including drywall, ceiling tiles and plastic rest room partitions, are being used.
- Metro has received a \$30,000 EPA grant to document the project as a demonstration project.
- A recycling chute is being installed in an existing mechanical shaft to carry office paper to the storage area from any level.
- Metro is working with Pacific Power and Light to incorporate energy saving elements to minimize the building's energy consumption.

Design/Build Team

Thompson Vaivoda/Cole Architects and Hoffman Construction selected through design competition.

Completion

March 1993

Project & Financing Costs (see attached cost breakout)

- Headquarters building project cost: \$15,683,000
- Parking structure project cost: \$3,699,000
- Financing costs: \$4,246,000
- Total costs: \$23,628,000
- Total building all-in cost per square foot: \$82.24 (includes acquisition cost, construction, furniture and fixtures, art and contingency)
- Net occupancy cost: \$16.17 for FY 1994-95, the first full year of normal operating costs. This includes debt service, operation and maintenance and capital outlay. Metro pays \$15.50/square foot for current leased space.
- Financed by \$22,990,000 in general revenue bonds. Property taxes <u>are not</u> used to repay general revenue bonds. They are repaid with Metro revenues from parking facilities; garbage disposal fees; zoo admissions and concessions; planning grants and excise taxes; exposition and recreation facilities user fees, rentals and concessions; and local government excise taxes.

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Comparitive Lease Rates From Data Gathered in August 1991

		T () ()			Headquarters
	Lease rate (1)	1.1. factor (2)	Parking rate (3)	Total rate	rate (4)
Benjamin Franklin Plaza	\$17.00	\$1.19	\$0.41	\$18.60	\$16.17
Harrison Square	\$16.50	\$1.19	\$0.41	\$18.10	\$16.17
Lloyd Tower	\$16.25	\$0.77	\$0.26	\$17.28	\$16.17
Emmett Building	\$16.00	\$1.70	\$0.24	\$17.94	\$16.17
Commercial Securities Plaza	\$19.75	\$1.19	\$0.57	\$21.51	\$16.17

NOTES -

1. The lowest rate indicated in the negotiating range.

2. Each rate is offered at a certain per square foot tenant improvement (T.I.) level. The headquarters building will be constructed at a T.I. level of \$22/ square foot. The example properties were offered at T.I. rates of lower thana \$22. The "T.I. factor" is a rate adjustment to bring example rates to the same T.I. basis.

3. The cost of the parking area is included in the heaquarters per square costs. In leased space parking would come at additional cost. Metro must maintain at least 30 public spaces. The cost per sqare foot, assuming 76,000 square feet, of these spaces has been included in the analysis as "parking rate."

4. Headquarters rate is the projected cost per square foot for headquarters space in FY 1993-94, the first full fiscal year of occupancy.

Metro Headquarters Building and			a.
Parking Garage Budget			
	Headquarters	Parking	.6 . 4
PROJECT COSTS	Building	Structure	Total
Real estate	\$2,779,000	\$2,688,000	
Project management	627,000	20,000	
Construction	9,364,000	991,000	
Contingencies	1,472,000		
Other			
Furniture and Fixtures	1,225,000		
Telephone/data wiring	130,000		
Art (1% of construction)	86,000		
TOTAL PROJECT COSTS	\$15,683,000	\$3,699,000	\$19,382,000
FINANCING COSTS		à i	
Reserve Account for debt service			\$1,808,000
Capitalized interest			1,914,000
Accrued interest		,	79,000
Other costs of issuance			444,000
TOTAL FINANCING COSTS			\$4,246,000
GRAND TOTAL COSTS	90 7	• •	\$23,628,000

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View from northwest looking south with plaza in foreground.



Design development site plan

- 1. Public stairs
- 2. Plaza
- 3. Screen
- 4. Open parking structure
- 5. Reception area
- 6. Council chamber
- 7. Main corridor/skylights
- 8. Tower
- 9. Day care
- 10. Play area
- 11. Landscape area



Metro

Solid Waste Department Waste Reduction Division 2000 S.W. First Ave. Portland, OR 97201-5398 (503) 220-1168

Metro Regional Center A Resourceful Renovation

Fact Sheet

Project Background

In November of 1991, Metro announced plans to move its central offices to the old Sears retail building located at 600 NE Grand Avenue. Metro's staff and management recognized that this renovation project offered an opportunity to design, build, occupy and promote a monument to innovative waste reduction and recycling practices while generating valuable information to help the region's contractors and builders save money and be good corporate citizens, by saving landfill space and other natural resources.

They proposed that Metro set a new standard in the region for construction/demolition waste reduction, reuse and recycling. Metro received a \$30,000 EPA grant to assist with implementing and documenting the recycling aspects of what has come to be known as the "Resourceful Renovation Project." The major elements of the project have included:

- Maximizing salvage of construction and demolition materials.
- Employing efficient building practices to reduce waste generated during construction.
- O Using building materials with recycled content.
- O Installing a state-of-the-art system for collecting and separating office papers.
- O Documenting waste reduction practices

Construction Site Recycling

- Each subcontractor is given a waste management form and a *Construction Site Recycling Guide*.
- Hoffman Construction, the prime contractor, provides a collection center for all materials except sheetrock. The two sheetrock subcontractors deliver their material to the same drywall recycler, one by truck and the other by commercial drop box.
- O All construction workers are encouraged to use on-site roller carts to separate recyclable materials and mixed waste. Past practices were to fill cardboard boxes with mixed waste and recyclables and backhaul the material to a dumpster at the construction office. By providing and promoting convenient source separation of cardboard and rubble, this project has set an example for other construction and renovation projects to follow.
- O Behaviors have been changed and money has been saved. For example, a 5-ton box of wood can be transported to a wood processor for the same cost as transporting mixed waste to a transfer station, yet the disposal cost for the separated wood is \$20 vs. \$225-\$375 for mixed waste.
- O Cardboard, sheetrock, clean wood, metals and rubble have been source-separated into drop boxes or piled on-site.
- Wood waste is loaded into a commercial dropbox and hogged for (commercial boiler) fuel.

- O Sand and concrete rubble recovered on-site have been used to fill elevator shafts and back-fill around the building foundation.
- Mixed metals have been piled on-site and loaded for transport by a clean-up hauler in exchange for the scrap revenue or transported at no cost in a commercial drop box.
- Building salvagers and non-profit organizations, such as the Wherehouse and the Salvation Army loaded and transported carpet for reuse, saving the contractor \$68 per ton in avoided disposal and transportation costs.
- O Rejuvenation House Parts enlisted labor to pull nails from 22,000 board feet of oak flooring to be used in their new show room. In the course of doing this, 16,000 additional feet of valuable cedar subflooring were recovered and sold.
- O Brick, concrete and dirt (i.e. rubble), have been used as beneficial fill for Metro's now closed St. Johns Landfill and in area pits.
- O The standard waste management plan for contractors is to order one drop-box and comingle all materials. Because of sourceseparation very few drop boxes of mixed solid waste have been filled at this site.
- To increase public awareness about the benefits of construction site recycling, Metro posted two signs announcing tons reused and recycled.

Materials Reused and Recycled (as of 1/2/93)	Quantity (tons)	
Rubble	7,020.38	
Metals	386.57	
Cardboard	2.03	
Clean Wood	120.95	
Green Glass	10	
Mixed Solid Waste	109.1	
Salvage	205.7	
Sheetrock	85.96	
Total	7,940.69	

Other Project Innovations

- Two 1% for Art projects utilizing recycled materials have been selected and are proceeding.
- One project will include "pavers" made with recycled materials, others will contain impressions from recycled materials. They will be scattered throughout the plaza and near the building entrance.
- O Waste Reduction staff participated early in the project and identified an existing mechanical shaft to become the location for office paper recycling chutes. Fire and other safety measures were carefully incorporated into the design.
- The landscape design was enhanced to incorporate additional native plants and a demonstration drip irrigation system is being installed to aid in the reduction of water consumption at the building.
- This project has generated interest among contractors nationally. *The Subcontractor* magazine gave an overview of the Metro building project and showcased several aspects of it.
- O 100% recycled paint was used in most of the building as a primer coat. A 50/50 recycled paint will be applied to some of the manager's offices and work spaces. 462 gallons of recycled paint will be applied.
- Locally produced, light-weight soil containing yard debris compost will be used in the Plaza planters. Additionally, Metro is purchasing top dressing of 100% compost from McFarlane's Bark.

A listing of all recycled projects utilized in the building is attached.

METRO'S RESOURCEFUL RENOVATION

January 1992 - March 1993

Facts

8,030 tons generated
7,020 tons of rubble generated, most used as beneficial fill at St. Johns Landfill
209 tons landfilled -206 tons salvaged (reused, donated, sold)
801.2 tons TOTAL reused and recycled

Nine energy conservation measures were identified as cost effective and implemented. The electrical energy use at the new Metro Regional Center has an annual savings of 33%

462 gallons of recycled paint have been delivered and are being applied

10 tons of green glass used for drainage behind a retaining wall

116,000 hours worked without loss or injury

120 Construction workers on-site

20 Subcontractors

31 Working Days Left

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METRO'S RESOURCEFUL RENOVATION

January 1992 - March 1993

List priorities prior to contractor selection.

Allot time for:

- waste audit
- waste management plan
- survey of recycling companies
- Cost/benefit analysis

Project managers must work with the general contractor to develop language that supports waste reduction and recycling.

Contractor shall monitor waste management. Contractor shall allot time, space and labor for source separation of materials.

"Subcontractor is aware this is a Metro project and shall make every effort to cooperate with the Metro recycling program. Subcontractor shall attend an orientation meeting with the on-site Metro recycling personnel when starting work at the job site. Subcontractor shall also submit an itemized weight breakdown of how many tons/cyds of material are removed from the job site, how many of those tons/cyds were recycled and where the materials were recycled. Subcontractor shall turn in a copy of the metro recycling worksheet at the orientation meeting. A sample copy of the Metro worksheet has been enclosed with the Subcontract for your use."

"All bidders are hereby advised that this project will be requiring a proactive recycling participation for waste disposal and use of materials with recycled content. Each Subcontractor shall be required to complete a waste disposal questionnaire and make a diligent effort to recycle materials where economically feasible. Each Subcontractor shall also be required to price alternates which utilize materials with recycled content. If a Subcontractor does not bid an alternate, they agree to submit a formal written explanation why they cannot bid the alternate. All bidders are subject to participation in the recycling program."