



METRO

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Memorandum

DATE: July 21, 1992

TO: Debbie Gorham, Waste Reduction Manager

FROM: Pat Marley, Assoc. Solid Waste Planner

THROUGH: Leigh Zimmerman, Market Development Manager *Lz*

RE: **Summary Report of "Buy Recycled" Activities for Metro Headquarters Resourceful Renovation Project**

"Metro Headquarters Resourceful Renovation "

"Metro Headquarters Resourceful Renovation " project presents a unique opportunity for the Waste Reduction's Market Development staff. Principal objectives of market development are to foster expansion of existing markets for recyclable materials and to encourage the development of new markets. Staff desired to provide coordination of the waste reduction activities associated with this demonstration project and in particular the incorporation of products made with recycled content.

Market Development's Role

The Market Development Group actively encouraged procurement of as many recycled products as feasible for this project. This required researching the availability of targeted recycled products, creating specific bid language, developing criteria for application of a preference for recycled products and setting up a system to monitor the use of these materials. An understanding of how the staff could effectively interact with the design-build team was required. Open communications with Berit Stevenson, Metro's Project Manager, and Glenn Taylor, Assistant Project Manager, were essential for "Resourceful Renovation" concepts to receive consideration.

Timing has been critical for this project. On November 27, 1992, the decision on the final design-build team was made. Project completion was set for March 1993. In order to have Market Development's philosophy incorporated into the building design, staff had to develop a program strategy by mid January.

State Laws and Metro's Recycled Product Procurement Ordinances

Chapter 385 Oregon Laws 1991 (Senate Bill 66) were reviewed to determine Metro's legal requirements to purchase recycled products. Metro's recycled product procurement resolution and ordinances were examined to identify any additional policy mandates and to clarify Metro's authority to apply the price preference. Meetings with Rich Wiley, Metro's Procurement Officer, and Craig Lewis, Senior Management Analyst, were held to discuss contract details. Metro did not have the authority to require the purchase of recycled products according to the terms of the design-build team contract. Several meetings with Berit and Glenn were held to discuss the how market staff could influence the

contractor and architect. Hoffman Construction and TVA Architect have been willing to work with Market Development staff as long as doing so does not interfere with their tight time frame, budget constraints and the aesthetic design.

Envirowise Developments Contract

A personal service agreement contract was awarded to Mr. Ed Mays, Envirowise Developments, on December 1991. The scope of work included conducting a brief market survey of building/finishing products with high percentage of recycled material content. This survey, conducted in conjunction with Metro staff, focused on recycled product 1) quality, 2) availability, 3) extent of recycled content, 4) price ranges, and 5) visibility to building users. Recycled content was defined as both pre-consumer and post-consumer waste material with a preference for post-consumer wastes. This survey identified 21 products for further consideration. Mr. Mays's final report contains a spreadsheet summarizing product specifications plus an appendix containing more detailed information.

Copies of the final report were distributed to the architect, project manager and Hoffman Construction. Staff presented each recommended product to Berit. As a result of this process, the product list was revised from 21 items to 16. These products were summarized along with estimated quantities, price, recycled content and other comments in a matrix. The Headquarters' Waste Reduction Committee reviewed this matrix and recommended items considered to be standard building materials be specified by Hoffman. A price preference was not expected to be required for items such as ceiling tiles, drywall, paint, and noise control boards. Recycled plastic toilet partition cost approximately \$5,000 more than the conventional metal partitions Hoffman intended to spec. The Committee felt that this was a product that should be used and for which Metro would be willing to pay this cost difference.

Letter to Hoffman Construction

A letter was sent to Dave Meyers, Hoffman's purchasing manager, under the signature of Bob Martin and Neil Saling. This letter described Metro's "Buy Recycled" philosophy and stressed the importance of this project as a prime opportunity to "practice what it preaches" about recycling. Metro's commitment to purchasing materials with recycled content was emphasized, along with its assurance to do everything possible to facilitate their use.

"Buy Recycled" Language

Staff developed recycled product procurement language for use in the construction bid specification package. This language was adopted from similar language Attroney, Todd Sadlo and Solid Waste Engineer Linda Pang-Wright developed for the St. Johns Landfill Closure Project. Rich Wiley suggested Metro lobby the architect to specify particular recycled products rather than advocating standard subcontract language. He felt this approach would work more effectively for procuring recycled products in the building.

Bid Packages

After reviewing the construction specification package and discussing its contents with Berit, Market Development staff succeeded in getting five recycled products included in the core and shell bid specifications. These products include ceiling tiles from Armstrong, gypsum wallboard from Domtar, sound control board from Homosote and toilet partitions from Santana. The price preference for these materials will be evaluated once bids have been received. Recycled product vendors were instructed to contact the architect directly, and to provide samples and information as required. Market Development staff also developed recycled product procurement language and procedures for the Tenant Improvement (TI) bid package. This bid package specifies interior finishes or non structural components of the building. Market Development is very interested in obtaining feedback from Hoffman and subcontractors about the "Buy Recycled" concept. Hoffman has been asked to report its observations and conclusions about the use of recycled products in the Headquarters Project.

Bob Martin, Berit Stevenson and Waste Reduction staff met with the design-build team to discuss the shortfalls of the core and shell package and to request their assistance in addressing these shortfalls. Mr. Martin emphasized Metro's strong commitment to the waste reduction and recycling concepts staff proposed be demonstrated in the building. Prior to this meeting, staff consulted with Lee Killbourne, an architect at Zimmer, Gunsul, & Frasca and a member of the American Institute of Architects' (AIA) Construction Specification Board, to write recycled product specifications for the TI package.

Staff presented this language, and additional recycled product information, to the design-build team. Staff worked with Berit before this meeting to screen out proposed recycled products that were exorbitant in price, of marginal quality, or inconsistent with the project design. Discussions continued on how Metro's Resourceful Renovation Committee could communicate its recommendations and apply the price preference. Hoffman agreed to incorporate staff's proposed recycled product procurement language into the TI bid package and to specify all approved recycled products as alternates. Hoffman also agreed to forward bids to the Waste Reduction Committee for evaluation.

"Complete the Cycle Center"

Information about a recycled product display center located in Denver, Colorado was brought to staff's attention. "Complete the Cycle Center" showcases products made from recycled content to the public. Staff is exploring the possibility of Metro providing retail space at the Headquarters building for such a display. Staff solicited background information from Denver and made a presentation to the Waste Reduction Manager and Berit Stevenson on the merits of such a project. Unfortunately, due to budget constraints and space limitation, Metro will be unable to accommodate such a project. Staff will continue to investigate the possibility of a recycled products showcase on a smaller scale.

Implementation of Price Preference for Recycled Products

Staff developed a process for implementing a price preference for recycled products. The price preference concept has existed for some time; however, it has never been applied to Metro contracts. Extensive research was conducted and options investigated to determine the best way to implement the

preference. Staff also developed a mechanism to administer the price preference payment internally. Management approved the creation of a \$35,000 "Buy Recycled" fund to pay additional costs that Metro may incur because of the price preference. Metro management authorized the Headquarters Waste Reduction Committee to allocate these funds at its discretion.

Reusing Salvaged Materials

Reusing salvaged materials from the building was discussed. Some items will be reused, but others, such as bathroom and light fixtures, will not. Items that will be reused, such as the fire sprinkler system, flooring, medallions, and aluminum lattice, should be documented in the project final report in a reuse category.

Recycled Materials and Products

Staff researched numerous material and product issues including:

- the waste reduction benefits of the single-ply, non-recycled drywall system proposed by the subcontractor versus the recycling benefits of conventional double-ply construction using 20-percent recycled-content drywall;
- the performance of nonrecycled carpet with looped construction versus recycled carpet with non-looped (shaved) construction;
- the price difference between natural slate and a recycled-content alternative;
- the recycled content of Santana plastic bathroom fixtures.

Staff also investigated the possibility of demonstrating the use of recycled glass in Terrazzo flooring. This involved researching the cost, availability and funding options for such a project. Funding options considered included 1% For Art and Clean Washington Center grants. Comprehensive research to investigate using recycled paint required many hours of work. Bob Martin and Vicki Rocker were queried to determine the level of support and the amount of emphasis that should be placed on using recycled paint in the building. Staff and the design-build team evaluated recycled-content tiles and countertops to determine if they were consistent with the project design. Other recycled products researched were readily available and cost competitive.

Status Report

After issuance of the Core and Shell bid package, Waste Reduction staff met with the design-build team to develop the TI bid package. During these discussions, staff attempted to address a number of weaknesses in the recycled products portions of the Core and Shell bid package so that they would not be carried over into the TI package. These included:

- lack of recycling preference language in the general conditions of the package;

- no indication in the specifications about which materials had recycled content;
- lack of firm direction from Metro's upper management about the level of price preference that Metro could and should offer to encourage the purchase of recycled materials;
- architect's reluctance to use recycled materials for aesthetic reasons.

General Requirements of the TI package

Market Development staff recommended specific "Buy Recycled" language and recycled products to be used in the general requirements of the TI package. This language referenced Chapter 385 Oregon Laws 1991, Section 61, requiring Metro to give preference to the purchase of recycled materials and products. Fifteen recycled products, along with supplier information, were listed in the TI package. Conditions requiring sub-bids to break out the material costs from the total cost and to list anticipated material quantities were added to facilitate calculation of the price preference. Waste Reduction staff will review the specifications to ensure that all recycled content materials previously discussed have been included in the TI package.

PV:gbc

cc: Andy Sloop, Management Intern
Jim Goddard, Sr. Solid Waste Planner
Pat Merkle, Assistant Solid Waste Planner

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DRAFT

**PROGRESS ON RECYCLED PRODUCTS
FOR
METRO NEW HEADQUARTERS**

Sept 92

The process to incorporate recycled products into the building can be broken down in basically three stages.

1. Berit reviewed the 17 recycled products from Ed Mays' report for possible overall use in building- March 1992
2. Alternative Recycled Products chosen for Core and Shell Bid Package (CS)-April 1992
3. Alternative Recycled Products chosen for Tenant Improvement Bid Package (TI)- July 1992

ACCEPTED PRODUCTS AS OF 9/92

**Approx.
Price
Premium**

1. Prominence Tile-bathroom floor tiles
Benefits: 62% pre-consumer glass yet are investigating post-consumer for near future \$4650
Barriers: Price premium approx. = \$4650 for three sets of bathrooms
2. RB Rubber Mats-gym/fitness flooring
Benefits: 100% recycled tires, local manufacturer, price equivalent \$0
Barriers: uncomfortable for Day Care Infant area
3. Santana Partitions- three sets of bathrooms \$2500
Benefits: 45-90% post-consumer plastic depending on color; unbreakable; no corrosion; no painting required
Barriers: Unable to hang from ceiling; may fade slightly in color; price premium for only TI bathroom- unable to negotiate as with CS bathrooms
4. Armstrong Second Look Ceiling Tiles \$0
Benefits: "40% recovered materials", specified by TVA
Barriers: Exact recycled content not determined
5. Santana Benches -shower room TBD
Benefits: 45-90% post-consumer plastic depending on color
Barriers: Cost premium?(believe approx. \$2000)

<u>6. US Gypsum Board- Core and Shell</u>	\$0
Benefits: Exterior paper 100% recycled ONP	
Barriers: Another brand gypsum board uses recovered gypsum	
<u>7. Homosote-Design Wall Interior Panels-Council Chambers, Personnel, Day care</u>	TBD
Benefits: Interior of panels -100% ONP	
<u>8. Domtar Gypsum Board- Tenent Improvement package</u>	\$0
Benefits: 20% recycled gypsum, 100% recycled ONP exterior cove, local manufacturer	
<u>9. Thermafiber Insulation- Core and Shell</u>	\$0
Benefits: 50% recovered steel slag, contractor selected w/o encouragement	
<u>10. Western Insulfoam - Core and Shell</u>	\$0
Benefits: 15% post consumer, local manufacturer, non-toxic, contractor selected w/o encouragement	
<u>11. Rasmussen Paint-Interior and Exterior</u>	\$0
Benefits: 50% recycled paint from Metro's HHW site; saving in costs; test results good	
Barriers: New product; limited colors; hesitation on quality and warranty	
<u>12. Refurbished office furniture</u>	TBD
Benefits: Cost savings	
Barriers: Availability	
<u>13. Plastic Lumber Benches - outside area , need 4 benches</u>	\$400-1600
Benefits: Recycled post consumer plastic; local manufacturer	
Barriers: Price premium, new product, limited testing	
Estimated Total Costs	\$8,750

4. Traffic Tiles
Benefits: 70% (25% post) recycled auto glass; high quality; used in new OMSI; local distributor
Barriers: Aesthetics; price premium approx. = \$14,000 for three bathrooms; using other recycled product
5. Summitville Tiles
Benefits: 75% recycled feldspar content; price comparable; high quality
Barriers: Aesthetics; using other recycled product
6. El Dorado Velvet Mats- entrances
Benefits: 100% recycled tires
Barriers: Aesthetics
7. Carlisle Rubber Flooring- gym flooring & day care
Benefits: 100% recycled tires; variety of colors
Barriers: Too hard for day care area; local recycled product was chosen for gym floor
8. The Mat Factory Safety Deck-gym flooring & day care
Benefits: 100% recycled tires
Barriers: Too rigid; local recycled product was chosen for gym floor
9. Saf-Dek Safety Surface- gym flooring
Benefits: 100% recycled tires; price competitive
Barriers: Chose local manufacture of similar recycled product
10. Dinoflex Safety Surface- gym flooring, day care area and exterior mats
Benefits: Recycled rubber
Barriers: Too rigid
11. Eco-Tile- day care area
Benefits: 100% recycled PVC plastic; interlocking no need to glue
Barriers: Too rigid
12. Schuyler Loading Dock Bumpers
Benefits: 100% of rubber content recycled truck tires, virtually maintenance free
Barriers: Existing bumpers will be used
13. Scientific Development Loading Dock Bumpers
Benefits: 100% of rubber content recycled truck tires, virtually maintenance free
Barriers: Existing bumpers will be used

14. Terrazzo Flooring- Interior and Exterior- entrance
Benefits: New produce; can use recycled glass and other recycled materials
Barriers: Aesthetics, price premium

Walls

14. Domtar Drywall - core and shell
Benefits: 20% recycled drywall content + ONP covering, price equivalent
Barriers: New product out that uses single layer and includes fire walls
15. Homosote Board Panels-sidewall insulation
Benefits: 100% post-consumer recycled newsprint
Barriers: Limited use, not needed
16. Evanite Fiber Board Panels-
Benefits: 100% post-consumer waste wood, local manufacture
Barriers: Limited use, not needed
17. Coverage Wallpaper-
Benefits: 66% post-consumer recycled paper + 32% pre-consumer wood chips
Barriers: Limited use, not needed
19. Rasmussen Paint- interior
Benefits: 100% post-consumer recycled paint from Metro's HHW; cost savings
Barriers: Color not available in white
20. Homosote-Sound-a-Sote- noise deadening structural board for use in the printing and Day Care areas
Benefits: 100% recycled ONP; no formaldehyde
Barriers: Aesthetics; using less expensive method for acusical walls

Ceilings

21. Celotex Ceiling Tiles
Benefits: 48-90% recycled content with some post-consumer content; each product style contains different recycled content; will discount for promotion
Barriers: TVA prefers another recycled product
22. Fiberlite Ceiling Tiles
Benefits: 100% pre-consumer recycled fiberglass
Barriers: TVA prefers another recycled product
23. Armstrong Ceiling Tiles- styles/products other than "Second Look"
Benefits: Greater % of recycled content

Barriers: TVA prefers other style with 40% recovered materials

Wood finish

24. Storie Wood Products-resawn wood

Benefits: All resawn wood; less than cost of virgin; better quality than new;
local manufacturer

Barriers: Limited quantities of requested wood

Misc

25. Avonite -countertops

Benefits: 60% pre-consumer recycled plastics

Barriers: Aesthetics

26. Phoenix Scientific Industries- paving bricks

Benefits: Up to 70% municipal incinerator fly ash; less than non recycled
comparable bricks

Barriers: Aesthetics; substantial price premium

PV:jc
October 6, 1992
HQprodlist.992

RECYCLED PRODUCTS LIST
for
METRO'S NEW HEADQUARTER BUILDING

January 93

ACCEPTED PRODUCTS

Approx.
Price
Premium

- | | |
|--|---------------|
| <p><u>1. Prominence Tile*</u> (Bathroom floor tiles- receipt dated 12/1/92)
Benefits: 62% pre-consumer glass yet are investigating post-consumer
for near future
Barriers: Price premium</p> | <p>\$3700</p> |
| <p><u>2. RB Rubber Mats*</u> (Gym/fitness flooring)
Benefits: 100% recycled tires; local manufacturer; price comparable
Barriers: uncomfortable for Day Care Infant area</p> | <p>\$0</p> |
| <p><u>3. Santana Partitions*</u> (22 compartments- receipt dated 12/01/92)
Benefits: 45-90% post-consumer plastic depending on color;
unbreakable; no corrosion; no painting required
Barriers: Unable to hang from ceiling so negotiated trade;
may fade slightly in color; price premium</p> | <p>\$2665</p> |
| <p><u>4. Armstrong Second Look Ceiling Tiles*</u>
Benefits: "40% recovered materials"; specified by TVA
Barriers: Post- vs Pre-consumer recycled content not determined</p> | <p>\$0</p> |
| <p><u>5. Santana Benches*</u> (Shower rooms-receipt dated 12/16/92)
Benefits: 45-90% post-consumer plastic depending on color;
never have to paint
Barriers: Price premium</p> | <p>\$660</p> |
| <p><u>6. US Gypsum Board*</u> (Core and shell package)
Benefits: Exterior paper 100% recycled ONP
Barriers: Another brand gypsum board uses recovered gypsum</p> | <p>\$0</p> |
| <p><u>7. Domtar Gypsum Board*</u> (Tenant improvement package only)
Benefits: 10% recycled gypsum; 100% (90% post) recycled
ONP exterior cover; local manufacturer; price comparable</p> | <p>\$0</p> |
| <p><u>8. Thermafiber Insulation</u> (Core and shell)
Benefits: 50% recovered steel slag; contractor selected w/o
encouragement</p> | <p>\$0</p> |

<u>9. Western Insulfoam</u> (Core and shell) Benefits: 15% post consumer; local manufacturer; non-toxic; contractor selected w/o encouragement	\$0
<u>10. Rasmussen Paint*</u> (Primer only) Benefits: 100% post-consumer recycled paint from Metro's HHW site; cost savings Barriers: New product; limited colors; request to void standard warranty on workmanship (Selected manager's offices & storage areas) Benefits: 50% post-consumer paint for Metro's HHW site; cost savings Barriers: New product; limited colors	\$0 \$0
<u>11. Watts Parking Wheelstops</u> (Parking lot-receipt dated 12/17/92) Benefits: 100% commingled recycled plastic; never requires painting; cost savings of \$10 per bumper	(\$720)
<u>12. Light weight soils</u> (North Plaza-receipt dated 12/17/92) Benefits: Secondary materials (compost) Barriers: Price of virgin filter fabric to accommodate light weight soil	\$1437
Estimated Total Premium	\$8462

* Recycled Content Certification form on file