



METRO

A G E N D A

MEETING: REGIONAL SOLID WASTE ADVISORY COMMITTEE

DATE: Wednesday, November 18, 1998

TIME: 10:00 a.m. – noon

PLACE: Room 370, Metro Regional Center, 600 NE Grand Avenue, Portland

- 5 min. I. Call to Order & Announcements** **Morissette**
- 5 min. *II. Approval of September Minutes** **Morissette**
- 10 min. III. REM Director's Update** **Warner**
- 20 min. *IV. Revision of Designated Facility Agreements** **Kraten**
Metro is renewing the Designated Facility Agreements that allow out-of-area landfills to receive waste from the Metro area. Staff asks for SWAC's comments on revisions to the types of waste that may be accepted. **Comments requested**
- 25 min. V. Planning for Regional Transfer Stations** **Warner/Anderson**
Questions about regional transfer stations remain unanswered after the code revision: where should they be located, what services should they offer, how many should there be? Staff will propose a process for answering these questions, outline the objectives of the project, and seek SWAC's comments. **Comments requested**
- 25 min. VI. Update: Status of Waste Reduction Programs** **Apotheker/Anderson**
Assessment of progress toward implementing the Recommended Practices of RSWMP, plus a report on the regional recovery rate, and some other indicators of performance. **No action requested**
Materials to be distributed at the meeting
- 25 min. *VII. Update: Draft Master Facility Plan** **Ehinger**
Update on Metro's Capital Improvement Plan for the transfer stations that specifies the capital and operational improvements needed for efficient management and to meet the goals of RSWMP. **Status Report**
- 5 min. VIII. Other Business and Adjourn** **Morissette**

All times listed on this agenda are approximate. Items may not be considered in the exact order listed.

* Materials for these items are included with this agenda.

Chair: Councilor Don Morissette (797-1887); Staff: Doug Anderson (797-1788); Committee Clerk: Connie Kinney (797-1643)

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SOLID WASTE ADVISORY COMMITTEE MEETING SUMMARY

Meeting of September 16, 1998

Members Present

Don Morissette, Chair
 Ralph Gilbert, East County Recycling
 Garry L. Penning, Waste Management of Oregon
 JoAnn Herrigel, City of Milwaukie
 Tom Wyatt, (Jerry Mayberry) BFI
 Doug DeVries, STS
 Leslie Kochran (Marti Pillon), DEQ
 Frank Deaver, Washington County Citizen
 David White, ORRA/Tri-C Haulers Assoc.
 Merle Irvin (Todd Irvine), WRI
 Mike Misovetz, Clackamas County Citizen
 Loreen Mills, Washington County Cities
 Tom Miller, WCHA
 Jeff Murray, Far West Fibers
 Lee Barrett, Susan Keil, City of Portland
 Kathy Kiwala, Oregon City

Guests Present

Dick Jones
 Diana Godwin
 Grant L. Ganthier
 Greg Noki, Oregonian
 Mike Riley, Riley Research
 Stan Fannin, Riley Research
 Easton Cross
 Mark Hope

Metro Present

Alexis Dow
 Sarah Adams
 Bruce Warner
 Leo Kenyon
 Tom Imdieke
 Jan O'Dell

Doug Anderson
 Dennis Strachota
 Aaron Brondyke
 Steve Kraten
 Keith Massie
 Terry Petersen

REM DIRECTOR'S UPDATES

Bruce Warner acknowledged the work of REM staff, the new Waste Management, specifically Barry Graham, with the help of Washington County in starting additional H2W events at the Forest Grove Transfer Station (3) one-day events. The average attendance at these events is 200-300 people.

Mr. Warner announced that the REMCom meeting for next week has been cancelled. The next meeting will be held October 6, 1998. Mr. Warner said REM has received applications for the new Regional System Fee Credit program as well as exchange of some existing licenses and franchises for new licenses.

Mr. Strachota said the Code was adopted by Council the end of August, 1998. He said that as part of the code, there was a provision that allowed 16 facilities to exchange their franchise agreement for new licenses before the end of the calendar year to accomplish: 1) allow them to apply for Regional System Fee Credits without entailing penalty provisions that currently exist within the existing franchise agreements; and 2) allow them and Metro to implement the uniform

performance standards that apply to all facilities doing similar types of activities. He said that to-date Metro has exchanged 5 agreements and expects to exchange at least one more before the end of the calendar year. Mr. Strachota said one of the Code rewrite activities that is new is the "direct haul" provisions. He said that an application package and administrative procedures have been developed for those facilities wishing to use the direct-haul activity. He said the administrative procedures that apply to the application process for direct-haul are available. Mr. Strachota said more procedures will be developed in the coming weeks which will be directed towards potential violations, record keeping and reporting. Mr. Strachota said staff have received two applications for direct-haul authorization and a third application is expected soon. He said staff expects to process these applications and forward them to Council for approval so that action can take place before the end of the calendar year.

Mr. Warner stated that our enforcement officers have recently issued tickets for uncovered loads and encouraged haulers to inspect their tarps to see they are undamaged and used in order that materials do not escape the trucks.

Mr. Warner also announced that the Hillsboro Landfill will not be operating on Saturdays beginning September 26, 1998.

MANAGEMENT OF WASTE TIRES

Chair Morissette then moved on to the next agenda item: Tires

Mr. Anderson said that the principal tire management firm, Waste Recovery, Inc. (WRI), located in North Portland, has announced they will curtail their operations. Mark Hope and Matt Tracey, (former managers of WRI), have established a new operation under a temporary DEQ permit out of the Farmington Landfill in Washington County. However they must cease operations at that site, because of a "non-conforming use." Mr. Anderson said that tires pose special problems, they require special handling and processing just to landfill. Metro and other regional partners recently met to discuss potential problems such as the potential for illegal dumping of tires. Tire Disposal and Recycling (formed by Mr. Hope and Mr. Tracey) have located a site in the Clackamas area and have requested that during the public process of the permitting, that DEQ issue a letter authorization (a six-month temporary permit to operate under standard rules) allowing them to operate the business with their assurance of financial stability. DEQ has authorized the letter permit and they are currently operating at 15360 SE Railroad Ave. in the Clackamas area. They accept tires off the rim for a charge of \$1.00.

Mr. Hope said they are doing some special civil engineering projects, and they have some niche markets, and they are continuing grading and culling casings for reuse. Mr. Anderson added that he researched the region's recovery rate over the past 2-years and tires have contributed anywhere from a half, to a point and one-half to our recovery rate.

SURVEY OF TRANSFER STATION CUSTOMERS

Mr. Watkins said that since 1993 we had 142,000 cash customers at our South and Central transfer stations, by 1997 we are up to 181,000, an average of over 2% growth over the years. He said we contracted with Riley & Associates to survey our customers to determine why our customers used our transfer stations rather than a weekly collection service, what type of materials they bring, and whether or not our customers are satisfied.

Mr. Riley, of Riley & Associates said they scientifically surveyed approximately 200 customers at both Metro Central and Metro South, at random, on-site every day for two weeks. They found that customers were aware of the facility because of friends or neighbors, through the phone book, or they had been there before. He said about half were able to identify Metro as the owner of the transfer station. Majority of customers knew about H2W drop off center because they had either driven by or saw a sign. He said that at Metro Central one in four (26%) customers hauling their own garbage (not commercial customers) do not subscribe to residential garbage service; and at Metro South 31%. He said that cost was the factor for not having curb service, and another factor for self-hauling was there was too much material to set at the curb. He said that most people felt a drop box was too expensive, they estimated about \$180. He said that 52% of self-haul loads was remodeling and building materials (this included business customers), 32% said everyday garbage, 29% garage or basement waste, 28% brought in recyclables. He said the staff was rated very highly for both courtesy and knowledge and 37% indicated it exceeded their expectations.

He said that staff were rated very highly especially as to their courtesy and knowledgeability. The customers said in most cases it exceeded their expectations. Conclusions were that most people using the transfer station were dropping off their own garbage, and that more of Metro South's customers do not subscribe to garbage service.

Ms. Mills asked if the self-haul customers had recyclables separated out. The consultant said most did not.

Mr. Penning asked what the average weight of a self-haul customer was and the consultant said the average for citizens was 687 pounds and for businesses it was 1030 pounds.

REGIONAL SYSTEM FEE CREDIT

Mr. Anderson explained that a credit was devised for recycling facilities after Metro reduced the tipping fee in order to make recovery facilities whole. The credit is based on the facility's recovery rate. He said the program objectives were to preserve MRF capacity, to use a "carrot" for recovery efforts rather than a "stick", to provide incentive to increase recovery, and to remove the disincentive on throughput.

Mr. Anderson said we allocated \$900,000 for the credits and thus far we have issued credits for two months and we have thus far paid out a total of \$151,090. He said there is only one company thus far that has aggressively gone after additional recovery (of industrial waste), citing the credit as an incentive. Mr. Anderson added that it is far too early to recognize any trends with regard to the credit program.

Mr. Anderson distributed a paper showing the companies involved in the program, the tonnage disposed, and the dry waste disposed.

STATE OF THE PLAN

Mr. Anderson said he would fill in for Ms. Erickson for this presentation as she is out ill. He said the State of the Plan's purpose is an assessment of the regional solid waste system, and waste reduction goals in particular. Those figures will be available in the future. He said this

report is called for in the RSWMP and is a requirement under State law to report to DEQ. He said it is a benchmark tool and if we find problem areas, the State of the Plan should guide the corrections necessary to reach our goals.

Mr. Anderson said that for each Recommended Practice, the Plan

- Specifies program elements
- Sets quantitative targets
- Allows alternative practices (if equivalent performance is demonstrated), i.e., the City of Portland asked for a substitution in their mandatory recycling.

Mr. Anderson distributed a draft status report on how the region is doing with all of the RSWMP goals. He said the main purpose today is to introduce you to the fact that we have a Plan out there that specifies programs and targets and how we track them report them and get information to measure our programs.

Ms. Mills asked if the region was still being held to the 50% recycling goal. Mr. Anderson said the State mandate has not changed and that is correct.

Chair Morissette commented that this was an informational report only today and asked for any more questions or comments.

Ms. Keil commented that organic waste was a critical component in recycling if we are to reach the region's goal and anything we can do to accelerate that effort should be made.

The meeting was adjourned

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OPTIONS FOR WASTE TYPES AUTHORIZED BY DESIGNATED FACILITY AGREEMENTS

Designated Facility Agreements (DFA's) authorize out-of-district disposal facilities to accept specific types of solid waste generated from within the Metro boundary. In return for this authorization, designated facilities agree to collect regional system fees and excise tax on such wastes and remit them to Metro.

Updating the DFA's

The DFA's are about to be updated and renewed. Presently the DFA's for the local landfills (Hillsboro and Grabhorn) differ from the DFA's for distant landfills with regard to authorized wastes. The DFA's for local landfills authorize acceptance of "Construction, demolition, and land clearing waste." Those for the distant landfills are more restrictive, specifying only "Residue from the processing of construction, demolition, and land clearing waste received from a Metro franchised facility."

In updating the agreements, staff recommends the incorporation of language

- is more consistent among all designated facilities,
- meets the needs of the region's material recovery facilities.
- maintains a high level of materials recovery.

*ADPT/REPORTS
SUN 2. OPT.
DFA*

With these goals in mind, the following options are presented for consideration:

Option:	Pros:	Cons:
Retain existing language	Assures recovery from CDL	Language not the same for all designated facilities. Does not allow for residue from recovery from non-CDL waste.
Broaden language to include MRF residual from all dry commercial sources rather than just CDL.	Acknowledges that much MRF residue is from non-CDL sources.	Language not the same for all designated facilities (but more consistent than existing language).
Broaden language to include all non-recoverable dry waste whether it is MRF residual or not.	Language the same for all designated facilities. Non-recoverable dry waste could be disposed w/out being first tipped at a MRF.	May create incentive to diminish recovery efforts at MRF's or to bypass them altogether.

STAFF REPORT*METRO COUNCIL BRIEFING ON THE DRAFT MASTER FACILITY PLAN
FOR SOLID WASTE FACILITIES*

Date: November 17, 1998

Presented by: Bruce Warner,
Paul Ehinger

PROPOSED ACTION

No action required (status report).

BACKGROUND AND HISTORY

Metro began preparation of a Facility Master Plan for its solid waste facilities in the summer of 1996. The purpose of this planning effort was to determine what capital or operational improvements were needed at Metro's solid waste facilities to meet the goals established in the Regional Solid Waste Management Plan (RSWMP). This planning effort has also provided a framework for REM's 5-year Capital Improvement Plan.

During the spring and summer of 1996, Metro received complaints from a number of commercial haulers about long lines at Metro South Transfer Station. In response to these complaints, and as a preliminary step in the facility planning process, Metro retained a consultant that identified a number of improvements at Metro South that could be implemented at relatively low cost without foreclosing future opportunities. Utilizing this preliminary plan, Metro staff initiated discussions with various stakeholder groups that use Metro's Solid waste facilities. The purpose was to get concurrence on the advisability of moving forward with the short-term improvements identified by our consultant and to better define issues that should be addressed in the more comprehensive Facility Master Plan. The groups contacted included commercial haulers, Metro operations staff, the transfer station operation contractors, Metro's transport contractor, local government officials, and local planning organizations.

A scope of work was developed that reflected the input of these parties. URS Greiner was retained in the spring of 1997 to prepare the Master Facility Plan. A draft plan was completed in April 1998. Metro staff is currently meeting with stakeholders to obtain their input on the draft plan. To date, the comments have been positive and no significant changes have been suggested. In fact, these groups have generally been complementary of the initial improvements that have significantly reduced the time that commercial haulers have had to spend on-site.

Significant improvements were identified for both of Metro's transfer stations. It was determined that Metro South Station was currently operating at or above capacity and that the delays and lines at this facility are caused by this fact. Improvements with a total capital cost of approximately \$3.4 million were identified at Metro South. The largest single improvement, costing approximately \$1.4 million, is for an unloading facility to handle our public customers.

Improvements estimated at \$1.25 million are proposed for Metro Central. An expansion of the public area, at a cost of \$340,000 is proposed to meet increasing demand at this facility. The remaining improvements are designed to improve safety and operational efficiency.

The executive summary of the Master Plan for the two transfer stations is attached to this staff report as Attachment 1. Metro's consultant also reviewed the capital needs at the St. Johns Landfill. No projects were identified except the maintenance facility, which is in the FY 1998-99 budget.

All of the projects included in the Facility Master Plan are already reflected in Metro's Capital Improvement Plan.

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EXECUTIVE SUMMARY

1.0 INTRODUCTION

Metro has authority over the disposal of solid waste in the Multnomah, Washington and Clackamas tri-county region. Metro is also accountable for state-mandated recycling and materials recovery goals in the region. The Regional Environmental Management Department (REM) within Metro has been established and is responsible for implementing Metro's solid waste disposal and recycling goals. One of the specific responsibilities of the REM Department is the development and administration of a Regional Solid Waste Management Plan (RSWMP).

The first RSWMP was adopted in 1974. In 1988, a formal revision of the 1974 Plan was adopted. Again in 1996, another formal revision was adopted which established goals and objectives to be achieved by the year 2005. One of the key goals of the 1996 RSWMP was to eliminate the need to build a new publicly-owned regional transfer station. This need can be eliminated by waste reduction, recycling and improving the operations of the existing publicly-owned transfer stations.

As a result, Metro decided to establish the Master Facility Plan for the long-range development of their two existing transfer stations known as:

- Metro South Station (MSS) located in Oregon City.
- Metro Central Station (MCS) located in Northwest Portland.

2.0 GOALS OF MASTER FACILITY PLAN

This Master Facility Plan has been developed to provide Metro with the proper tools for the future development and improvements to their two existing stations necessary to meet the ever-changing solid waste management needs of the tri-county region. The development and improvements proposed in this Master Facility Plan are based on the following goals:

- Improve waste recovery and recycling.
- Reduce traffic congestion and improve traffic circulation.
- Maximize station efficiencies.
- Improve facilities for Metro and Station operator personnel.

In meeting these goals, the following assumptions have been made:

- No restrictions will be placed on public self-haul to the stations.
- No new publicly-owned regional transfer stations will be constructed.
- There will be continued growth in both the commercial and public use of the stations.

Discussions were held with Metro administration and operations personnel, and with the private station operations personnel to determine their needs and the problems associated with daily operations. Based on these discussions, several different improvements were evaluated for both stations, reviewed with Metro and the station operators, and the decision was made as to which improvements should be included in this Master Facility Plan.

3.0 DEVELOPMENT RESTRAINTS

Both sites have restraints which reduce the opportunities for development. In general, they are not large sites (11.47 acres at Metro South and 6.0 acres at Metro Central) and the facilities constructed to date to accommodate the waste and traffic volumes has resulted in limited areas for future development. At the Metro South Station, this restraint is further compounded by the fact that many portions of the site are below the 100 year flood plain and subject to flooding as was experienced in the 1996 flood. No new facilities should be constructed below the elevation of the 100 year flood plain if they can be damaged, or if they shut down the transfer operations during high flood levels.

4.0 METRO SOUTH STATION (MSS)

Six different improvements were proposed and are included in this Master Facility Plan. Their advantages and costs are summarized as follows:

Description	Drawing	Advantages	Construction Cost
Relocation of Public Unloading/Recycling Facility	MSS-4 MSS-5	<ul style="list-style-type: none"> ▶ Improves traffic circulation ▶ Reduces traffic congestion ▶ Increase station capacity ▶ Increase recycling ▶ Provides a "top-load" option for flexibility in Station operations ▶ Improves operations for commercial vehicle receiving and unloading 	\$1,345,000
Transfer Building Additions	MSS-6 MSS-7	<ul style="list-style-type: none"> ▶ Increases recycling opportunities ▶ Provides more storage space ▶ Increases station capacity ▶ Improves operations 	\$485,000 commercial side addition; \$335,000 expansion on north wall
New Latex Building	MSS-8	<ul style="list-style-type: none"> ▶ Improves personnel safety ▶ Above 100 year flood level ▶ Improves operations ▶ Located to not interfere with future developments 	\$510,000
New Truck Wash	MSS-4 MSS-9	<ul style="list-style-type: none"> ▶ New location does not hinder future development ▶ Improves treatment of wash waters ▶ Reduces traffic congestion 	\$129,000
New Personnel Facilities	MSS-10	<ul style="list-style-type: none"> ▶ Improves personnel facilities ▶ Provides space for safety meetings/conferences ▶ Provides space for visitor orientation ▶ Provides storage space 	\$540,000
Utility Improvements	MSS-11	<ul style="list-style-type: none"> ▶ Improves efficiency of storm and sanitary sewer systems ▶ Improves station operations - reduces maintenance 	\$44,000

An improvement was also considered for the relocation of the household hazardous waste (HHW) building and operations. This improvement was considered because the existing facility is below

the 100 year flood level and can be subjected to damage during high flood levels as was experienced during the 1996 flood. Different locations above the 100 year flood level were evaluated and a possible location is shown on Drawing MSS-12. However, Metro decided not to include this alternative for the following reasons:

- Improvements made since 1996 will provide extra time to plan for evacuation.
- Metro has developed an HHW emergency evacuation plan which will significantly reduce the damage from any flood and eliminate the possibility of hazardous materials being released.
- The cost of a new facility is in the range of \$1.0 million even though some of the existing equipment could be relocated.

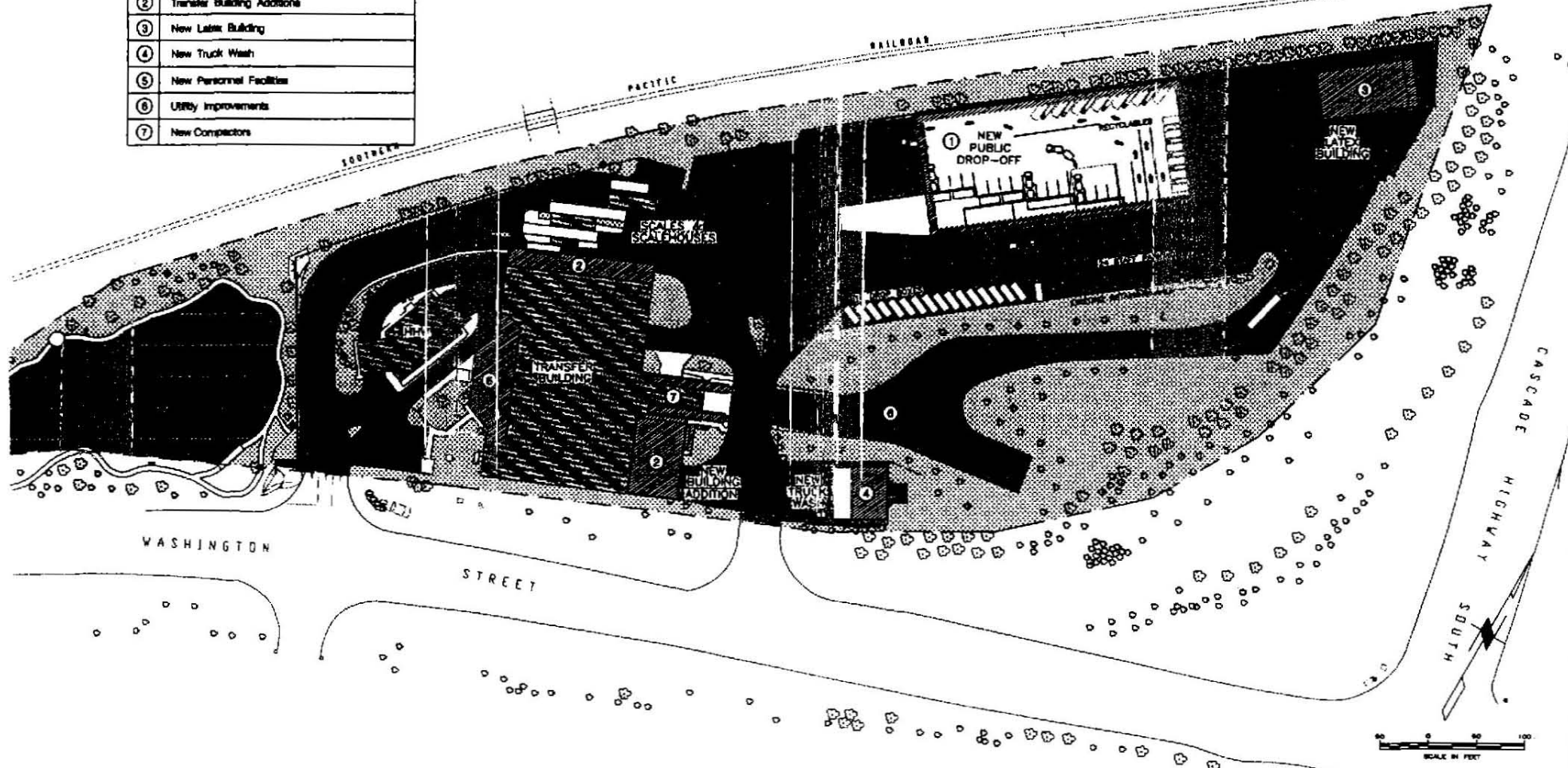
It is important to note that the relocation of the public unloading and recycling facility improvement is not possible unless the private transportation contractor can relocate the transfer trailer storage area presently located at the east end of the site. Metro is currently working with this contractor to determine possible off-site locations.

5.0 METRO CENTRAL STATION (MCS)

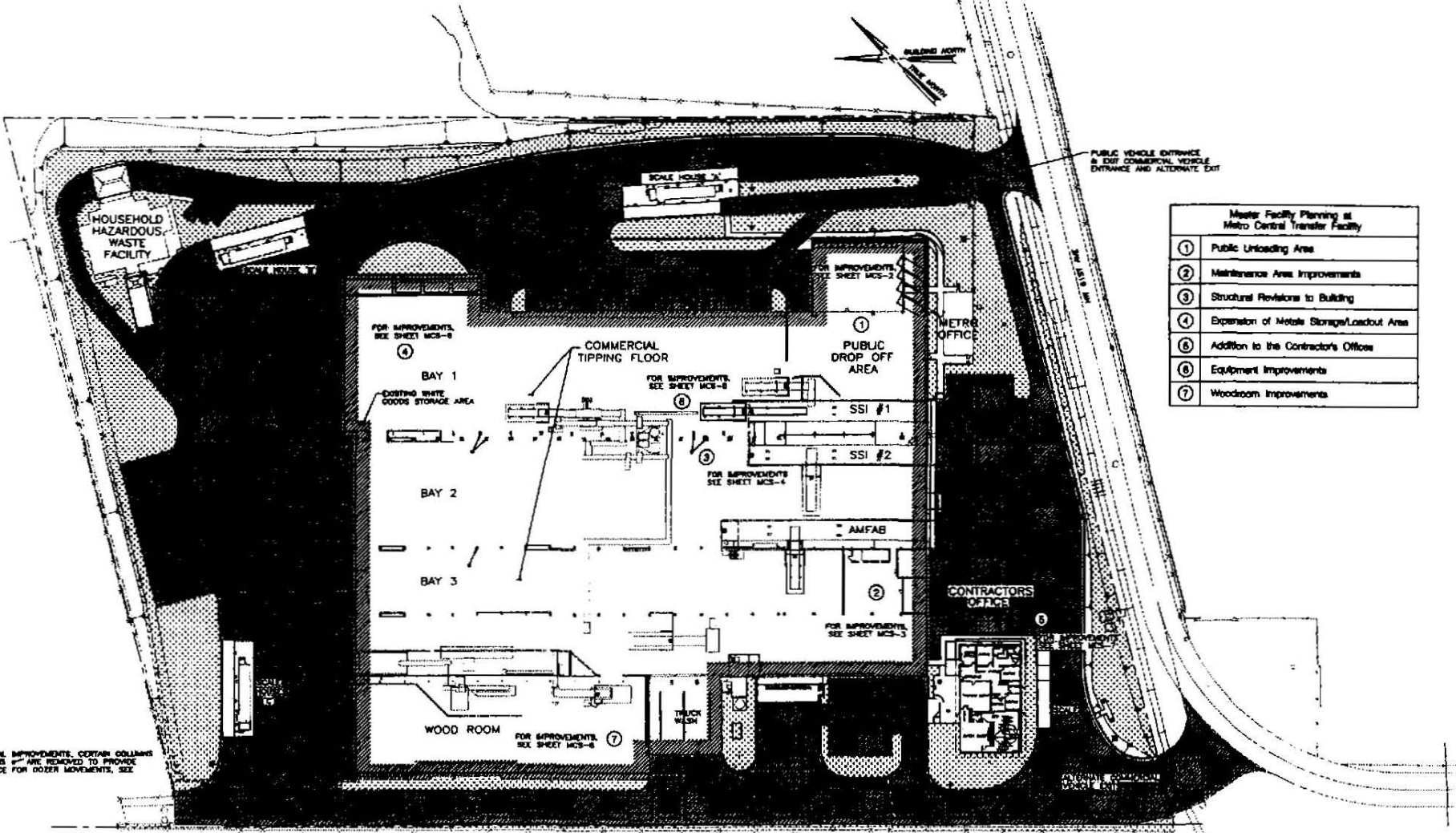
Seven different improvements were proposed and are included in this Master Facility Plan. Their advantages and costs are summarized as follows:

Description	Drawing	Advantages	Construction Cost
Public Unloading Area Expansion	MCS-2	<ul style="list-style-type: none"> ▶ Improves recycling ▶ Improves traffic congestion ▶ Increases station capacity 	\$349,000
Maintenance Area Improvements	MCS-3	<ul style="list-style-type: none"> ▶ Improves operations ▶ Reduces maintenance costs ▶ Improves personnel safety 	\$100,000
Structural Revisions to Building	MCS-4	<ul style="list-style-type: none"> ▶ Improves operations ▶ Reduces vehicle congestion 	*\$121,000 @ SSI area only
*Note: The cost of this improvement is dependent upon the number of columns to be removed.			
Expansion of Metals Storage/Loadout Area	MCS-6	<ul style="list-style-type: none"> ▶ Improves operations ▶ Increases recycling ▶ Provides top-load option for overall station flexibility ▶ Reduces vehicle congestion 	\$353,000
Addition to the Contractor's offices	MCS-7	<ul style="list-style-type: none"> ▶ Improves personnel facilities ▶ Provides space for safety meetings/conferences ▶ Provides visitor orientation space 	\$105,000
Equipment Improvements	MCS-5	<ul style="list-style-type: none"> ▶ Improves operations ▶ Improves safety ▶ Increases station transfer capacity 	\$194,000
Woodroom Improvements	MCS-8	<ul style="list-style-type: none"> ▶ Improves operations ▶ Increases storage capacity ▶ Increases station capacity 	\$135,000

Master Facility Planning at Metro South Transfer Facility	
①	Relocation of Public Unloading/Recycling Facility
②	Transfer Building Additions
③	New Lateral Building
④	New Truck Wash
⑤	New Personnel Facilities
⑥	Utility Improvements
⑦	New Compactors



URS Greiner 111 S.W. Columbia Street Portland, Oregon 97201	METRO PORTLAND OREGON		METRO SOUTH STATION MASTER PLAN PROPOSED MODIFICATIONS		SHEET
	CAD FILE NUMBER: S-FIG2		DRAWING NUMBER: FIGURE 2		REV. SHEET OF



Metro Facility Planning at
Metro Central Transfer Facility

①	Public Unloading Area
②	Maintenance Area Improvements
③	Structural Revisions to Building
④	Expansion of Metals Storage/Loadout Area
⑤	Addition to the Contractor's Office
⑥	Equipment Improvements
⑦	Woodroom Improvements

NOTE:
 1.) FOR OPERATIONAL IMPROVEMENTS, CERTAIN COLLINGS DESIGNATED THIS ARE REMOVED TO PROVIDE ADDITIONAL SPACE FOR DOZER MOVEMENTS, SEE DWG. MCS-4.



URS Greiner 111 S.W. Columbia Street Portland, Oregon 97201	METRO PORTLAND OREGON	METRO CENTRAL STATION MASTER PLAN PROPOSED IMPROVEMENTS	SHEET
	C-FIG1	DRAWING NUMBER: FIGURE 1	REV

Regional Solid Waste Management Plan Goals

Management	1995	2000	2005
Recycling (1)	34%	45%	50%
Energy	<u>8%</u>	<u>7%</u>	<u>7%</u>
Recovery	42%	52%	57%
Disposal	<u>58%</u>	<u>48%</u>	<u>43%</u>
Generation	100%	100%	100%

(1) Includes waste prevention, recycling and composting.

Source: RSWMP, 11/97.

Metro Recovery and Disposal, 1994-1997

	1994	1994	1995	1995	1996	1996	1997	1997
Management	Tons	Percent	Tons	Percent	Tons	Percent	Tons	Percent
Recycling	438,118	27.2%	534,583	30.9%	478,022	25.8%	580,712	28.8%
Composting	122,024	7.6%	118,948	6.9%	144,862	7.8%	140,404	7.0%
Stock (1)	<u>159</u>	<u>0.0%</u>	<u>9</u>	<u>0.0%</u>	<u>25</u>	<u>0.0%</u>	<u>1</u>	<u>0.0%</u>
Total Recycling	560,301	34.7%	653,540	37.8%	622,909	33.7%	721,117	35.8%
Energy	<u>75,568</u>	<u>4.7%</u>	<u>81,691</u>	<u>4.7%</u>	<u>129,561</u>	<u>7.0%</u>	<u>118,537</u>	<u>5.9%</u>
Total Recovery	635,869	39.4%	735,231	42.5%	752,470	40.7%	839,654	41.7%
Disposal	<u>977,730</u>	<u>60.6%</u>	<u>995,035</u>	<u>57.5%</u>	<u>1,097,246</u>	<u>59.3%</u>	<u>1,173,593</u>	<u>58.3%</u>
Generation	1,613,599	100.0%	1,730,266	100.0%	1,849,716	100.0%	2,013,247	100.0%

(1) Change in inventory of recovered materials not yet marketed between beginning and end of year.

Source: DEQ, 11/98.

Regional Solid Waste Management Plan Goals

Management	1995	2000	2005
Recycling (1)	34%	45%	50%
Energy	<u>8%</u>	<u>7%</u>	<u>7%</u>
Recovery	42%	52%	57%
Disposal	<u>58%</u>	<u>48%</u>	<u>43%</u>
Generation	100%	100%	100%

(1) Includes waste prevention, recycling and composting.

Source: RSWMP, 11/97.

Per Capita Waste Recovery, Disposal and Generation for Metro

Activity	Units	1993	1995	1997	1993- 1995	1995- 1997	1993- 1997
Population	People	1,268,000	1,305,100	1,341,700	2.9%	2.8%	5.8%
Recovery	Tons	575,819	735,231	839,654	27.7%	14.2%	45.8%
Waste Disposal	Tons	960,691	995,035	1,173,593	3.6%	17.9%	22.2%
Waste Generation	Tons	1,536,510	1,730,266	2,013,247	12.6%	16.4%	31.0%
Recovery	Tons/capita/yr	0.45	0.56	0.63	24.1%	11.1%	37.8%
Waste Disposal	Tons/capita/yr	0.76	0.76	0.87	0.6%	14.7%	15.5%
Waste Generation	Tons/capita/yr	1.21	1.33	1.50	9.4%	13.2%	23.8%
Recovery	Lbs/capita/day	2.49	3.09	3.43	24.1%	11.1%	37.8%
Waste Disposal	Lbs/capita/day	4.15	4.18	4.79	0.6%	14.7%	15.5%
Waste Generation	Lbs/capita/day	6.64	7.26	8.22	9.4%	13.2%	23.8%

Source: DEQ; Metro Regional Data Book, 1998.

Increased Recovery Needed To Meet Metro's Year 2000 Goal

	1995	1995	2000	2000	Baseline	New
Management	Tons	Percent	Tons	Percent	Tons	Tons
Recycling (1)	599,748	34%	873,100	45%	625,900	247,200
Energy	<u>141,117</u>	<u>8%</u>	<u>141,117</u>	<u>7%</u>	<u>141,117</u>	<u>0</u>
Recovery	740,866	42%	1,014,217	52%	767,017	247,200
Disposal	<u>1,023,100</u>	<u>58%</u>	<u>936,200</u>	<u>48%</u>	<u>1,183,400</u>	<u>(247,200)</u>
Generation	1,763,966	100%	1,950,417	100%	1,950,417	0

(1) Includes waste prevention, recycling and composting.

Source: RSWMP, 11/97.

Recovery Programs Needed To Meet Metro's Year 2000 Goal

Programs	Single-Family	Multi-Family	Commercial	C&D	Mixed (1)	Total	Percent
Home Composting	11,100					11,100	4%
Expanded Curbside	10,500					10,500	4%
Expanded Collection		12,600				12,600	5%
Bus.Waste Prevention			9,200			9,200	4%
Paper&Containers			66,400			66,400	27%
Organics			41,700			41,700	17%
C&D				31,400		31,400	13%
Post-Collection					64,300	64,300	26%
Total	21,600	12,600	117,300	31,400	64,300	247,200	100%
Percent	9%	5%	47%	13%	26%		

(1) Multi-generator material source.

Source: RSWMP, Table 9.2a, 11/97.

Metro Recovery Using DEQ Data

Method	1995	1996	1997	1995-1997
Curbside	125,626	130,175	131,454	5,828
Multi-Family	8,222	9,511	10,627	2,405
Depot	<u>8,091</u>	<u>9,164</u>	<u>7,832</u>	<u>(259)</u>
Total Residential	141,939	148,850	149,913	7,974
Commercial (H)	50,053	60,602	63,144	13,091
Commercial (P)	<u>443,670</u>	<u>417,899</u>	<u>488,549</u>	<u>44,879</u>
Total Commercial	493,723	478,501	551,693	57,970
C&D	99,482	123,906	133,987	34,505
Total Recovery	735,144	751,256	835,593	100,449

H=Hauler reported

P= Private recycler

Summary of Hauler-Reported Curbside Tonnages: Total

Program	1994	1995	1996	1997	1995-1997
Residential	111,745	137,163	140,294	157,225	20,062
Multi-Family	10,118	10,214	14,098	14,114	3,901
Depots	7,840	9,116	9,591	8,985	-131
Commercial	<u>88,481</u>	<u>101,484</u>	<u>119,263</u>	<u>157,714</u>	<u>56,230</u>
Total	218,184	257,976	283,247	338,038	80,062

Source: Metro, 11/98.