METRO

2000 S.W. First Avenue
Portland, OR 97201-5398
503/221-1646

Agenda

Meeting: Solid Waste Policy Committee

Day: Friday

Date: August 14, 1992

Time: 7:30 AM to 9:30 AM

Place: Metro Council Chamber
Metro Center
2000 SW First Avenue
Portland, Oregon 97201

I	Committee Member and Citizen Communication	Judy Wyers
II.	Approval of May 8 Meeting Minutes	Judy Wyers
III.	Updates	Bob Martin
IV.	Review and Comment on the Model Zoning Ordinance for Mixed Solid Waste and Recyclables Storage Areas in New Multi-Unit and Non-Residential Buildings	Mark Buscher
V.	Update of Progress Made in Establishing Clear and Objective Standards for Siting Solid waste Facilities in the Region	Mark Buscher
VI.	Adjourn: Next Meeting - Thursday, September 11..	

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SOLID WASTE POLICY COMMITTEE
May 8, 1992, Meeting Minutes

Members and Alternates Present:

Judy Wyers, Chair, Metro Council
Bob Martin, Director, Metro Solid Waste Department
Steve Larrance, Washington County
Jack Adams, Cities of Multnomah County
Sharron Kelley, Multnomah County
Stephanie Hallock, DEQ
Cecilia Petrocco, City of Hillsboro
Susan Keil, City of Portland
Mark Buscher, Metro

Guests Present:

Larry Eisele, Washington County
Sam Chandler, Metro
Terry Peterson, Metro
John Houser, Metro
David Boem, Esq., Gardner, Cosgrove, Attorneys at Law

Chairperson Judy Wyers brought the meeting to order at 7:30 a.m., May 8, 1992.

Updates:

Mr. Martin said he wanted to go directly to the Agenda Items and that would incorporate solid waste updates.

Agenda Items:

The agenda items began in reverse order and started with a slide show presentation by Sam Chandler of the Household Hazardous Waste Facility site.

Mr. Chandler presented 10 slides beginning with a slide of the Seattle HHW site. This site is open to the elements and all storage containers are outside. The next slide was of a new site being built by Seattle. Mr. Chandler pointed out that this new site was an improvement over the previous site, and indicated there was a detention area for spills on the concrete, a little bit of a cover, two bays instead of one, but still exposed to the

elements. The next slide was of the King County Mobile system which has two trucks. Mr. Chandler said they pack up the tents, tie-backs, barrel lifters, tarps, etc., arrive at a pre-arranged site and perform their collection. Mr. Chandler said the mobile unit was quite expensive but very effective. The next several slides were of the Metro South HHW facility, which Mr. Chandler described as "state of the art." Mr. Chandler described in detail how materials were received, inspected, tested, bulked, etc., and it all takes place in a controlled environment. Mr. Chandler said the customer never gets out of his car and they can serve two customers at a time. Most people have read the brochures sent to them and place their materials inside a cardboard container as directed; the technicians spend very little time talking to the customer. The material is brought inside, stacked on tables, and then processed.

Mr. Larrance asked Mr. Chandler how much the facility cost to build.

Mr. Chandler said it cost $1.1 million dollars to build. He said they anticipated their operating expenses to be from $700,000 to $900,000 for the first year of operation.

Mr. Larrance asked who picked up the recyclable materials.

Mr. Chandler said Westcomp is the primary transport contractor for hazardous materials and depending on the type of material, some were landfilled, some went to Idaho, pesticides and herbicides go to an establishment in Arkansas. A company in British Columbia will be taking some of the paints to make paint chips out of them. Operations is doing that to minimize the cost and maximize the amount of re-use and recyclables. They are also recycling all of their latex paint on-site, they are also recycling all of the cardboard containers in which they receive most of the HHW materials as well as empty metal paint cans. Solvents are bulked to be used as alternative fuels.

Ms. Kelly asked what they did with the household batteries, old refrigerators, and picture tubes from televisions.

Mr. Chandler said picture tubes would be a trash item; and they have a program in place but not quite operational to extract freon from refrigerators, and they also receive canisters of freon, all of which contain some freon. Each unit must be tested to make sure they have "good" freon, because if they mix bad gas in with their good, they cannot recycle it and it must be burned which is more expensive. Mr. Chandler said they actually saw very few household batteries, most are probably put in with people's trash.

Chair Wyers asked if the new facility at Metro Central would look like the current facility.

Mr. Chandler said they would change very little because the current facility had very few problems. He said they would change the ventilation to increase the airflow, the layout will be changed slightly to fit the site, they are on a flat site so they will have to excavate a dock, and they will make the bulking room a little bigger, but basically it will be the same building with the same costs.

Mr. Larrance asked how many customers per day they received (on the average)?

Mr. Chandler said it varied: The peaks were on Saturday and they do approximately 225 per weekend, about 90 on Saturday and pretty evenly distributed between Thursday and Friday. Mr. Chandler said they had not advertised adding there was a real fine balance between being able to accommodate the people who want to use the facility and "doing it right."

Mr. Martin said that one way to get a sense of what this single facility is doing for us is that at its present rate of usage, it represented the equivalent of one of the single day events that they were holding each and every week at a cost -- on an annualized basis -- of about 50% higher than the annual cost of what they were putting into the single day events, but they are now getting a lot more material and are serving a lot more customers.

Action Item: Approval of the Regional Household Hazardous Waste Management Plan

Larry Eisele, Chairman of the Household Hazardous Waste Management Subcommittee, presented the committee's draft which is to be incorporated into Chapter 2 of the Regional Solid Waste Management Plan after adoption. Mr. Eisele said collecting data on hazardous waste was very difficult because this was a new area, no one counted the material the same, the volumes, material collected and how they funded and budgeted their programs were all different. The committee endeavored to pick out the best components of what people were doing across the nation and tried to adapt those to what they thought would work in the Metro region. Mr. Eisele said they endeavored to keep the document flexible because this is a new field and things are changing rapidly and because of the tremendous costs involved with the collection of hazardous waste, it is doubtful that all portions of the plan will be implemented immediately. Mr. Eisele said this document gives Metro an option to go beyond tipping fees to fund research.

Mark Buscher briefly discussed the information contained in the document. Mr. Buscher said the Plan is based on a program and facilities analysis conducted over a year and a half period. The purpose of the program analysis was to research other programs throughout the country. The facilities analysis was to look at what long-term level of service we would have for the region if we only had permanent depots at Metro South and Metro Central. Then develop alternatives for providing service to underserved portions of the region.

The Plan recommends distribution of information in schools, and at solid waste facilities, through our recycling information center and through mailouts. Specific programs recommended for household hazardous waste reduction are also outlined in the plan, one being waste exchanges at the facility, also information and/or education at the point-of-sale through cooperation of retailers, etc. The plan also looks at the potential banning of collection of household hazardous waste at the curb by haulers to help keep those materials out of the wastestream as well as putting the responsibility of disposal on the

purchaser of the material. Another potential legislative proposal would be manufacturer/retail kickbacks of certain materials -- for instance used tires, auto batteries. One other potential legislative item might be product bans. These are all common themes throughout the country in similar facilities. Mr. Buscher suggested monitoring actual participation, disposal rates at the hazardous waste facilities as well as monitoring trends and purchases of potential household hazardous wastes which could be used as a measure of effectiveness of the reduction activities.

Mr. Buscher said they conducted a cost analysis for additional fixed or permanent depots, as well as a mobile or "prefabricated" facility to serve Washington County and eastern Multnomah County. Mr. Buscher said the plan recommends a mobile depot for two reasons: cost estimates indicate a 15% reduction in operation costs; a mobile facility would also be more flexible.

Mr. Buscher said that in addition to funding of the facilities through tipping fees, there is a possibility of funding through DEQ (from their tipping fee). The committee wanted to clarify that if it is found that a user fee could be implemented without significantly impacting participation, a "per participant" fee would be levied.

With regard to the mobile facility, the plan has determined that DEQ and Metro should work together for procurement of that facility, whether it be purchased, leased or franchised.

Mr. Adams asked Mr. Buscher if the committee had considered temporary storage facilities sited by, for instance, at fire stations because firemen are trained with regards to hazardous materials, using a storage shed within a 1-1/2 to 2 mile radius.

Mr. Buscher said that concept was basically what the mobile system was designed to do. That typically it would operate two to three weekends consecutively in the same area

Mr. Adams suggested that the fire station would be a good temporary place to gather materials and have the mobile unit pick it up on a regular schedule, or, he asked, was it necessary for the material to be categorized and packaged immediately?

Stephanie Hallock, DEQ, addressed Mr. Adams question saying that a real key player on how these materials must be handled is the State Fire Marshall and they are extremely restrictive and concerned about safety requirements. She said preparation for gathering HHW must be closely monitored and that she seriously doubted that items could be "stored" in an empty warehouse just to gather it up.

Mr. Adams said that was not what he was proposing. He said his agency was one of the HAZMAT providers for the state and his people are trained to handle those materials. He said they already have a small storage facility for a limited amount of HAZMAT at the City Hall station. He would like to be able to expand that somewhat. He suggested the

mobile unit come through once a month or even every other month to pick the material up if there was not an immediate need to categorize and package it.

Mr. Chandler said that the crew at the HHW facility put all materials collected during the day into the appropriate barrel or bay before closing for the day and that was the State Fire Marshall's requirement. They are not even allowed to leave piles of even sorted material out in the open, even inside the HHW building. Mr. Chandler said it was his understanding that materials collected in a warehouse or any other type of facility was required to be categorized by hazard type before leaving for the day. Mr. Chandler said that when you deal with this type of material you are dealing with a lot of unknowns and some type of determination of the materials origins would be required at a minimum. This procedure requires a lot of employee time as well as a place to work. So temporary storage facilities would probably be best used to gather very select items and could be used if, for instance they attracted just paint.

Chair Wyers suggested they investigate to see what the arrangement is in the area that Mr. Adams is speaking of and see if there is any possible way to coordinate that with the program Metro has going, including input from the State Fire Marshall.

Mr. Martin agreed that Mr. Adams suggestion would be worth following up on. He said that fire departments have been playing a good, strong role in the whole management scheme, but they have made it clear that during the single day events, they do not want the material there any longer than the weekend in which materials are collected because they are not set up to handle large volumes. Some of the storage facilities are extremely good, but limited. In general, they are not enthusiastic towards being a destination for the volumes of traffic people would generate in the collection of hazardous materials nor do they have the capacity for storing for long periods of time.

Susan Kiel asked why the HHW facility was only open on Thursday, Friday and Saturday.

Mr. Chandler said the determination was made because that was when they were most likely to get the largest amount of people. Mr. Chandler said they would be unable to handle the flow of material were they to be open more often.

Ms. Kiel asked if the HHW facility would be able to handle volume from small quantity generator commercial customers on a complete fee driven basis.

Mr. Chandler said that logistically Metro could do that but for one, it would require changing the conditional use permit with the City of Oregon City, and a variety of other factors. Mr. Chandler sees Metro's role as getting those in need directly involved with vendors who provide that type of service.

Ms. Hallock said that in reference to the Chapter before the Committee, Metro would either have to deal with that matter (small quantity generator) or else remove the reference to CEG's. Ms. Hallock asked if the statement in the Chapter as to participation rate in

2001 as being 15%, included CEGs? If this was not the case, she suggests Metro remove reference to CEGs as well as reference to infectious waste, as Metro does not deal with that issue at the HHW facility either.

Mr. Martin said that Ms. Hallock was quite right, the chapter as it is written addresses strictly hazardous waste, by intent. He said we are not trying to cover the full gamut of small quantity generators and other kinds of hazardous waste components, medical waste, etc. at this time, which does not mean we will ignore them forever. We will develop a subsequent Chapter 2, which will cover those additional disposal issues at a later time. Mr. Martin said that the policies that are listed up front are comprehensive policies in the area of hazardous waste. He indicated they do reference medical waste, etc., because our policies address all of those specific things.

Mr. Martin said that with regard to Ms. Kiel's comments that we charge a fee to commercial users, we may develop, perhaps in the future, a role in handling CEG or small quantity generator materials. He said we were not permitted to do that at present but that does not rule out a way to proceed in the future and we could request a reasonable modification of the permit at the appropriate time. Mr. Martin emphasized that at present our intention is to see the facility function efficiently and effectively and after it is stabilized then start looking in conjunction with a more comprehensive plan for CEG waste and perhaps try to supplement the overall region's management schemes on a user fee basis.

Ms. Kiel emphasized that she felt it was important that the public not get the impression that there was no cost associated with this facility and that perhaps the idea of a fee might be entertained.

Mr. Chandler said that presently the cost is $80.00 per customer, and that does not count the capital cost. He said this was one of the problems with trying to assess a fee because it is doubtful they will ever approach recovering those costs. Mr. Chandler said that perhaps as Mr. Buscher suggested, recovering the costs through a front-end product tax or surcharge might be a more viable way to spread that cost through the user system, because they are still not receiving the majority of the household hazardous materials, nor could they handle it all.

Ms. Kelly said it was her impression that everyone would like to be responsible citizens, but what we have is a system people do not understand, that they are paying a lot more for and they are having to drive all over the place to get rid of bits and pieces, especially in East Multnomah County. Ms. Kelly noted the arrangements made in Japan where manufacturers are responsible for disposing or recycling of the materials they put on the market, or they have to pay a fee. Ms. Kelly said she prefers that people be given a financial incentive to make different choices.

Mr. Larrance said he liked the way the chapter was put together, the amount of research which had been undertaken and the flexibility of having a system that can adjust as it

moves along. Mr. Larrance also liked the idea of front-end loading the cost because everybody that participates in the wastestream have a vested interest in ultimately doing it right, and he likes the idea of a mobile unit.

Ms. Hallock indicated she would like to add one thing on page 24, under DEQ Role, Ms. Hallock said DEQ was directed by the Legislature to come back with a report on long-term alternative funding and she felt it should be mentioned in that paragraph that DEQ will and have been working with Metro in that area.

Ms. Wyers asked the committee members if there were any more concern about the inclusion of the CEG's and medical waste in the chapter.

Mr. Buscher reminded the committee members that although there was reference to CEGs and medical waste in the Household Hazardous Waste chapter 2, this is only to indicate that these matters will be addressed separately in sections of the chapter yet to be developed.

Chair Wyers said she wanted to make it a priority in her capacity as solid waste chair to see that we develop some solid promotional programs to educate people on how to deal with the costs as well as alternatives of hazardous waste, etc. Ms. Wyers said she wants to see budgeted funds for education about the reduction in the use of household hazardous waste.

It was moved and seconded to approve the Regional Household Hazardous Waste Management Plan and to incorporate it into Chapter 2 of the Regional Solid Waste Management Plan.

Ms. Stephanie Hallock reminded the Clerk that DEQ was a non-voting member of the committee.

The motion was approved unanimously without further discussion.

Presentation of the 1991 Regional Recycling Survey

Terry Peterson made a presentation of the 1991 Regional Recycling Survey. The survey was made for all materials recycled throughout the region. In 1991 about 600,000 tons of all materials were recycled in the region which compares to approximately 1,000,000 tons disposed (not counting contaminated soils), which produces a recycling percentage of 38%. This compares to 32% recycling level in 1990. Figuring pounds-per-person-per-day, we find 7.2 lbs generated, 4.5 lbs disposed and 2.7 lbs being recycled. If you compare the disposal figure of 4.5 to current literature, it would indicate that figure to be high, however, we are talking about all waste in the region including commercial, residential, construction demo -- anything which gets landfilled. Those items causing the recycling level to rise consist of: yard debris, construction materials, and glass -- paper rose slightly. The methodology change for calculating the recycling percentages accounted for a 1.7% increase.

Mr. Adams asked if there was any reason for the reduction in tonnage being received that Metro could recognize.

Mr. Peterson said it was true that the rate increase was linked to the lower tonnage figure, and that part of the drop of tonnage has nothing to do with recycling, illegal disposing, etc. There was 26% fewer house construction, so when the economy recovers and housing starts begin going back up, we will see an increase in construction demolition.

Mr. Larrance said he thought it was important for people to understand, however, that when housing started back up, we won't see that tonnage end up in the disposal column because we have new programs in place.

Mr. Martin said Metro did not compile the figures in order to compare ourselves with other jurisdictions because there are so many differences in the way persons count what is waste and what is recycling and it is therefore extremely difficulty to compare across-jurisdictional boundaries. Mr. Martin said that comparing our region, for instance to Seattle, they are reporting a 37% recycling rate while we are reporting a 38% recycling rate.

Mr. Adams asked what kind of an increased recycling rate the new yard debris program would give the region.

Ms. Kiel said they were not satisfied with the first month's figures, but the second month showed double the participation rate. Ms. Kiel said that based upon the improvement they have seen during the past month, they believe that 50% of households will participate (total 132,000 households).

Mr. Peterson said that translating that into a regional level and the impact on the recycling level, Metro estimates that new yard debris programs will add perhaps 2% to the overall recycling level.

Ms. Wyers asked if there were any other comments and/or questions.

The meeting was then adjourned.

METRO

2000 S.W. First Avenue
Portland, OR 97201-5398
503/221-1646

Memorandum

DATE: August 7, 1992

TO: Solid Waste Policy Committee

FROM: Mark Buscher, Senior Planner

RE: **Model Zoning Ordinance for Mixed Solid Waste and Recyclables Storage**

Attached are the materials prepared for the Model Zoning Ordinance for Mixed Solid Waste and Recyclables Storage in New Multi-Unit Residential and Non-Residential Buildings. They include:

- The Project Summary
- The Model Ordinance
- A Waste Assessment Form (to use to show compliance with the ordinance), and
- A hand-out showing design examples that meet the design objectives of the ordinance.

These materials have previously been reviewed by the Land Use and Waste Reduction Sub-Committees, local governments, and several different developers groups. Please review the enclosed materials prior to the meeting so we may receive and discuss your comments at the Policy Committe meeting.

If you have questions or need additional information prior to the Policy Committee meeting, please call me at 221-1646, extension 194.

Thank you.

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PROJECT SUMMARY FOR:
THE MODEL ZONING ORDINANCE FOR MIXED SOLID WASTE AND RECYCLABLES STORAGE IN NEW MULTI-UNIT RESIDENTIAL AND NON-RESIDENTIAL BUILDINGS

Background:

The Metropolitan Service District (Metro) prepared this model ordinance in order to provide regionally uniform zoning standards that accommodate on-site storage of mixed solid waste and recyclables prior to collection by waste haulers. The model ordinance is applicable to new, or major expansions and renovations of multi-unit residential, commercial, industrial and institutional buildings.

The model zoning ordinance requires that developers include adequate space for the storage of mixed solid waste and recyclables in their development plans. The availability of adequate on-site storage areas will provide the opportunity for increased levels of recycling in the region in order to help in meeting the state's goal of 50% waste recovery by 2000; and, the region's waste reduction goal of 56% by 2010.

Implementation of the model ordinance by local governments fulfills the "Building Design Review" element of their Waste Reduction Program for fiscal-year 1992-93,. It also makes implementation of multi-family recycling programs, also contained in the FY 92-93 Waste Reduction Program, more feasible. The standards contained in the model ordinance pertaining to new commercial, institutional and industrial development will make implementation of a recyclables collection program for those land uses more practicable Such a program is listed in the State Recycling Act (Senate Bill 66) as a potential program element for local governments to implement in order to meet the state's waste recovery goal.

Objectives of the Model Ordinance:

The model ordinance meets the following objectives:

- Provide objective standards that are easy and efficient for local governments to administer;
- Provide objective standards to designers and developers without limiting creativity; and
- Build flexibility into the ordinance to make compliance feasible without the need for a zoning variance.

Options for Compliance with the Model Ordinance:

The Model Ordinance outlines four methods of compliance.

1. Minimum Standards Method: Specifies a minimum storage area requirement based on the size and general use category of the proposed development.

2. Waste Assessment Method: Provides the option for an applicant to document that solid waste and recyclables volumes expected to be generated can be stored in less space than is required by the Minimum Standards method.

3. Comprehensive Recycling Plan Method: Makes use of comprehensive recycling plans and programs developed by industrial, institutional or other uses which go beyond the standards of this model ordinance to satisfy compliance.

4. Franchised Hauler Method: To be used when there are unique conditions associated with the site, use or waste stream that make compliance with any of the other three methods infeasible.

Location, Design and Access Standards:

The location, design and access standards included in the model ordinance accomplish the following :

- Ensure storage areas are centrally located and easy to utilize;
- Meet dimensional and access requirements for waste haulers;
- Provide design standards which mitigate the visual impacts of waste storage areas

Use the Model Ordinance As a Guide:

Each local government in the region has a zoning and development review code which is uniquely formatted and organized. The model ordinance contains specific standards and code language. However, it is formatted as a guide so it can be used by local governments to efficiently incorporate the standards of the model into local codes.

Implementation and Administration of the Model Ordinance:

Implementation of the model ordinance will occur through adoption .by the local governments in the region. Metro staff is available to provide background information about the ordinance and assist with fitting the model into local codes.

Administration of the ordinance standards will require a review of site and building plans to determine the adequacy of proposed storage areas for new development or major expansions or renovations of existing development. Site plan review staff or a local solid waste coordinator may perform this review. It is expected that the additional review time necessary to evaluate storage area designs will be minimal. In order to ensure that implementation of the ordinance does not add appreciably to the site-plan review process, it is suggested that site-plan review staff receive training from local solid waste coordinators so they can objectively review development plans that make use of the "Waste Assessment", "Comprehensive Recycling Plan" or "Franchised Hauler Review" methods of compliance. Metro staff are also available to assist in this task.

MODEL ZONING ORDINANCE FOR MIXED SOLID WASTE AND RECYCLABLES STORAGE IN NEW MULTI-UNIT RESIDENTIAL AND NON-RESIDENTIAL BUILDINGS

I. PURPOSE

This ordinance establishes standards for centralized mixed solid waste and source separated recyclables storage. The purpose of the ordinance is to ensure that new construction incorporates functional and adequate space for on-site storage of mixed solid waste and source separated recyclables prior to pick-up and removal by haulers.

II. APPLICABILITY

The mixed solid waste and source separated recyclables storage standards shall apply to all new multi-unit residential and non-residential construction that is subject to full site development plan review.

III. DEFINITIONS

"Mixed Solid Waste" means solid waste that contains recoverable or recyclable materials, and materials that are not capable of being recycled or recovered for further use.

"Source Separated Recyclables" means, at a minimum, recyclable materials designated "principle recyclable materials" by the State Environmental Quality Commission under ORS 495A.025, with the exception of yard debris. Currently these materials include newspaper, ferrous and non-ferrous scrap metal, used motor oil, corrugated cardboard, aluminum, container glass, office paper, and tin cans (OAR 340-60-030).

"Storage Area" means the space necessary to store mixed solid waste and source separated recyclables that accumulate between collection days.

"Multi-unit residential building" means a structure that contains five or more dwelling units that share common walls or floors/ceilings with one or more units.

"Non-residential building" means a structure that is used for any non-residential function, including but not limited to office, retail, wholesale/warehouse/industrial, educational, and institutional uses.

IV. MATERIALS ACCEPTED

The storage area must be designed and managed to accommodate a multi-material system. The list of source separated recyclables accepted shall conform to the most current state law or local government requirements, whichever is most inclusive. Separate and appropriate methods of containing source separated recyclables and mixed solid waste must be provided in the storage area, based on the volume of materials accumulated between collection days.

V. METHODS OF DEMONSTRATING COMPLIANCE

To provide for flexibility in designing functional storage areas, this model ordinance outlines four methods to meet the overall objective of improving the efficiency of collection by providing adequate on-site areas for material storage. An applicant can choose any one of the following four methods to demonstrate compliance: 1) minimum standards; 2) waste assessment; 3) comprehensive recycling plan; or 4) franchised hauler review and sign-off.

Section VI of this ordinance (Location, Design and Access Standards) applies to all four methods of demonstrating compliance listed below. In addition, the following provisions are applicable to all four methods:

1. When compliance with this ordinance requires the development of an interior or exterior storage area, the storage area shall be excluded from the calculation of lot coverage in the base zone.

2. When computing required storage area, the building floor area used for source separated recyclables/residual solid waste storage shall not be counted.

A. Minimum Standards Method

Description of Method: This method specifies a minimum storage area requirement based on the size and general use category of the new construction.

Application of Method: This method is most appropriate when the specific use of a new building is not known. It provides standards for the appropriate size of storage areas. The minimum standards can be efficiently incorporated into site plans and building design.

Review Procedure: The size and location of the storage area(s) shall be indicated on the site plan for new or expanded multi-unit residential or non-residential buildings. Through the plan check review process, compliance with the general and specific requirements set forth below is verified.

General Requirements:

1. The storage area requirement shall be based on the predominant functional use of the building. When a building has more than 20 percent of its floor area in a distinct function (i.e., office, warehouse, or retail), the storage area requirement shall be calculated separately for each function.

2. When there are two or more separate uses on a site, the storage area requirement for the site shall be the sum of the required storage area(s) for the individual uses. Storage areas for multiple uses on a single site may be combined and shared.

3. The specific requirements are based on an assumed storage height of 4 feet for solid waste/recyclables. In central city settings where space is at a premium, vertical storage higher than 4 feet but no higher than 7 feet may be used to accommodate the same volume of storage in a reduced floor space (potential reduction of 43% of specific requirements). Where vertical or stacked storage is proposed, the site plan shall include drawings to illustrate the layout of the storage area and dimensions of containers.

Specific Requirements:

1. Multi-unit residential buildings containing 5-10 units shall provide a minimum storage area of 50 square feet. Buildings containing more than 10 residential units shall provide an additional 5 square feet per unit for each unit above 10.

2. Non-residential buildings shall provide a minimum storage area of 10 square feet, plus:

   Office: 4 square feet/1,000 square feet gross floor area (GFA)
   Retail: 10 square feet/1,000 square feet GFA
   Wholesale/Warehouse/Manufacturing: 6 square feet/1,000 square feet GFA
   Educational and Institutional: 4 square feet/1,000 square feet GFA
   Other: 4 square feet/1,000 square feet GFA

B. Waste Assessment Method

Description of Method: This method tailors the storage area size to a waste assessment and management program for the specific user of a new building.

Application of Method: This method is most appropriate when the specific use of a building is known and the type and volume of mixed solid waste to be generated can be estimated. A waste assessment form shall be used to estimate the volumes of source

separated recyclables/mixed solid waste generated. From this information, the applicant can design a specific management, storage and collection system. Techniques such as a compactor, cardboard baler or frequent collection may be implemented to minimize the square footage of the site which must be set aside for a storage area.

Review Procedure: A pre-application conference with the solid waste coordinator/plan check staff is required if the waste assessment method is proposed. The applicant shall obtain a waste assessment form from the local jurisdiction (Note: A sample form will be provided as an attachment to this ordinance). The form shall be completed and submitted with site plans/building plans required by the local jurisdiction. The plans must identify the size and location of interior or exterior storage area(s), specialized equipment, collection schedule, etc. required to accommodate the volumes projected in the waste assessment.

Specific Requirement: The site plan drawings and descriptions of storage containers, equipment and collection service shall demonstrate that the mixed solid waste and recyclables volumes expected to be generated can be stored in less space than is required by the minimum standards method. The solid waste coordinator for the local jurisdiction shall review and approve the waste assessment as part of the plan check process.

C. Comprehensive Recycling Plan Method

Description of Method: This method recognizes that many large industrial, institutional or other uses have comprehensive recycling plans and programs in place which go far beyond the minimum standards of this model ordinance. These businesses are also frequently expanding and renovating their facilities. It is appropriate to recognize and use these existing plans to satisfy compliance with this model ordinance.

Application of Method: This method can be used when a comprehensive recycling plan has been implemented for a specific facility. It is most suited to large non-residential uses such as hospitals, schools and industrial facilities. The comprehensive recycling plan method can be used for new construction or expansion that is subject to full site plan review.

Review Procedure: The comprehensive recycling plan shall be submitted to the local solid waste coordinator at the same time site and building plans are submitted for site plan review. For the new construction, expansion or renovation proposed, the comprehensive recycling plan shall be referenced and a brief description provided by the applicant to note how the new construction will be served and integrated into the overall comprehensive recycling program.

The location, design and access standards set forth in Section VI shall not apply if the new construction can be served with existing storage areas. If new storage areas are needed to implement the comprehensive recycling plan, the standards of Section VI are applicable.

D. Franchised Hauler Review Method

Description of Method: This method provides for coordinated review of the proposed site plan/building plan by the franchised hauler serving the subject property.

Application of Method: This method is only available in jurisdictions which franchise collection service areas because there is a guarantee that a specific level of service will be provided, whether or not the specific use of the building changes. This method is to be used when there are unique conditions associated with the site, use or waste stream that make compliance with any of the other three methods infeasible. The objective of this method is to match a specific hauler program (types of equipment, frequency of collection, etc.) to the unique characteristic(s) of the site or development.

Review Procedure: The applicant shall work with the franchised hauler to develop a plan for storage and collection of source separated recyclables and mixed solid waste expected to be generated from the new building. The size and location of storage area(s) required to accommodate anticipated volumes shall be identified on site plans/building plans. A letter from the franchised hauler shall be submitted with the site plans/building plans to describe the level of service to be provided by the hauler, including any special equipment and collection frequency, which will keep the storage area from exceeding its capacity.

VI. LOCATION, DESIGN AND ACCESS STANDARDS FOR STORAGE AREA(S)

The following location, design and access standards for storage areas are applicable to all four methods of compliance: 1) minimum standards; 2) waste assessment; 3) comprehensive recycling plan; and 4) franchised hauler review and sign-off.

A. Location Standards

1. To encourage its use, the storage area for source separated recyclables shall be co-located with the storage area for residual mixed solid waste.

2. Storage area(s) can be located inside or outside of proposed buildings. If located inside, storage area(s) shall comply with Building and Fire Code requirements.

3. Storage area space requirements can be satisfied with a single location or multiple locations, and can combine both interior and exterior locations.

4. Exterior storage areas can be located within interior side yard or rear yard areas. Exterior storage areas shall not be located within a required front yard setback or in a yard adjacent to a public street.

5. Exterior storage areas shall be located in central and visible locations on a site to enhance security for users.

6. Exterior storage areas can be located in a parking area, if the minimum parking space requirement for the proposed use is met. Storage areas shall be appropriately screened according to the provisions in Section B, Design Standards.

7. The storage area shall be accessible for collection vehicles and located so that the storage area will not obstruct pedestrian or vehicle traffic movement on the site or on public streets adjacent to the site.

B. Design Standards

1. The dimensions of the storage area shall accommodate containers consistent with current methods of local collection.

2. To ensure efficient collection and avoid unsightly exterior storage areas and litter, storage containers shall be weatherproof. This can be accomplished either by using weatherproof containers with lids or by providing a covered storage area.

3. Exterior storage areas shall be enclosed by a sight obscuring fence, wall, or hedge at least six feet in height. Gate openings which allow access to users and haulers shall be provided. Gate openings for haulers shall be a minimum of 10 feet wide and shall be capable of being secured in a closed and open position.

4. Storage area(s) and containers shall be clearly labeled to indicate the type of materials accepted.

C. Access Standards

1. Access to storage areas can be limited for security reasons. However, the storage area shall be accessible to users at convenient times of the day, and to collection service personnel on the day and approximate time they are scheduled to provide collection service.

2. Storage areas shall be designed to be easily accessible to collection trucks and equipment, considering paving, grade and vehicle access. A minimum of 10 feet

horizontal clearance and 8 feet of vertical clearance is required if the storage area is covered.

3. Storage areas shall be accessible to collection vehicles without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius shall be provided to allow collection vehicles to safely exit the site in a forward motion.

WASTE ASSESSMENT

Guidelines for Proposed Alternatives to the Minimum Standard Storage Area Requirement

Project Title & Location:

Waste Assessment Checklist Completed By: Date:

Facility Gross Square Footage: Number of Floors:

Principle Use(s) of Facility:

Square Feet of Solid Waste and Recyclables Storage Area Which Would Be Required Under the Minimum Standards Method: _____

Square Feet of Solid Waste and Recyclables Storage Area Proposed on the Basis of Documentation Provided Through Waste Assessment: _____

Indicate with a "check" whether an alternative to the minimum standard is being requested on the basis of A, B or C:

❑ A. An evaluation of the quantities and types of waste to be generated at this site indicates that an area of less than the code's specified minimum storage area for solid waste and recyclables will be adequate.

- ❑ Response has been provided to items 1, 2 & 4 attached;
- ❑ Necessary documentation is attached;
- ❑ Site plans reflect the locations and provisions for solid waste and recyclables storage.

❑ B. Special solid waste and/or recyclables storage equipment (i.e. balers, compactors, shredders) to be installed at this site assure that an area of less than the code's specified minimum storage area for solid waste and recyclables will be adequate.

- ❑ Response has been provided to items 1, 2, 3 & 4 attached;
- ❑ Necessary documentation is attached;
- ❑ Site plans reflect the locations and provisions for solid waste and recyclables storage.

❑ C. Both A. and B. apply.

- ❑ Response has been provided to items 1, 2, 3 & 4 attached;
- ❑ Necessary documentation is attached;
- ❑ Site plans reflect the locations and provisions for solid waste and recyclables storage.

1. Provide an estimate of the total pounds, tons or cubic yards of solid waste and recyclables to be generated at the site/facility between collection days; once it is fully operational. (Assume that the number of collection days in 7 day week is no more than 3). Consider seasonal variability to assess average as well as maximum periods of waste generation. Provide documentation in support of the estimate.

   Acceptable sources of assumptions & information for documentation:

   _____ *historical data on waste and recyclables generation at similar reference facilities with which the project designer is familiar; or*

   _____ *an analysis prepared by an experienced recyclables collector or vendor of waste/recyclables storage equipment; or*

   _____ *an analysis prepared by an independent consultant or engineer; or*

   _____ *waste and recyclables generation data for facilities of similar size and function obtained from published studies or reports; or*

   _____ *other forms of documentation proposed by the project designer which are deemed acceptable to this jurisdiction, at the pre-application conference.*

2. Identify the recyclable materials which could potentially be recovered from the facility's waste stream and provide an estimate of their volume or amount (average and maximum weekly pounds, tons or cubic yards). Provide documentation in support of the estimate.

   Acceptable sources of assumptions & information for documentation:

   _____ *historical data on recyclables generation and/or recovery at similar reference facilities with which the project designer is familiar; or*

   _____ *an analysis prepared by an experienced recyclables collector or vendor of waste/recyclables storage equipment; or*

   _____ *an analysis prepared by an independent consultant or engineer; or*

   _____ *recyclables generation and/or recovery data for facilities of similar size and function obtained from published studies or reports; or*

   _____ *other forms of documentation proposed by the project designer which are deemed acceptable to this jurisdiction, at the pre-application conference.*

3. Identify and describe special solid waste and/or recyclables storage and handling systems and equipment to be installed at this site which will reduce the amount of site area needed to store these materials. Balers, compactors or other systems to containerize and/or densify waste or recyclables must be identified on site plans. Supporting documentation on the capabilities of scheduled equipment to handle anticipated types and quantities of material must be provided.

   Acceptable sources of documentation:

   _____ *equipment specifications provided by the equipment vendor; or*

   _____ *project designer descriptions of how planned systems have performed at similar reference facilities; or*

   _____ *an evaluation prepared by an independent consultant or engineer; or*

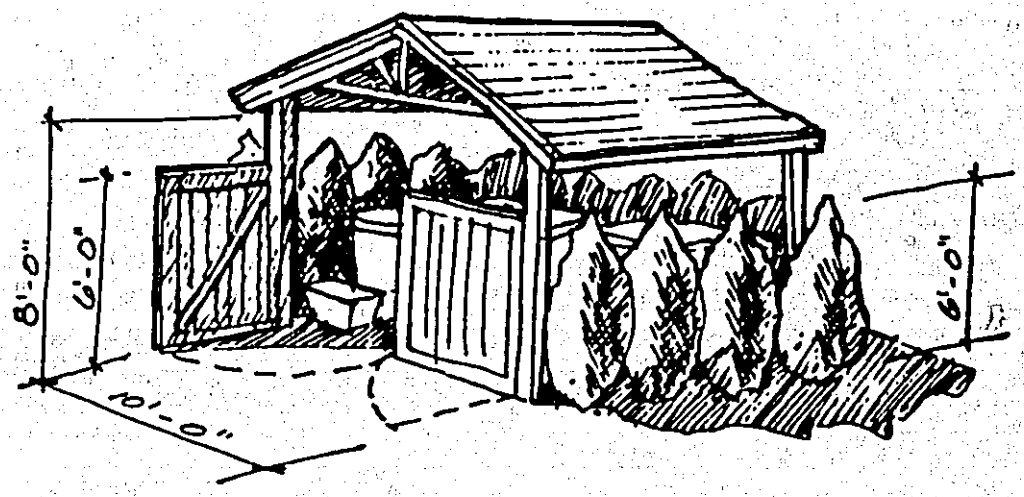
   _____ *published studies/reports on the performance of planned systems; or*

   _____ *other forms of documentation proposed by the project designer which are deemed acceptable to this jurisdiction, at the pre-application conference.*

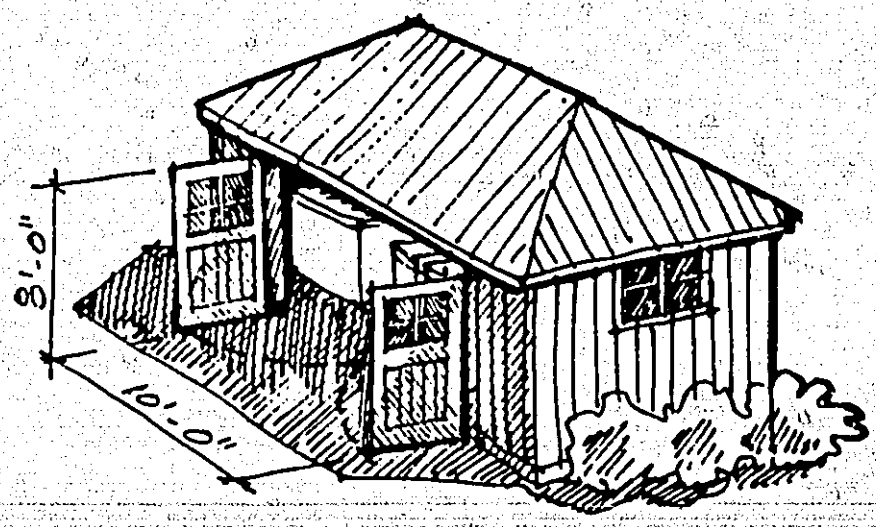
4. Provide calculations and supporting assumptions demonstrating that the allocated storage area(s) (square footage as well as height and lay-out) for solid waste and recyclables will adequately serve the needs of the facility. Identify dedicated storage area(s) on facility plans. Provide detail on storage container size, design and dimensions.

Design Examples of Solid Waste and Recycling Storage Areas

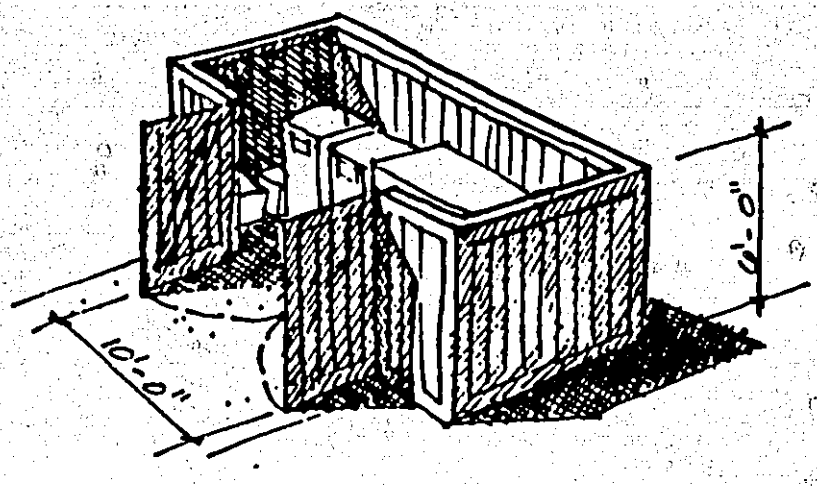
Pole structure with roof, sight-obscuring hedge and service gate.

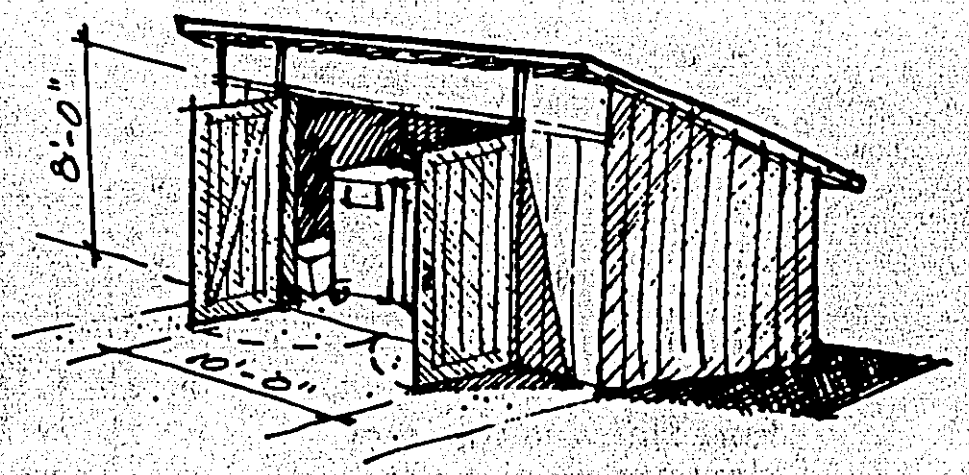


Hipped roof enclosure with optional landscaping.

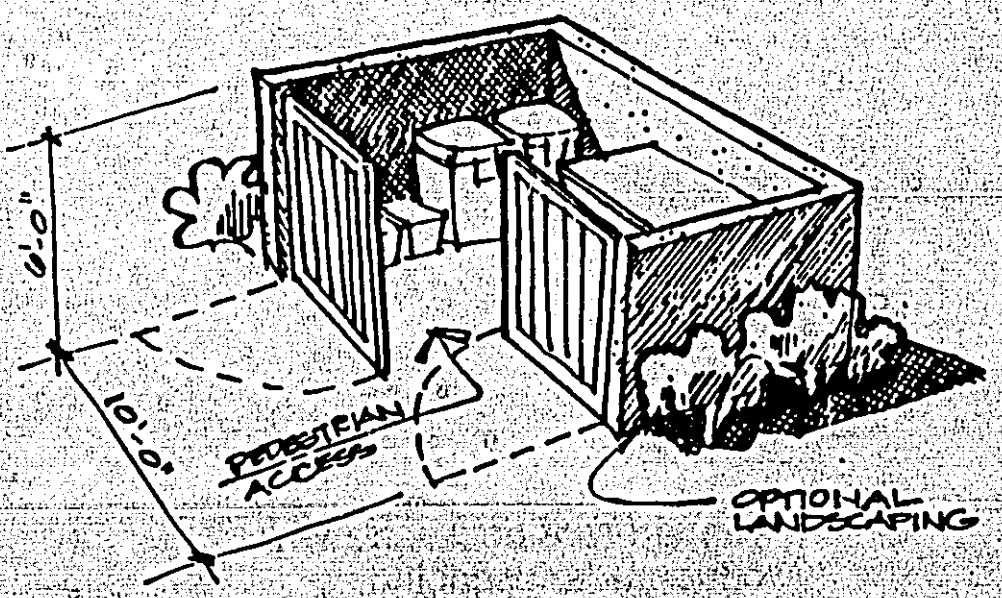


Sight-obscuring fence with service gate.

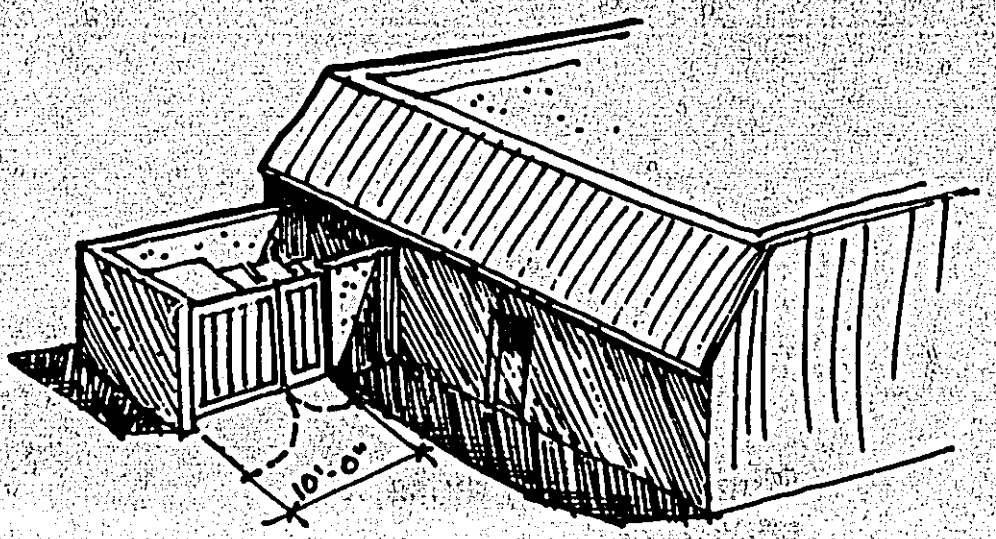




Free standing, covered shed.

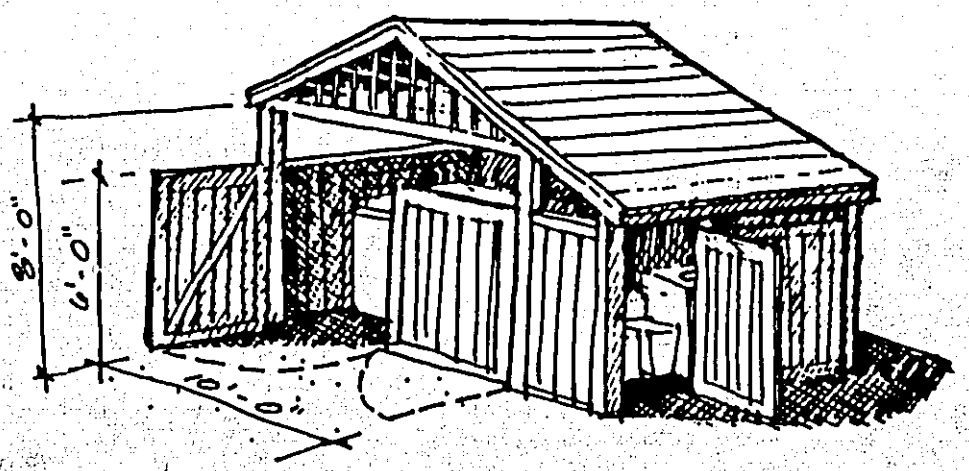


Free standing wall with pedestrian access and service gate.

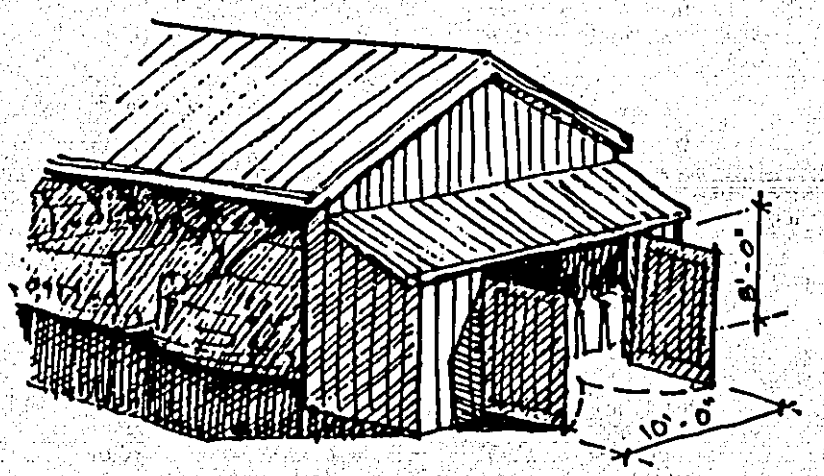


Wall attached to building with pedestrian scaled gate.

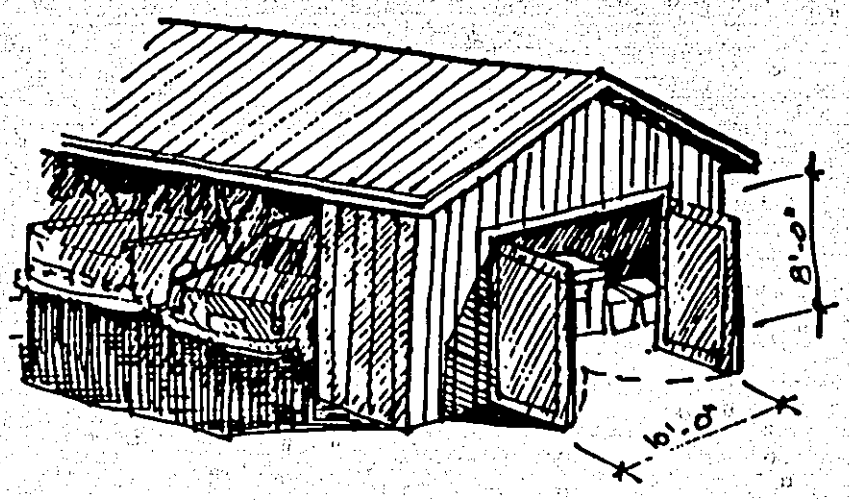
Pole structure with roof, sight-obscuring fence, pedestrian and service gates.

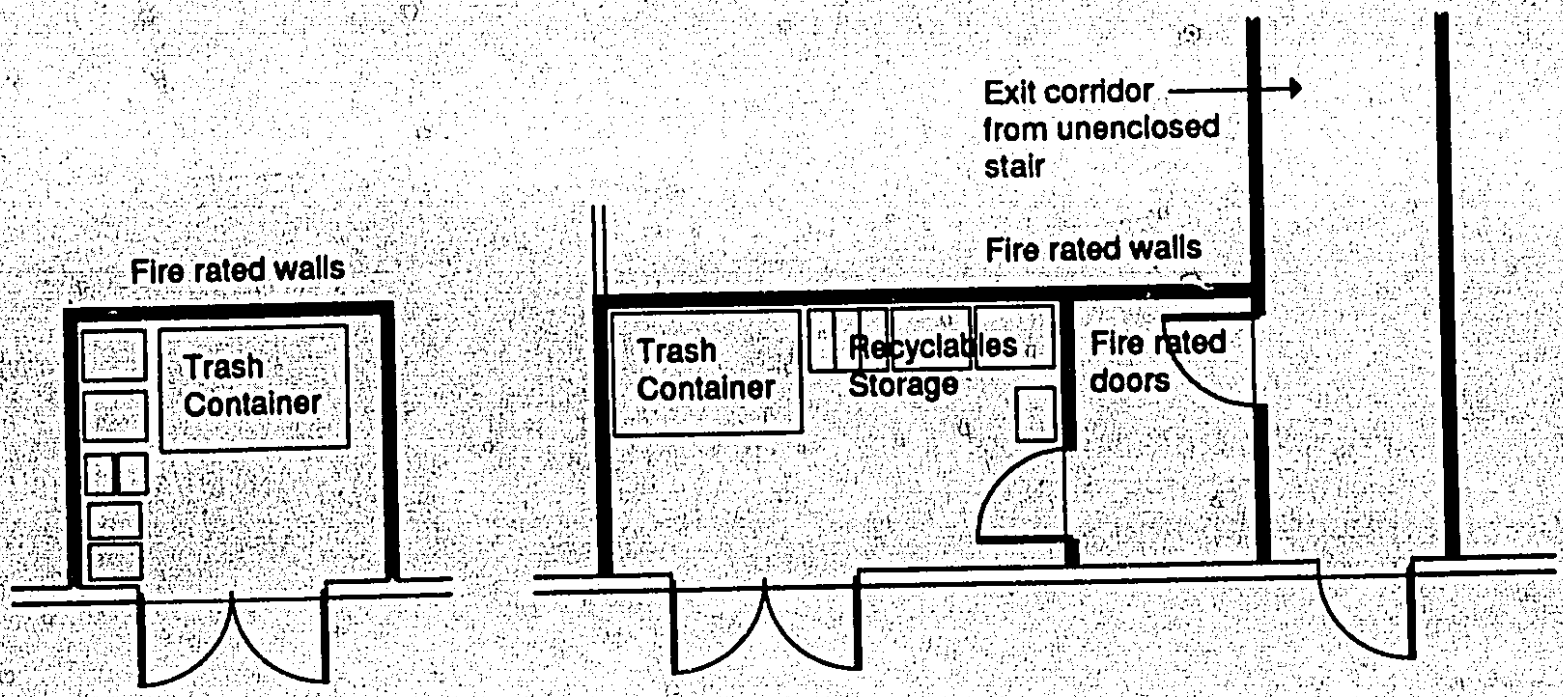


Shed enclosure added at end of carport.



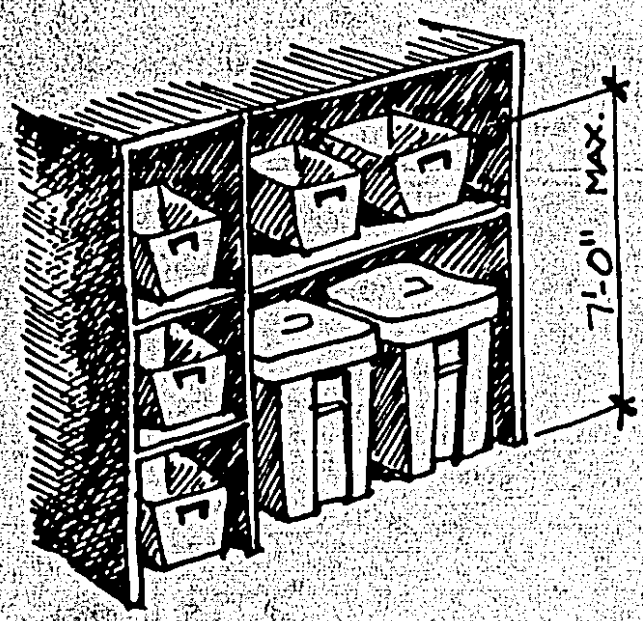
Enclosure integrated with carport.



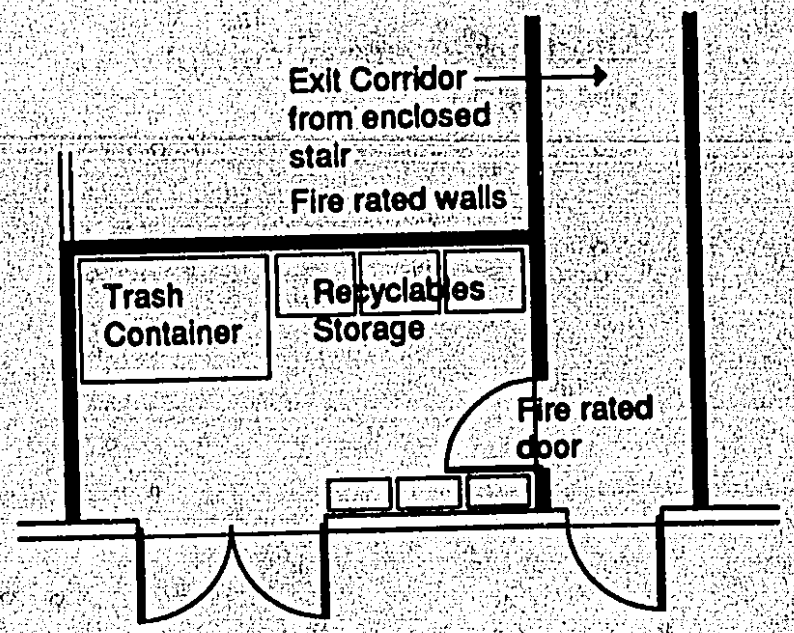


Trash Room with no interior access

Trash Room in Fully Sprinklered Building Having Enclosed Stairs (or no stairs)



Trash Room with stacked storage



Trash Room in Fully Sprinklered Building Having Enclosed Stairs (or no stairs)