



# Multi-Tenant Collection Area Design Review

## Executive summary

In response to changes in Oregon’s recycling laws, the opportunity to recycle is being extended to all residential and commercial tenants of multi-tenant properties. The change will require cities and counties to ensure properties with tenants that share garbage collection service also receive recycling collection by July 2022. This requirement is for cities with 4,000 or more residents, cities within the Metro Service District and counties which manage programs within those cities’ urban growth boundaries.

In order to support implementation, Oregon Department of Environmental Quality staff reviewed collection area ordinances and guidelines from the following jurisdictions and organizations:

- Boise, Idaho
- Chaska, Minn.
- Clackamas County, Ore.
- Dublin, Calif.
- Durham, N.C.
- Farmersville, Calif.
- Federal Way, Wash.
- Fort Collins, Colo.
- Fremont, Calif.
- Frisco, Texas
- Hollywood, Fla.
- McMinnville, Ore.
- North Central Texas Council of Governments
- Olympia, Wash.
- Pride Disposal, Ore.
- San Leandro, Calif.
- Santa Barbara, Calif.
- Seattle
- South Salt Lake City
- Stopwaste.org
- Sunnyvale, Calif.
- Tucson, Ariz.
- Washington County, Ore.

See Appendix B for a links to ordinances and guidelines.

## Applicability of collection area ordinances

Collection area ordinances and guidelines varied in application, but mostly applied to new construction and some remodeled multifamily and multi-commercial developments. The definition of a multifamily development ranged from more than one unit to five or more units.

## Location of collection area and screening

Generally, ordinances and guidelines specified that collection areas be located out of public view or right-of-way and if not possible, have screening that shields garbage and recycling from sight. Screening was required on three to four sides of collection areas to screen materials with 80 to 100 percent opacity. Screening can be walls, fences, topographic changes, horizontal separation, landscaping or similar. Screening above the collection area was sometimes recommended where interior will be visible from upper floors and between the roof and collection area walls, if the gap was greater than two feet, to discourage illegal dumping.

## Fire code

Fire code requires that the distance of the collection area is at least five feet from combustible walls, openings or combustible roof-eave lines. Fire code also specifies materials for building walls and roofs. Some codes require automatic sprinkler systems and fire alarms, depending on the size and location of the collection area.

## Collection area design

### Materials

Collection area ordinances and guidelines generally called for enclosing the area using durable materials that are consistent with or complementary to the existing structures on the property, an example of which can be seen in Figure 1. These materials include masonry, concrete, metal, vinyl, finished plastic lumber and plantings that can form a continuous hedge. Some ordinances identified wood and chain link — with specification for vinyl or wooden slats — as acceptable materials for enclosure construction, while others advised against or prohibit these materials. Floors were to be of a durable, impermeable surface capable of supporting full receptacles and collection trucks during time of service.

**Figure 1:** Design matching existing structure on property



Fire code requires collection areas to be made of concrete masonry unit or Type I or II fire-resistive construction. Type I fire resistive construction is usually for high-rise buildings 75 feet or taller — sometimes classified in buildings 35 to 55 feet tall — made of concrete or protected steel and constructed to keep fire contained in the point of origin for an extended period of time. Type II fire resistive construction includes non-combustible walls, made with reinforced masonry or tilt slab, and roofs with metal structural members and decking. Lightweight concrete, foam, insulated membrane or a combination of materials usually cover these roofs.

### Gates

Most ordinances and guidelines required gates. Ordinances and guidelines specified that gates should be made of durable materials such as metal or have a metal frame and with hardware that would allow gates to be held in open and closed positions. Gates were to open a minimum of 110 degrees and in an unobstructed path. See Figure 2 for an example of a collection area made with durable materials and with gate pins to keep the gates in closed position.

**Figure 2:** Gates with pins



### **Pads and aprons**

Ordinances and guidelines commonly included specifications of the collection area pad and apron. The apron is the area in front of the pad, between the pad and approach. The pad and apron should be made of concrete and similar aggregate materials that are four to eight inches thick and able to withstand between 20,000 to 60,000 pounds of force from full receptacles and collection trucks.

### **Damage prevention**

Measures were included to protect the collection area from collection service vehicles and other vehicles as well as the weight and movement of receptacles. These measures included buffers, bollards or wheel stops, in addition to using durable materials for walls. See figure 3 as an example of a collection area with bollards.

**Figure 3:** Bollards



## Service specifications

Many ordinances and guidelines had specifications for the approach — the path for service vehicles leading up to the collection area — which ranged between 40 to 75 feet in length and was to be constructed from concrete or other well-compacted surface.

There were also specifications for turning radiuses of service vehicles that generally ranged between 40 and 50 feet. Approaches were to be designed to minimize the backing up of service vehicles to the collection area. The maximum backing distance ranged from 40 feet to 150 feet. Trucks should not back into or across any public right-of-way. Some ordinances and guidelines mentioned horizontal clearance that ranged from 10 to 70 feet, depending on service trucks and receptacles.

Requirements for vertical clearance during service, above the approach and collection area, included no obstructions, such as overhead wires and low hanging trees, and ranged from 14 to 32 feet in clearance.

## Other collection area specifications

The following design elements and other collection area ordinance or guideline attributes were not as common.

### Wall, ceiling and roof specifications

Wall height ranged from at least six feet to a maximum of 10 feet. One standard required that the lowest part of the ceiling must be no less than 10.5 feet high. Roof specifications indicated to use rust inhibitive paint on roof surfaces, and be of a height to allow access to collectors and collection equipment as well as accommodate receptacles with fully open lids.

### Storm water management

Storm water management features required drains in the collection area connected to a sanitary sewer or other measures that prevented storm water from running on or off the collection area. Roofs were suggested or required to be sloped to allow water to run off to the side of the collection area and onto landscaping, as seen in Figure 4.

**Figure 4:** Sloped roof for storm water diversion and adjacent landscaping



### User standards

User standards specified collection areas to be located “conveniently.” Specifications included a maximum distance of 150 to 250 feet to multifamily units.

Additionally, specifications included a pedestrian gate or door other than the service gate, as can be seen in Figure 5. Specifications of the pedestrian gate or door included Americans with Disabilities Act compliance or a 36-inch pathway for pedestrians to and in front of the receptacles.

Specifications for lighting included a minimum of at least one candle-foot of light and motion-sensor lighting in the collection area and along the pathway to the collection area.

**Figure 5:** Separate pedestrian entrance



## **Signage**

Specifications included using signage to identify that the collection area was for garbage and recycling collection and identified the materials collected in each receptacle. Additionally, signage was used to prohibit parking that would block access to the collection area, prohibit illegal dumping and for proper flow of traffic around the collection area.

## **Ordinance exemptions and alternatives**

One variance described that if multifamily properties had individual collection receptacles or were without centralized, communal materials collection, collection area ordinances may not apply. Another exception included properties that do not generate a level of waste that would require receptacles that needed screening or receptacles are stored indoors. If the collection area would negatively affect parking-stall requirements or other existing constraints, standards would not apply.

If a property has unique physical limitations, an alternative collection area plan may be proposed.

## **Space allocation**

There was not a general standard among ordinances to determine the dimensions of collection areas. Generally, collection areas were to allow adequate space for receptacles to be moved and accessed by users and service personnel. Some ordinances and guidelines for multifamily properties provided a volume generated by unit or resident, as seen in Appendix A, Table 1. Another calculation determined area of the collection area based on number of units at a multifamily property as illustrated by Table 2. For commercial properties, some ordinances and guidelines determined the area by the gross floor area of all the existing structures on the property, as seen in Table 3.

## Appendix A

**Table 1:** Material volume generation by unit or resident

|   | Per every three residents              | Per unit                |
|---|--|-------------------------|
| Stopwaste.org — garbage, recyclables and organics | 50 gallons or 0.25 cubic yards (2:2:1) |                         |
| Fremont, Calif. — garbage                         |  | 0.33 cubic yards        |
| Fremont, Calif. — recycling                       |  | 0.33 cubic yards x 0.25 |
| Fremont, Calif. — organics                        |  | four gallons            |

**Table 2:** Multifamily collection area space allocation in square feet

|                     | Minimum square feet | Per unit | 2-8 units | 9-15 units | First 10 units | Every 10 units | 11 units and up                | 16-25 units | 26-50 units | 51-100 units                  | 100 or more units              |
|---------------------|---------------------|----------|-----------|------------|----------------|----------------|--------------------------------|-------------|-------------|-------------------------------|--------------------------------|
| Federal Way, Wash.  | 65                  | 1.5      |           |            |                |                |                                |             |             |                               |                                |
| Fort Collins, Colo. |                     |          |           |            | 100            |                | 100 + 5 for each unit over 100 |             |             |                               |                                |
| Seattle             |                     |          | 84        | 150        |                |                |                                | 225         | 375         | 375 + 4 for each unit over 50 | 575 + 4 for each unit over 100 |
| Sunnyvale, CA       |                     |          |           |            |                | 12.5 x 9 min.  |                                |             |             |                               |                                |

**Table 3:** Commercial space allocation for collection area in square feet

| Gross floor area of all structures on lot (square feet) |    | 1-5,000 |     | Per 1,000               |     | 5,001-15,000 |     | First 10,000 | Additional 1,000 | 15,001-50,000 | 50,001-100,000 | 100,001-200,000 | 200,001 |
|---|----|---------|-----|-------------------------|-----|--------------|-----|--------------|------------------|---------------|----------------|-----------------|---------|
| Federal Way, Wash.                                      |    |         |     | 3 (min. 65/ max. 1,000) |     |              |     |              |                  |               |                |                 |         |
| Fort Collins, Colo.                                     |    |         | 100 | 5                       |     |              |     |              |                  |               |                |                 |         |
| Seattle   | 82 | 125     |     |                         | 175 | 225          | 275 | 500          |                  |               |                |                 |         |

## Appendix B

### Ordinances and guidelines available online

- [Boise, Idaho](#)
- [Chaska, Minn.](#)
- [Clackamas County, Ore.](#)
- [Dublin, Calif.](#)
- [Durham, N.C.](#)
- [Farmersville, Calif](#)
- [Federal Way, Wash.](#)
- Fort Collins, Colo. [ordinance](#) and [guidelines](#)
- [Fremont, Calif.](#)
- [Frisco, Texas](#)
- [Hollywood, Fla.](#)
- [McMinnville, Ore.](#)
- [North Central Texas Council of Governments](#)
- [Olympia, Wash.](#)
- [San Leandro, Calif.](#)
- [Santa Barbara, Calif.](#)
- [Seattle](#)
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- [Stopwaste.org](#)
- [Sunnyvale, Calif](#)
- [Tucson, Ariz.](#)
- [Washington County, Ore.](#)