SPACE ALLOCATION GUIDE FOR TRASH AND RECYCLING

For New Commercial Construction and Remodel

City of Santa Barbara
Department of Public Works
Environmental Services
564-5587 • www.sbrecycles.org

These guidelines provide information and resources for designing trash and recycling sites that will be used by building occupants in new developments or significant remodels. Conventional recycling and green waste recycling must be designed into the site along with the trash capacity. Assembly Bill 1327, *The California Solid Waste Reuse and Recycling Access Act of 1991* requires new commercial and multi-family developments of 5 units or more, or improvements that add 30% or more to the existing floor area to include adequate, accessible, and convenient areas for collecting and loading recyclable materials.

In this document, the term *waste* refers to discarded materials that may be either recyclable, trash, or a mix of both. Waste disposal and recycling must be well planned in conjunction with the City and the waste hauler. This is especially true of large sites with centralized waste storage areas.

This booklet consists of five sections and two appendices. Section 1 describes the waste services offered in the City. Section 2 provides information on how to design waste enclosures and where to place them. Section 3 details a step by step procedure on how to estimate waste volume and size containers. Section 4 presents a brief list of common practices that don't work well. Section 5 provides a contact list of City personnel and waste haulers that can help with waste storage design issues. Appendix A is a very detailed guide that presents all design considerations, measurements, and clearances needed for enclosures. Appendix B provides data to help estimate waste production.

Section 1: Trash, Recycling, and Green Waste Collection: How it Works

32 Gallon Can

City-contracted franchise waste haulers provide collection service for trash, recycling, and green waste in separate containers. The City is divided into two zones with MarBorg servicing areas North and East of State St, and BFI servicing the area South and West of State St.

Customers can have cans, carts, dumpsters, and rolloff boxes for all materials, and compactors for trash or recycling. The waste hauler will provide all containers except 32 gallon trash cans and 6 yd^3 dumpsters. . For smaller customers who want cans or carts, cans take up more space than carts, but will be serviced from their daily location. Carts can store more material in a smaller space but must be placed on the curb. For larger customers, waste haulers provide separate 1.5 (MarBorg only), 2, 3, and 4 yd^3 front loading dumpsters for trash, recycling, or green waste. Customers may buy their own dumpsters to save on rental fees Waste haulers can also provide rolloffs for trash, recycling, or green waste. Compactor service is available for both trash

95, 64, and 32 Gallon Carts

2yd3 Trash Dumpster

4yd^3 Recycling Dumpster

Dumpsters for trash and recycling *for multi-unit or business service* can be emptied from 1 to 6 times per week. Trash cans or carts can be emptied 3 times per week, and recycling or green waste cans or carts can be emptied 1 time per week.

Multi-Unit Complexes

Condos, apartments, and town homes must have 128 gallons of trash (4 cans) per week to get multi-unit service. Complexes that need less trash service must have *single family* trash service, and trash, recycling, and green waste pickup is limited to once per week. On *multi-unit servic,e* all trash containers within the complex must be picked up with the same frequency, and all recycling and green waste containers will be picked up once per week.

Section 2: Waste Storage and Enclosure Design and Location

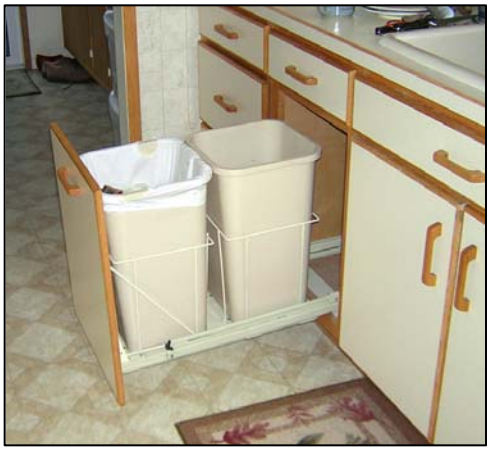
This section contains information for designing the appropriate waste system for the project, but the best resource for trash and recycling design are the waste haulers (MarBorg and BFI). They can estimate the amount of capacity required, will evaluate the placement of the containers, and can spot design flaws in the enclosure or waste management system. Consult with the hauler early in the project to design the waste management system or even for just the placement of dumpsters.

Trash and recycling capacity should be equal in terms of volume both indoors and outdoors. They must be located side by side in the enclosures or in the same central storage area. Changing proportions of trash and recycling in time can be accommodated by adjusting the frequency of collection. For example: a business may have an enclosure that contains two 4 yd^3 dumpsters, one for trash and one for recycling. Initially, the trash dumpster is emptied twice per week, so that the totally trash volume is 8 yd^3/week. The recycling dumpster is emptied once per week for a total volume of 4 yd^3/week. When the occupants start to recycle more and produce less trash, the manager switches the pickup to twice per week for recycling, and once a week for trash.

For businesses and multi-unit complexes, locate green waste bins away from trash and recycling to prevent contamination by the occupants. Since the green waste bins will only be used by the landscaper, they don't have to be as convenient as trash and recycling. If possible, consider composting the green waste onsite. To save space at multi-unit residential complexes, use the Conditions, Covenants & Restrictions (CC&R) document to require the landscaper to haul green waste offsite to a recycling location. The use of mulching mowers is recommended for all sites with lawns. These mowers will dramatically reduce the need (and cost) for green waste hauling or bins by grinding grass clippings and broadcasting them back on the lawn.

Indoor Collection

Collection containers for trash and recycling should be located side by side. If they are separated, people tend to put all the waste in the closest container. Allocate adequate indoor space for recycling to be located next to trash in kitchens. When chutes are used, locate trash and recycling chutes side by side.



Kitchen Recycling and Trash

Multiple or Single Shared Waste Enclosure Design and Location(s)

Trash enclosures containing cans, carts, or dumpsters are appropriate for locations where the occupants will be taking their own trash and recycling to the site and placing it in the shared containers themselves. Commercial and multi-unit residential trash and recycling containers stored outdoors must be in enclosures. This applies to single cans as well as multiple dumpsters. The enclosure site must be owned, leased or rented by the building occupants.

Businesses do not have the right to place waste in the public right of way, parking lots, or on private property. Check the lease terms to ensure that the proposed waste site is included in the lease. Businesses may share dumpsters or enclosures with other businesses, but must work out a written agreement before submitting plans. See Appendix A for *Enclosure Design Guidelines* for size and layout information. Businesses that will use dumpsters must design the enclosure for 4yd^3 containers. The tenants may choose any dumpster size they need, but the enclosure must be able to accommodate different tenants with varying waste production. Downsizing existing waste sites will only be allowed in special circumstances.

Enclosure with Pedestrian Gate

In residential complexes, enclosures should have a pedestrian gate that does not

necessitate opening of large gates used for servicing containers. Seniors, children, and people with disabilities may not be able to open the service gates. For senior complexes where residents take out their own trash, the recommended maximum dumpster size is 2 cubic yards. Larger dumpsters are more space efficient, but require users to lift bags above shoulder height with one hand while lifting the lid with the other hand. This may be difficult or impossible for seniors or disabled people.

Commercial waste enclosures should be a *maximum* distance of 250' from the nearest point of the building served. For senior residential complexes where occupants empty their own trash and recycling, 150' *maximum* is recommended. The path of travel from building to dumpster should be free of stairs, textured surfacing, and other impediments. Although office waste is usually emptied by janitors at the end of the day, food serving businesses and others can empty trash or transport recyclable boxes 6 or more times all throughout the day. Long distances may affect productivity and worker safety after dark.

Individual Enclosures for Multi-Unit Residential

If each tenant will have their own trash and recycling containers in garages, carports, or small enclosures, system design may be more complicated.

<u>All units have the same number of bedrooms</u>:
This case is simple. Each enclosure will be the same size, and the containers will be collected on the same frequency with multi-unit trash service.

<u>Units have different number of bedrooms:</u>
If the complex desires multi-unit service, then the units with more bedrooms must have larger carts since all containers on multi-unit service must be picked up with the same frequency. Alternatively, each unit can have a separate single family account, but this is the more expensive option.

Centralized Waste Storage Sites for High Volume Generators

One large, central area for waste is only appropriate for developments or institutions that have dedicated janitorial staff to move waste from every tenant or occupant to the site. Compaction and baling equipment can work well for a large operation with trained staff for waste collection and disposal, but may not be suitable for complexes with different tenants that take out their own trash and recycling. Keep in mind that each tenant will have to operate the compactor or baler, have a key to the system, and use it safely. High turnover in food serving businesses may make it impossible to effectively train personnel. If trash is centralized, locate recycling in the same area.

Large complexes that are using a compactor for trash should consider similar compactors or balers for recycling. Cardboard balers can dramatically reduce the space required for recycling, but be sure to locate the baler where a large truck can pickup the bales. You may need a storage area for the bales to meet hauler minimums for transport. Allocate space for pallets as well.

Questions to consider when designing centralized waste sites:

- What container will the tenant use to transport the trash or recycling to the site? Trash bags may leak smelly trash juice the entire distance from the restaurant to the disposal and recycling site.
- Is it practical to haul large quantities of cardboard to the site?
- For businesses that haul trash after dark, is the transport path safe for a lone worker?
- If a wheeled container is used to move waste to the site, is the entire transport path free of texturing, stairs, and other impediments? Where will the tenants store the transport container?
- Does the waste route run through an area that might be inappropriate during the day such as a public courtyard or a restricted access area?

High volume systems or ones that include compaction should be planned in conjunction with the waste or recycling hauler and City Solid Waste Personnel.

For centralized disposal sites, consider how the tenants will transport trash from their business to the site. Long distances from businesses to the trash site are discouraged, particularly when the business complex may contain food serving businesses or those that receive large deliveries. Food serving businesses may have to empty trash 6 or more times per day, and hauling trash long distances will affect their productivity and staffing. Some businesses receive large weekly deliveries that generate a massive amount of cardboard in a short period of time, and it may be very difficult to haul this long distances. Not all businesses can restrict trash and recycling disposal to after business hours, so consider the path that the waste must travel during the day.

Centralized waste systems require more planning and management that simple dumpsters behind buildings. Design the system from the point of generation to the storage location. Map out the route that trash and recycling must travel so you can see if it is feasible.

Section 3: Determining Waste Volume and Sizing Containers

Builders are free to use any method to determine the amount of waste capacity needed, as long as equal space is allocated for trash and recycling.

Simple Method: Ask the waste hauler for an estimate or use the *County of Ventura Space Allocation Guidelines* in Appendix B.

Calculation Method:

1. **Decide if waste will be centralized or distributed among several enclosures**. Determine which types of tenants will occupy the site, and what type of trash management system is appropriate according to the guidelines in Section 2.

2. **Determine the number of enclosures needed**. Decide how far users can be expected to transport waste. Site enclosures at appropriate locations to conform to this maximum distance and tally the number required.

3. **Determine the total amount of waste that will be produced by the complex**. Use the City and County of Santa Barbara *Waste Generation Rates* in Appendix B. Determine the volume of total waste (trash and recycling) that will be produced by the entire complex in cubic yards per week. Be careful about using minimums in the City of Santa Barbara multi-unit residence data since you may end up with inadequate waste capacity.

4. **Calculate the waste volume in each enclosure**. Divide the total volume of waste produced by the complex by the number of enclosures you tallied in step 2 to figure out how much waste each enclosure will contain. (This calculation assumes that enclosures will be of equal size.)

5. **Determine the acceptable frequency of collection**. It is more cost effective and space efficient to have fewer dumpsters emptied more frequently, but frequent service in the early morning hours may be a quality of life issue in residential developments. Because the City has more mixed use developments and multi-unit residential next to commercial areas, frequent collection in the early morning hours may cause problems for nearby residents. Minimizing the space allocated to waste by designing for 6 days per week pickup is not recommended because it lacks flexibility for changes, miscalculations, or increases in waste as the tenants change, and annoys the neighbors.

   Customers with a higher weekend production of waste should note the there is no pickup on Sunday. Pick an acceptable maximum frequency and subtract one from this number for adjusted maximum frequency. This is your flexibility factor that will compensate for the fact that that tenants may not recycle quite enough, and may need to add an extra trash pickup each week. If you are uncertain about your predications for waste generation, subtract one more from your frequency to get the adjusted maximum frequency. This will allow for more generation of waste than predicted.

6. **Determine maximum container size**. Haulers offer dumpsters up to 4yd^3 in size. Commercial businesses or multi-unit complexes that use dumpsters for trash collection must use dumpsters for the collection of recyclables unless they apply for an exemption, and can prove that they will not regularly generate cardboard boxes.

   Business Development: Design for 4yd^3 dumpsters since waste production varies widely among different types of businesses and the composition of tenants may change over the lifespan of the development. Very small businesses might want carts or cans for waste, but they still must be in an enclosure.

Multi-Unit Residential: It is more cost effective and space efficient to have the largest dumpster possible, but you may decide to limit the size for multi-unit residential based upon accessibility considerations outlined in the preceeding section. Recommended maximum dumpster size is 3 yd^3 for non-senior development, and 2 yd^3 for seniors. Carts or carts may also be used, and can cause fewer problems for management and tenants.

7. **Determine number and size of containers in each enclosure.** Divide the waste volume in each enclosure by adjusted maximum frequency to get your load size.

FOR CARTS OR CANS:

Divide load size by 0.158 to get the number of 32 gallons cans. Note that you can substitute space-efficient carts for 2 and 3 cans. Half of the containers should be for recycling, and half for trash.

FOR DUMPSTERS:

If load size is four or less, divide it by two to get the size of each trash and recycling dumpster. If the load size is larger than 4, divide by the maximum dumpster size to get the number of dumpsters needed. If you don't have whole numbers, round up. Half of the dumpsters should be for recycling and half for trash. If you have an odd number, it is okay to dedicate more to trash than recycling. As long as the space is there, building occupants can lower the dumpster size and play with the frequency a bit to suit actual usage.

8. **Determine enclosure size.** After calculating the number and sizes of containers that must fit in the enclosure, use the *Enclosure Design Guidelines* in Appendix A to determine the enclosure size. Businesses with a load size of less than four must design enclosures for 4 yd^3 of recycling, and 4 yd^3 of trash unless there is an absolute and pre-existing space constraint. The enclosure is only slightly larger for the bigger containers and will allow for different types of tenants to have adequate capacity. The tenants can always choose smaller dumpsters to suit their actual generation.

Section 4: Situations to Avoid

There are many business recycling and trash sites within the City that function poorly and require near constant attention from business owners and City personnel. Beware of the following situations:

1) **Dumpster sharing**. When tenants pay their own trash bills, sharing dumpsters with other businesses rarely works well. When trash is paid by central management, tenants often lack the motivation to separate recyclables since they do not benefit economically. It is also difficult to ascertain who is responsible for dumping problems and recycling contamination.

2) **Lack of easements or provisions for waste storage.** Many building leases in older parts of town have no outdoor provision for trash or recycling storage. Do not assume that containers can placed outside the structure or that existing dumpsters can be used. Check the lease terms before remodeling and/or consult with the City Solid Waste Program.

3) **Recycling and trash in separate locations.** People will generally take all waste to the nearest container, regardless of its designation. Always place trash and recycling adjacent to each other.

4) **Mixing different container sizes or types.** Smaller dumpsters and carts are easier to access than larger dumpsters, and people may overload the smaller one rather than use them equally. Design for waste and recycling containers of approximately the same size, and adjust for different volumes by changing the frequency of collection.

5) **Exposed trash or recycling containers**. Legally, all outdoor commercial trash must be in enclosures. If the containers are not enclosed, the owner may be cited or required to build an enclosure.

Section 5: Contacts

City Solid Waste personnel and the franchise waste haulers will be happy to provide information or resources to help design adequate recycling and waste capacity into the project.

Construction phase and occupancy phase waste planning:
Karen Gumtow, City of Santa Barbara Solid Waste Specialist, 897-2542,
kgumtow@santabarbaraca.gov

Occupancy phase waste planning: (Westside)
John Kendall, BFI, 965-5248

Occupancy phase waste planning: (Eastside)
David Borgatello, MarBorg, 963-1852

Do you want to save money on construction or demolition debris disposal ? Pick up a copy of the City of Santa Barbara *Construction and Demolition Recycling Guide*.

Enclosure and Facility Design Guidelines for Recycling and Trash Removal Service

Front End Loading Containers

Enclosures:

A. Enclosures designed with at least 50% of space designated for recycling. This often requires two bins, one for recycling and one for trash.

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B. Dimensions vary based on projected usage. If multiple containers go in one enclosure, allow a minimum of 30" between containers. See Illustrations A - D.

C. Gates should be two inches off the ground and hung on the outside so that, when open, gates are out of the bin's way. Gates should be able to open more than 90° and should be equipped to prevent accidental swinging, which can result in injury to persons or equipment.

D. Hardware should be of sufficient strength to accommodate repetitive swinging, and individuals with gloves should be able to open them.

E. Lid ears and bin pockets will rub enclosure walls. Bin may also roll against the back of the enclosure. Wood or metal bumpers or interior curbs will significantly extend enclosure life. Bolts or screws should be inset on bumpers to avoid injury to collector or user.

F. Container should be on flat, level surface in enclosure and in position where driver dumps the container. Asphalt or dirt floor in enclosure may not hold up under heavy weight of loaded bin. Concrete is recommended.

Pads and Access Areas:

A. Maximum roll-out by collector is 25' from enclosure to truck.

B. Roll-out area should be level and free of dips and bumps.

C. Front-end loading trucks may weigh up to 25 tons when loaded. All access surfaces should be engineered accordingly to avoid future pavement damage. Concrete surfacing is recommended in all access and service areas. If cost prohibits total concrete surfacing, consider a service pad 105" wide and extending 13' in front of the enclosure. This will accommodate the front wheels of the vehicle while dumping, which is when the heaviest weight occurs. However, if the concrete service pad interfaces with an asphalt or other soft surface, the apron of the pad may eventually break down under the weight of the truck approaching the pad.

D. Allow for overhead obstructions. (See Illustration E)

E. Storm drain grills should not be placed in the driving path of the truck.

F. Approach and container location should be designed to minimize backing situations as much as possible.

G. Allow for parked cars, delivery trucks, etc.

Approximate Container Dimensions:

	Diameter (w/handles)		Height
32 gallon cans	25”		27”
	Width	**Depth**	**Height**
32 gallon carts	21”	23”	40”
64 gallon carts	27”	29”	41”
95 gallon carts	29”	34”	46”
1.5 cubic yard dumpster	81”	34”	41”
2 cubic yard dumpster	81”	40”	52”
3 cubic yard dumpster	81”	48”	60”
4 cubic yard dumpster	81”	55”	76”

Height is measured with the lids closed. Most enclosures are built only to a height about 8 to 10 inches higher than the dumpster since local ordinances require that lids remain closed at all time except when the container is being loaded or unloaded. When lids are raised, full height from the ground to the top of lids may extend to 120”.

One cubic yard = 6 standard 32 gallon garbage cans=2 large 95 gallon carts.

Twenty-foot clearance of overhead obstructions is necessary where the vehicle will lift and empty the container. Generally, the driver will move the container out away from the enclosure about 8 feet before dumping. See Illustration E.

If overhead obstructions exist, it is advisable to have Hauler review plans in order to avoid property damage.

Required Clearance for Front End Loading Vehicles:

Vertical (Approach and Exit)	15’ High
Vertical (When dumping bin)	22’ High
Lateral	15’ Wide
Turning Radius	(See Illustration F)

Roll Off Containers (Debris Boxes)

Container Placement:

This type of container is most frequently used at construction sites, but it is also designed for very high volume users.

A. Roll off containers may be placed directly behind a building where space is available at a loading dock to allow loading from above. See Illustration G.

B. Container should be on a level surface. If placed on an incline, roll-away protection is required. Hauler will provide on site inspections before final container placement.

C. In-street placement generally requires a minimum of two parking spaces plus room for the truck to maneuver while servicing. 65' minimum is required as shown in Illustration H.

D. Loading docks should be equipped with bumper pads or 8" high curbs to avoid undue dock damage from heavy container. Contact hauler before designing any guide rails for container.

E. In-street placement may require user to obtain a permit.

Required Clearances for Roll Off Vehicle:

Vertical (Approach and exit)	14' high
Vertical (Rails raised with bin)	25' high
Lateral	10' wide
Service Area Length Minimum	65' long

Container Dimensions:

	Length	Width	Approx.Height
10 to 12 cubic yard "Lowboy"	14'	8'	4'
(Lowboy used for concrete, dirt and other dense, heavy material)			
25 to 30 cubic yard Highside	18-22'	8'	6-8'
40 cubic yard Highside	22'	8'	8'

Compacting Units:

Compactors vary in size and the manufacturer should provide capacity and the dimensions. Contact hauler before installing compaction units. Contact in planning stages.

Illustration A: Front End Loading Container Enclosures

This illustration shows one, 4-yard recycling bin and one, 4-yard trash bin.

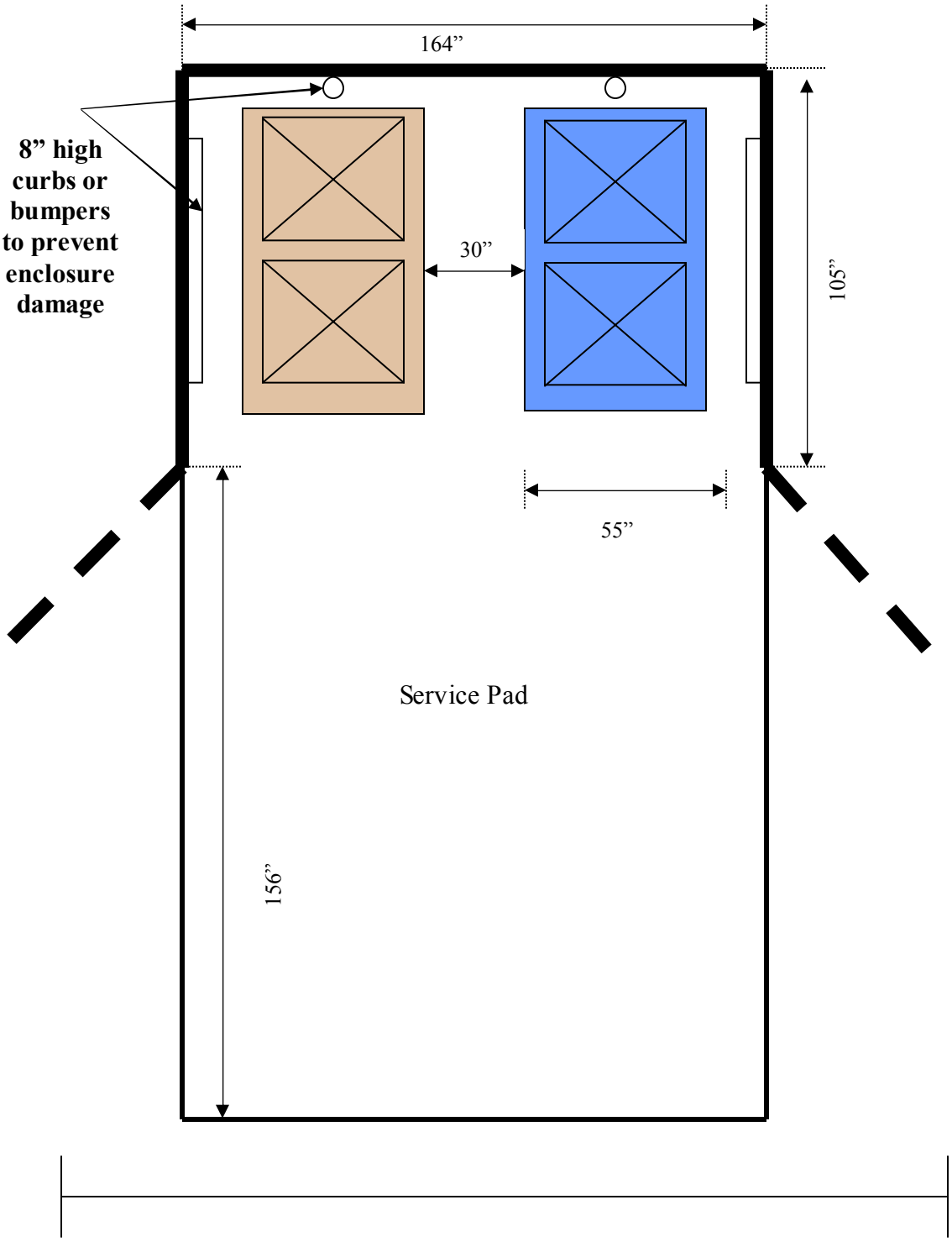


Illustration B: Front End Loading Container Enclosures

This illustration shows one, 3-yard recycling bin and one, 3-yard trash bin.

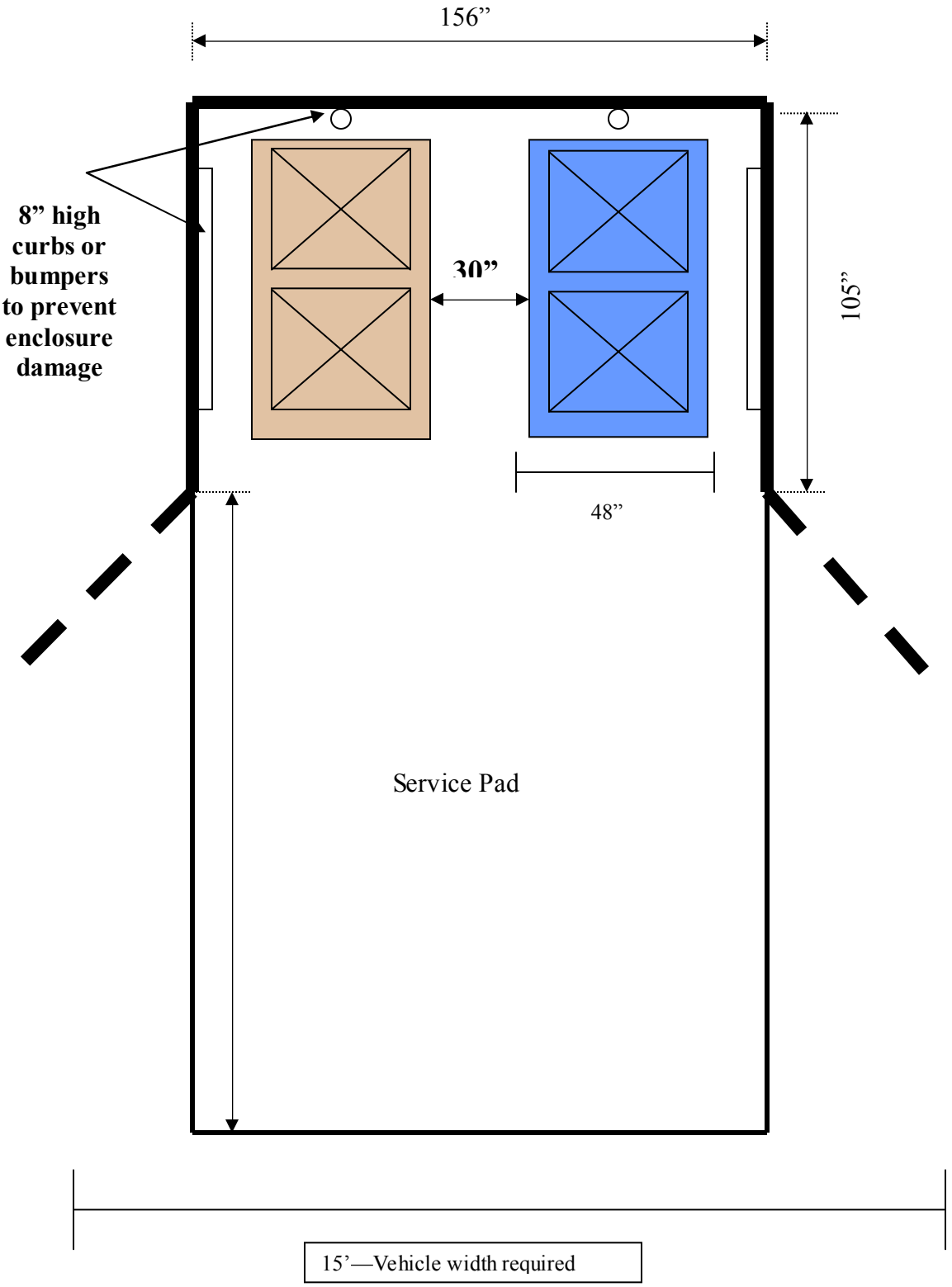


Illustration C: Front End Loading Containers

This illustration shows one, 2-yard recycling bin and one, 2-yard trash bin.

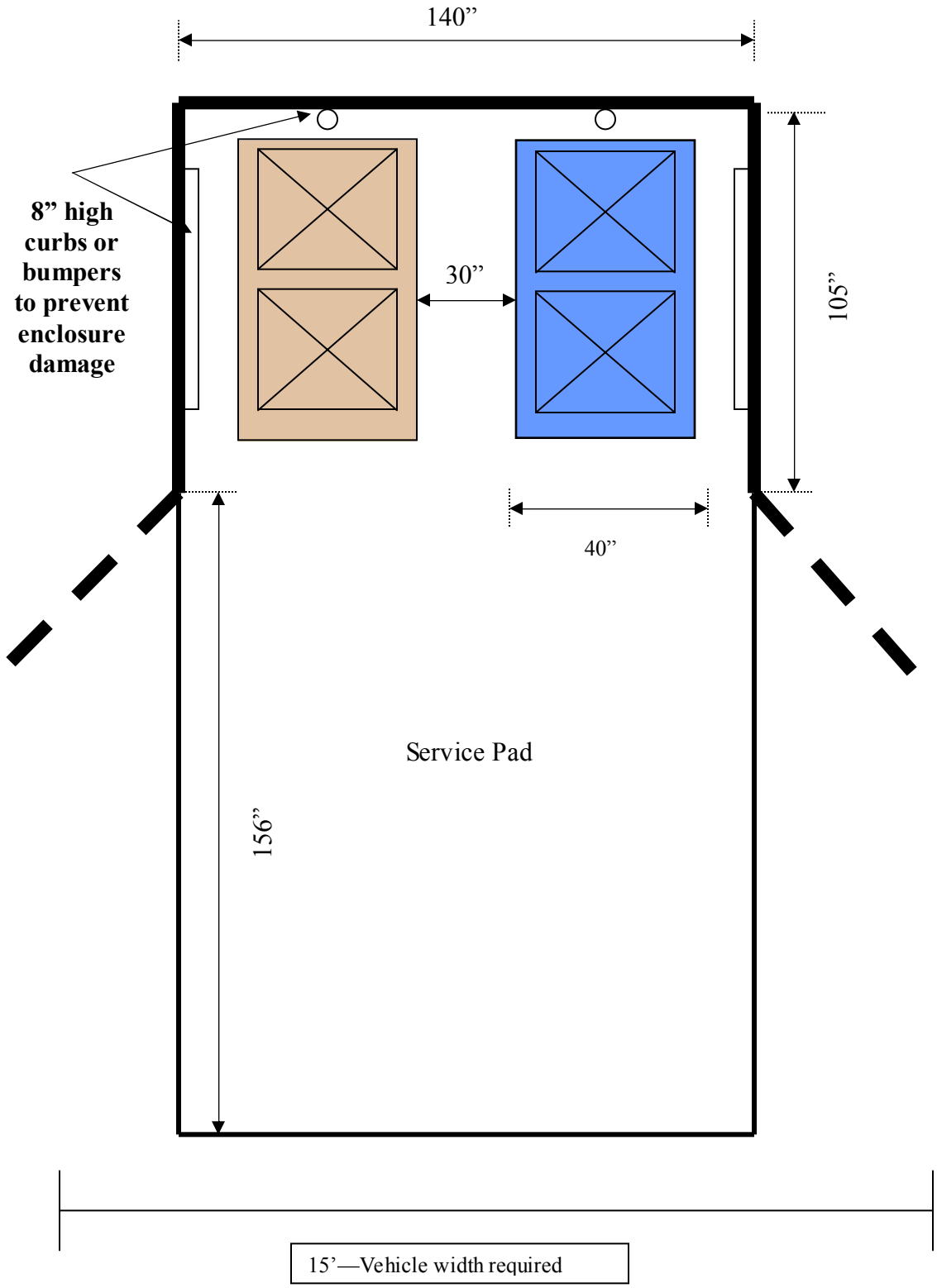


Illustration D: Front End Loading Containers

This illustration shows an alternative alignment for one, 4-yard recycling bin and one, 4- yard trash bin.

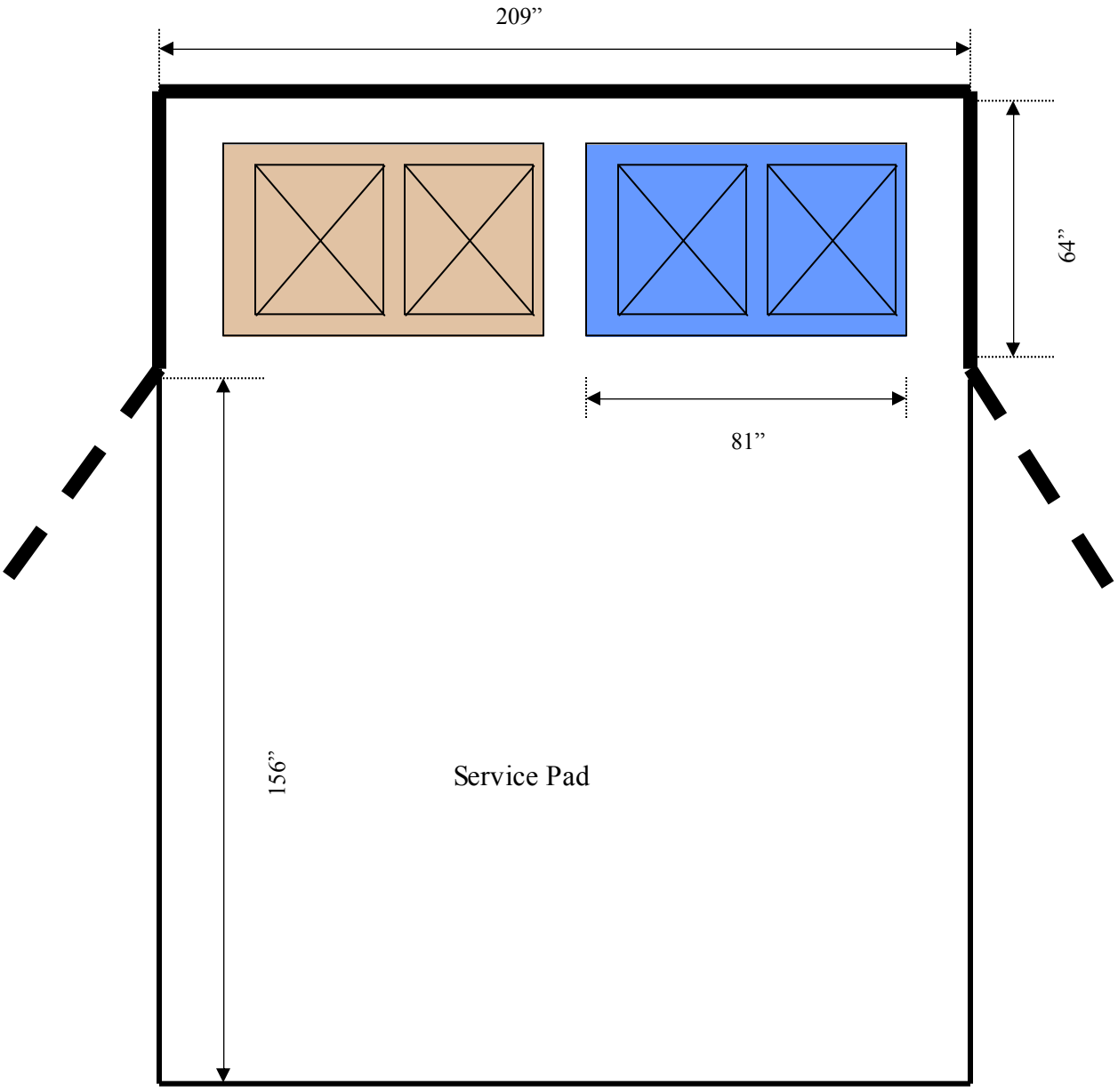


Illustration E: Clearance

Twenty-foot clearance of overhead obstructions is necessary where the vehicle will lift and empty the container. Generally, the driver will move the container out away from the enclosure about eight feet before dumping.

If overhead obstructions exist it is advisable to have the hauler review plans in order to avoid future property damage.

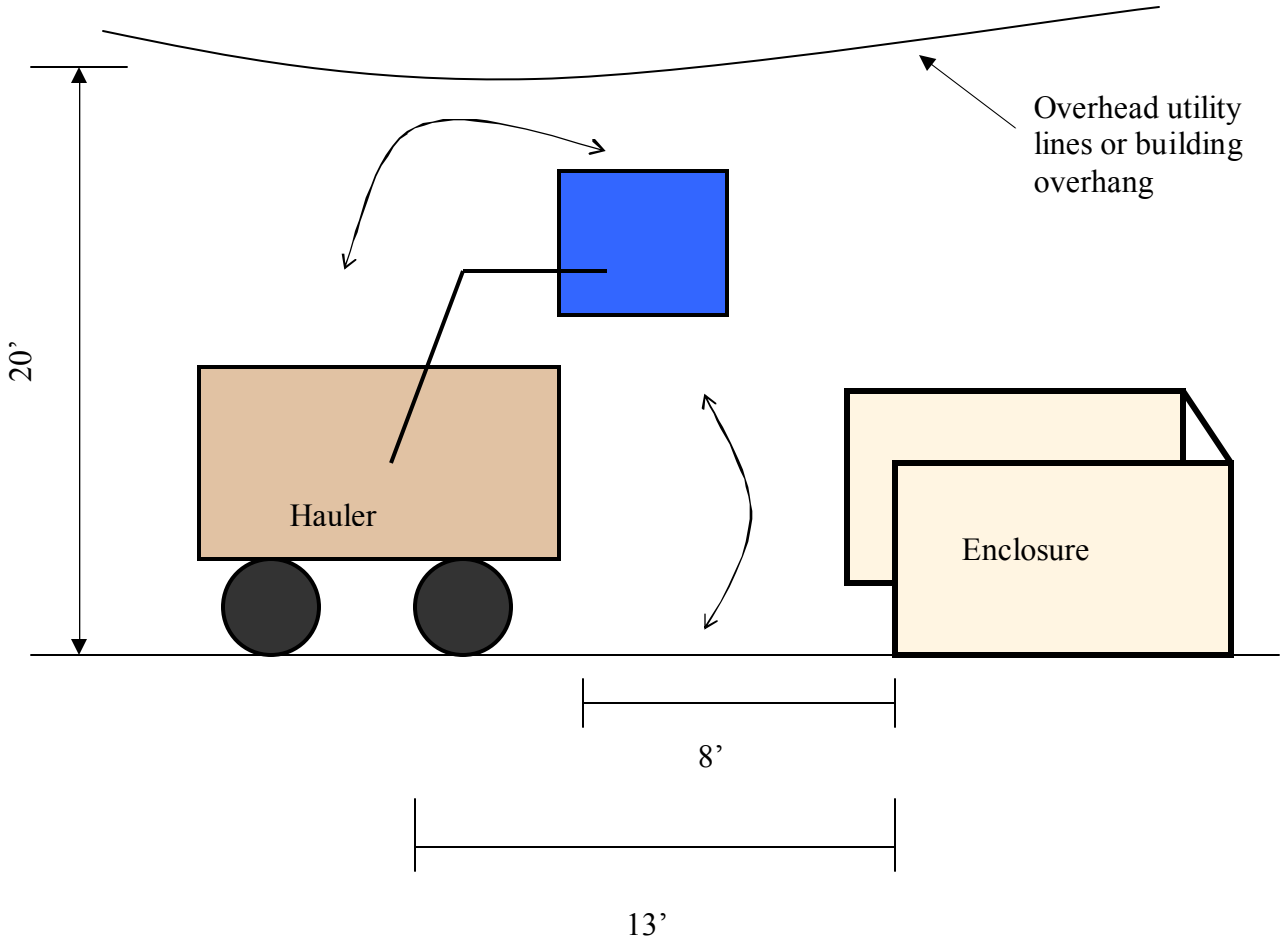


Illustration F: Facility Design

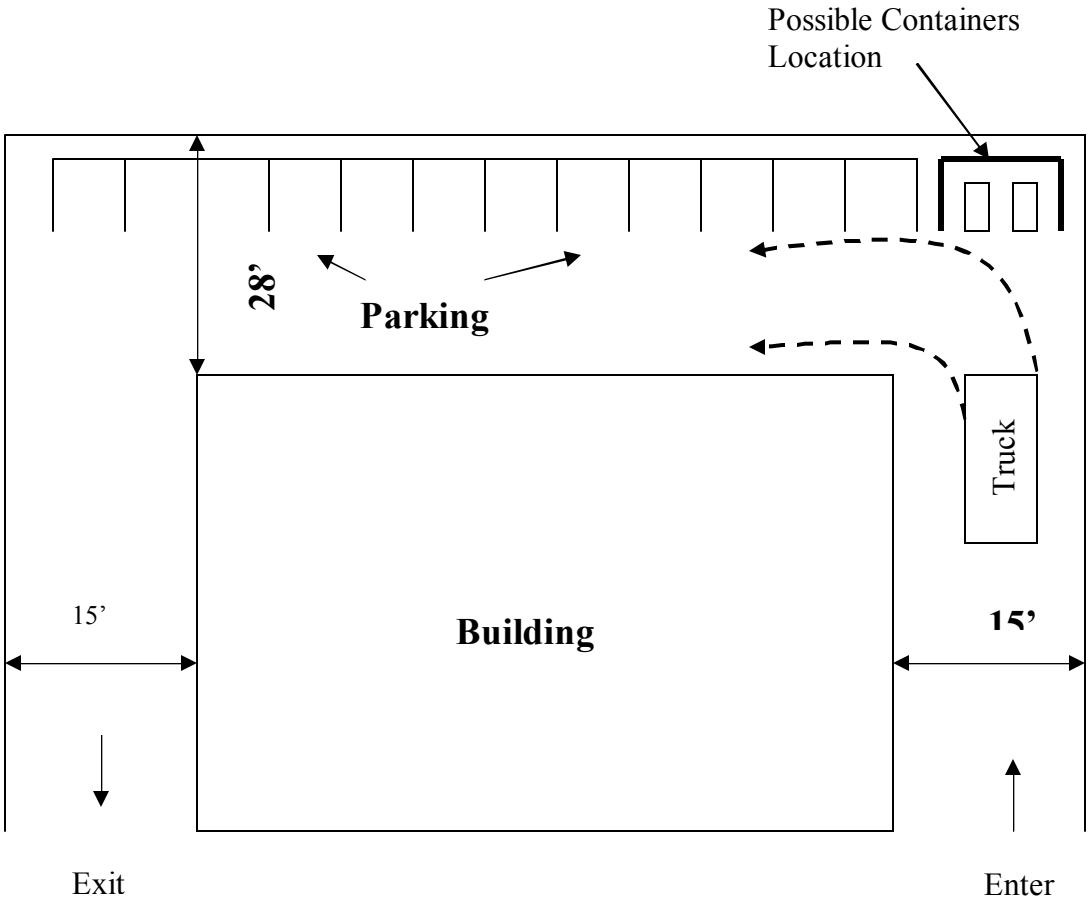


Illustration G: Roll-Off Container Placement

Allow 10’ wide access for driver to check the rear of the bin before loading onto vehicle.

This illustration depicts top-loading of container. Container gates are at rear of container (next to dock). If container is to be loaded from ground level, allow minimum of 5’ to open gates.

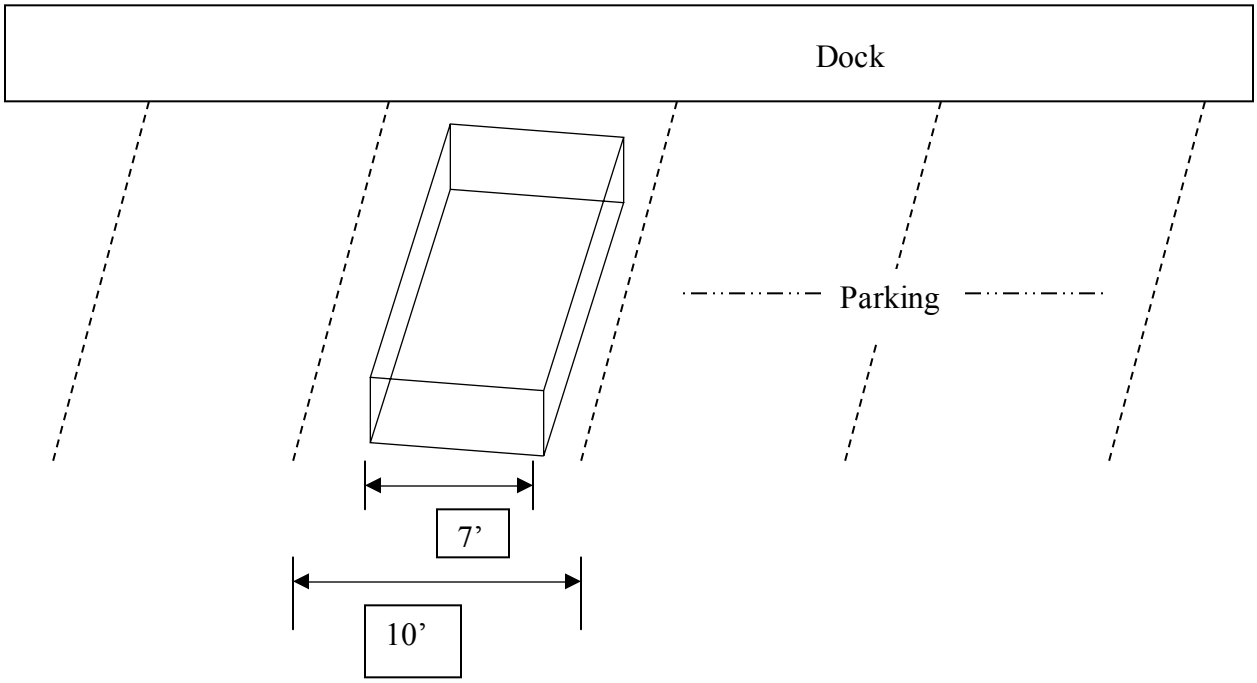
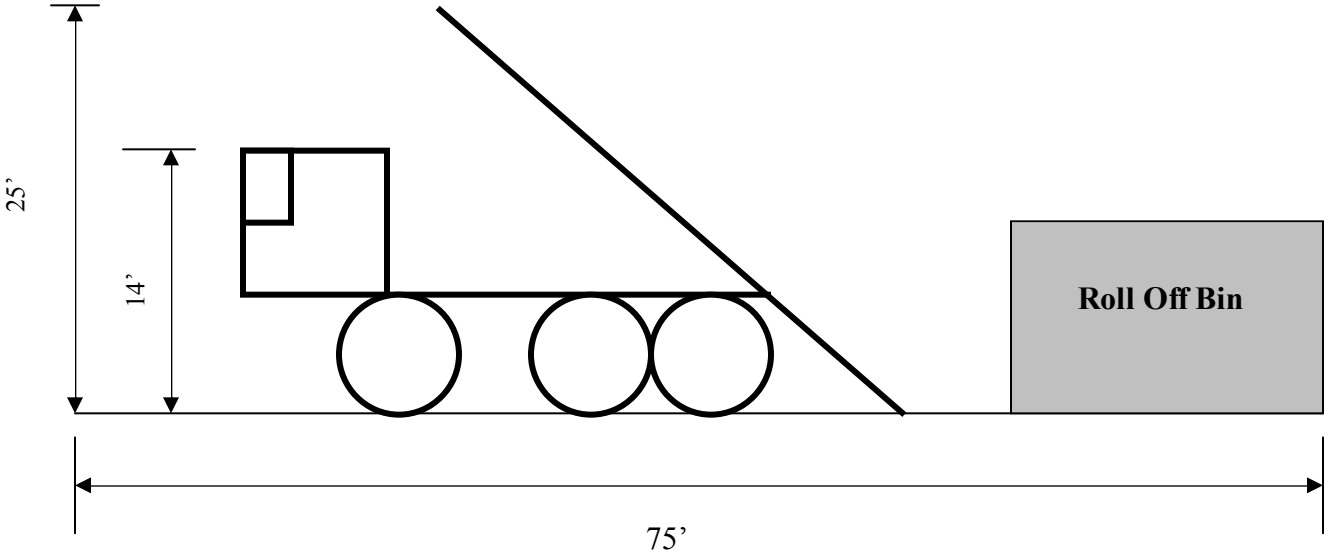


Illustration H: Roll-Off Container Placement

Allow minimum of 65’ to load/unload container safely. Truck rails may extend to 25’ high when servicing container.



Waste Generation Rates for Commercial Activities

The Information presented in this appendix is offered for information purposes only, and is not a City of Santa Barbara requirement. The City does not guarantee that the waste estimations will be accurate for a particular development, but has presented the best information available. If the builder knows precisely what types of tenants will occupy the space, and it will not change for the life of the building,, the County of Santa Barbara and City of Santa Barbara information is the most specific. If the development is mixed use or the tenants are not known, the Ventura County guidelines are more general and may be more appropriate.

County of Santa Barbara

The information in the first two columns of the table below is from *A Planner's Guide to Conditions of Approval and Mitigation Measures, County of Santa Barbara, 1998.* The information in the third column applies a conversion factor of 300lbs/yd3 to produce volume. This conversion factor is an average taken from several cities that have measured weight to volume relationships for commercial trash. Please note that the figures are for total waste generation that includes both potential trash and recycling.

ESTIMATED COMMERCIAL WASTE GENERATION RATES

Retail	Annual Generation Rate (tons)	Weekly Generation (yd^3)
Neighborhood Center (30,000-100,000 ft^2)	ft^2 x .0009	ft^2 x.00012
Regional shopping Center (100,000-300,000 ft^2)	ft^2 anchor x .0012 + ft^2 tenant x .0048	ft^2 x.00015 + ft^2 tenant x .00062
General Retail & Misc. Services	ft^2 x .0057	ft^2 x.00073
Eating and Drinking Establishment	ft^2 x .0115	ft^2 x.00147
Auto Dealer and Service Station	ft^2 x .0016	ft^2 x.00021
Hotel and Motel	# of rooms x .80	# of rooms x .10256
Warehouse	ft^2 x .0016	ft^2 x.00021
Health Services	ft^2 x .0013	ft^2 x.00017
Hospital	# of rooms x 1.90	ft^2 x.24359
Office	ft^2 x .0013	ft^2 x.00017
Educational Institutions	ft^2 x .0010	ft^2 x.00013
Transportation, Communication & Utilities	ft^2 x .0026	ft^2 x.00033
Manufacturing	ft^2 x .0026	ft^2 x.00033

City of Santa Barbara

The following information was compiled from multi-unit complexes in the City of Santa Barbara in 2004. This is the amount of trash and recycling service that is on site, and will vary according to how accurately the container size meets their needs, and how much they recycle

Complex	**# of bedrooms**	**Weekly Trash**		**Weekly Recycling**		**Weekly Total**	
		(yd^3/bdrm)	(32gal/bdrm)	(yd^3/bdrm)	(32gal/bdrm)	(yd^3/bdrm)	(32gal/bdrm)
Housing Authority-Seniors	498	.148	0.937	.057	0.361	.210	1.329
Housing Authority-General	975	.167	1.056	.043	0.272	.210	1.329
Sea Crest Apts.	46	.130	0.823	.041	0.259	.171	1.082
Villa Espana	66	.081	0.513	.048	0.304	.129	0.816
Villa Mesa Condos	42	.286	1.810	.038	0.241	.320	2.025
Eucalyptus Hill	34	.235	1.487	.013	0.082	.250	1.582
Weighted Average		**.161**	**1.019**	**.047**	**0.297**	**.208**	**1.316**

County of Ventura

The following information is from the County of Ventura *Space Allocation Guidelines*. Waste capacity needs predicted by Santa Barbara County are similar for Retail and Industrial, but the Office and General Commercial category in the Ventura table is higher than the Office category in the Santa Barbara County table. This is because the Ventura Office with General Commercial catagory allows for a wider variety of commercial businesses that may occupy the site.

Land Use	**Size/Scale**	**Minimum Space for Bins**
Multi Unit Residential	20 Units	Space for one $3yd^3$ refuse bin and one $3yd^3$ recycling bin
Office and General Commercial	20,000 ft^2	Space for one $3yd^3$ refuse bin and one $3yd^3$ recycling bin
Retail	8,000 ft^2	Space for one $3yd^3$ refuse bin and one $3yd^3$ recycling bin
Industrial	20,000 ft^2	Space for one $3yd^3$ refuse bin and one $3yd^3$ recycling bin