



City of Raleigh SOLID WASTE COLLECTION DESIGN MANUAL

Part 7, Chapter 2 of the Raleigh City Code

Version 2.1, January 14, 2005

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Introduction / Amendments to the Manual / Variations from Design Standards

The regulations and standards contained in this manual are intended to provide for adequate and coordinated development with necessary facilities to allow the efficient and effective provision of solid waste removal services by the City.

In the case where any requirement in the City Code conflicts with any regulation or standard presented in this manual, the City Code shall control.

Amendments to this manual may be made from time to time by action of the Solid Waste Services Director, after consultation with other City Departments. The Director shall make a reasonable effort to involve industry representatives in any such amendment, and shall provide reasonable notice to common users of this manual of its amendment. All amended versions shall be numbered and dated and shall be placed on file in the City Clerk's office.

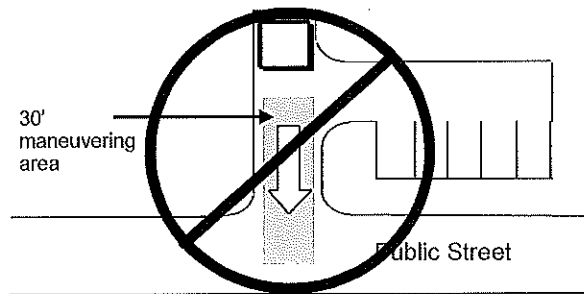
The Solid Waste Services Director, in consultation with other City departments, may allow modification to the design criteria set forth in this manual, subject to approval of the City Manager. Modifications may be necessary to allow for existing conditions or for unusual circumstances. Modifications to design criteria may be allowed provided that an investigation by the Solid Waste Services Director concludes that all of the following criteria can be satisfied:

- (1) The modification to the design criteria is based on sound collection practices and industry standards.
- (2) The modification will not create an unsafe or hazardous situation to occur.
- (3) The modification will be the equivalent of the standard in terms of efficiency of service, functionality, durability, and long term maintenance.
- (4) The modification to the design criteria will not adversely impact the ability of the City to provide efficient and effective solid waste collection services, nor will it adversely affect adjacent properties.

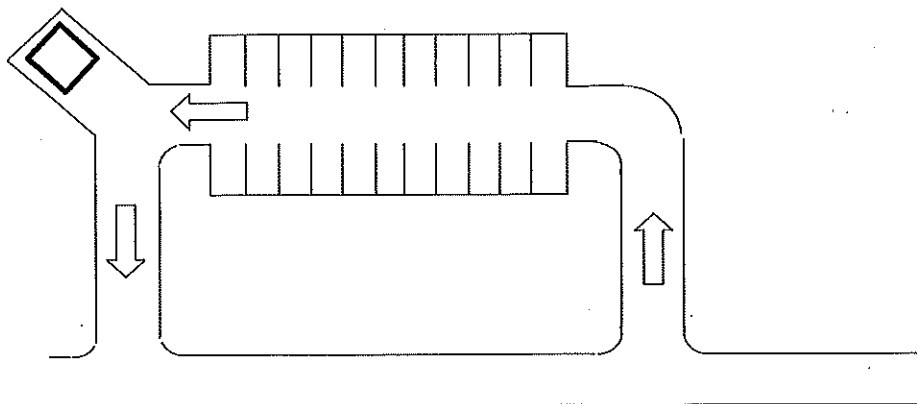
Section A. Access Standards

A-1. All parking areas to be directly accessed by solid waste collection vehicles must maintain all internal inside curb radii at a min. 30'. All parking lot aisles that will be traversed by solid waste collection vehicles must meet the residential street standard of 8" sub-base and 2.5" asphalt surface. Site plans must designate the ingress and egress routes for solid waste collection vehicles.

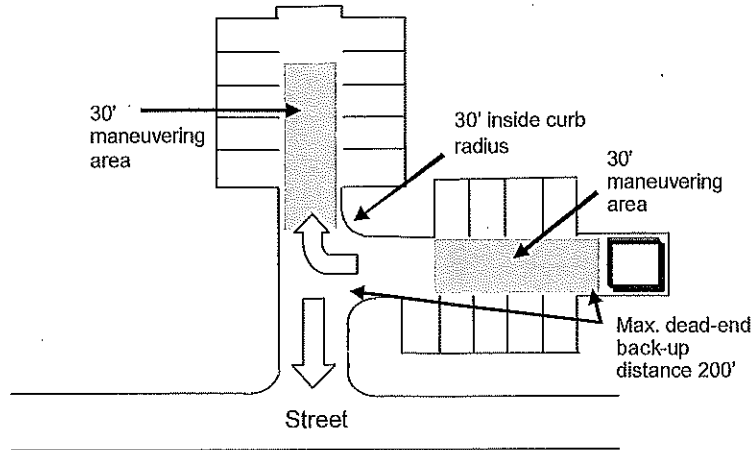
A-2. Access to collection devices must be by internal driveways and parking areas within a site. No collection device may be accessed directly from a public street, and no backing movement from an internal collection device may encroach into a public right of way. Exemption of this condition for properties within the Downtown Overlay District may be authorized in writing by the Solid Waste Services Director.



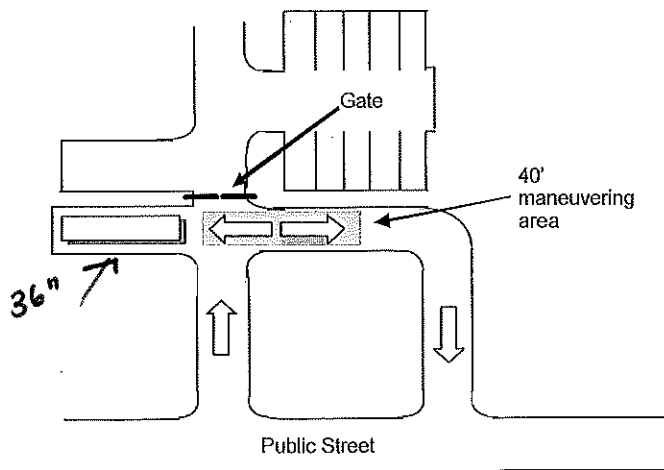
A-3. Parking areas must allow for a circular through movement wherever possible to avoid back-up movements.



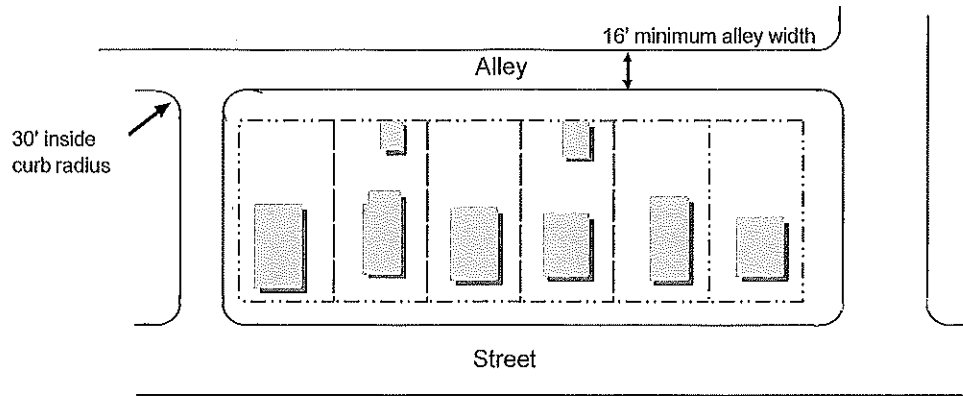
- A-4. Where a circular through movement is not possible, maneuvering space in front of any dumpster as noted in C-1 below must be provided (30' min.). Backup and turnaround space must be in an aisle with a minimum width of 16' and a depth of 30', and min. inside curb radius of 30'.



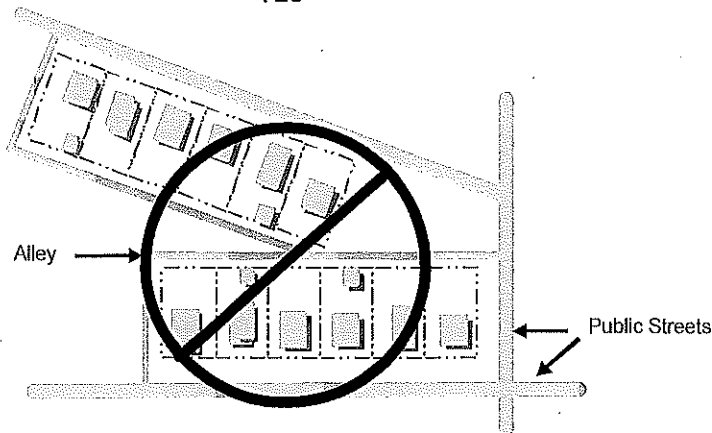
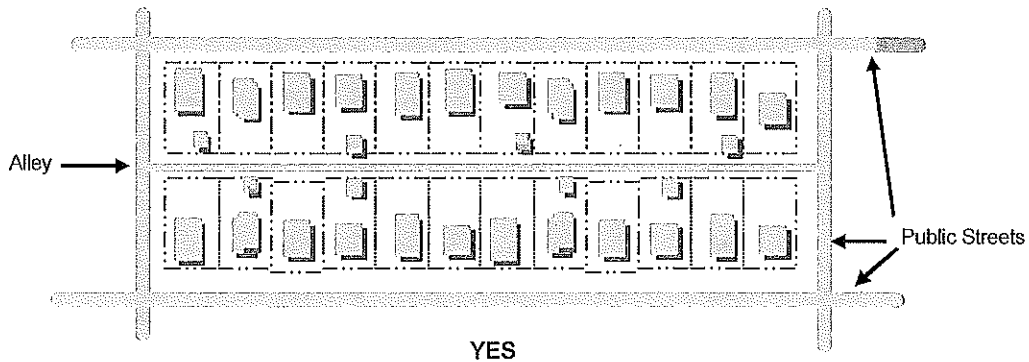
- A-5. Access to roll-off collection devices as noted in C-1 below shall provide 40 feet of clear maneuvering area from the end of the compactor. Access to roll-off device shall not be restricted by any private gate or door, except in accordance with C-5 below, and must meet the standards of A-2 above.



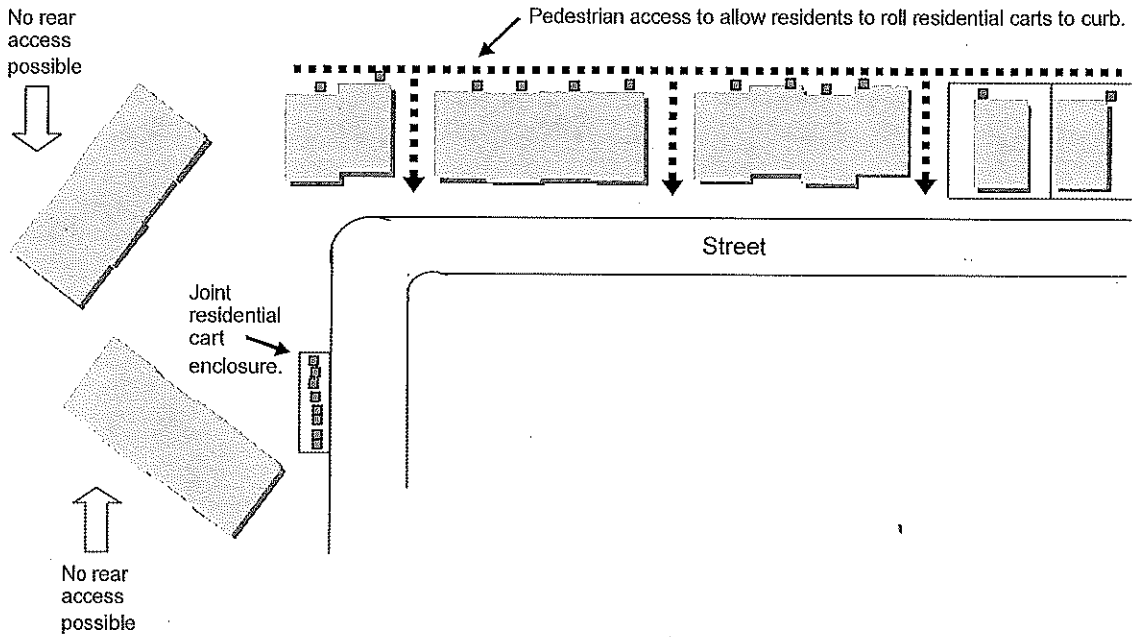
- A-6. Alleys used for solid waste collection vehicles that serve individual residential units must be a min. 16' in width. Inside curb radii must be min. 30'. All alleys to be traversed by solid waste collection vehicles must meet the residential street standard of 6" sub-base and 2.5" asphalt surface course.



- A-7. Alleys should extend through a block between public streets, and avoid 90-degree or acute angled turns.



A-8. Where a rear alley is not provided for solid waste vehicles, direct vehicular access to all small-lot or attached single-family homes (patio home, cluster home or townhome developments) for the purpose of collection of 96-gallon standard City residential solid waste carts must be provided. This access can be provided either (a) by a design that allows each unit occupant to roll the carts to the public or private street as is normal for residential pick-up (no obstructions or topographical features that would hamper the resident from rolling the cart to the curb - at least 3' horizontal clearance); (b) multiple 96-gallon standard City residential solid waste carts may be stored in a common area which is accessible directly to the public or private street; or (c) the development may provide for a common collection facility (dumpster) in accordance with Section C. below. Any design other than (a) (b) or (c) above must be approved by the Solid Waste Services Director.



B. General Limitations on Solid Waste Service*:

- B-1. A development consisting of detached single-family dwellings or attached single-family dwellings with a ground-level individual entrance for each unit (townhouse buildings, for example) or other multi-family developments of all types up to 6 units will be served utilizing standard 96-gallon city solid waste collection carts. All carts serving individual units are to be brought to the curb of the nearest public right-of-way or alley, or to the curb of an accessible private drive that meets circulation standards otherwise noted in this document, or may be utilized as described in (A-8.) above. All multi-family developments consisting of more than 6 attached dwellings, with common entrances for each building or with units arranged one atop the other in multiple stories (flats), must provide for a common collection facility in accordance with Section C. below, except as specifically authorized in writing by the Solid Waste Services Director.
- B-2. If the development is a Planned Development in accordance with City Code Section 10-2057, a solid waste collection plan can be proposed by the developer in lieu of the requirements noted herein, but any variance from the standard collection program must be approved in writing by the City's Solid Waste Services Director.
- B-3. Non-residential properties must be served by common collection facilities as noted in Section C., and refuse collection must be contracted with a private refuse hauler, with the following exceptions:
- Small businesses or offices located in an area that is primarily residential, may be allowed curbside collection service by the City, and curbside recycling service, provided that refuse generation in the building does not exceed 2 individual 96-gallon rollout refuse containers meeting the standards in C-1. below. These rollout refuse containers must be purchased from the City of Raleigh. Eligibility for this service will be determined on a case-by-case basis by the Solid Waste Services Director or designee. Businesses not meeting the above criteria will be required to locate or cooperate in locating a dumpster or roll-off compactor and cardboard recycling container as noted in Section C-1., and to contract with a private hauler to remove refuse.
 - Central Business District (code reference 7-2004(a)(3)b.) residential, commercial, office, entertainment, institutional, medical, educational, charitable and other non-industrial uses located in an area bounded by Peace Street, West Street, Cabarrus Street, Blount Street, Edenton Street and McDowell Street may request curb-side pickup of refuse by the City. Containers must be placed on the sidewalk by the curb between the hours of 3:00 -5:30 pm each day (NO EARLIER), and must be removed from the curb by no later than 9:30 am the following day.

(see map next page)

C. Collection Devices

C-1. Standard Refuse Containers shall meet the following standards:

Residential individual-unit refuse containers:

- Standard 96-gallon residential roll-out solid waste containers shall be provided by the City's Solid Waste Services Division for any new single-family detached dwelling unit or single-family townhome unit upon occupancy of the unit. Other containers may not be used.
- Maximum of two carts will be collected at any one location
- City will supply a 64 gallon cart in lieu of the 96-gallon standard cart upon request of the resident
- Residents may purchase one additional cart from the City.
- Collection will not be made for carts not provided by or purchased from the City



Non-residential individual business refuse containers:

- In special situations noted in B-3. above, individual containers may be approved by the Solid Waste Services Director for use by non-residential owners or tenants
- Standard 96-gallon roll-out containers must be purchased from the City for this use

Dumpster:

- Must have a capacity of 8 cubic yards without compacting, or
- A capacity of less than 8 cubic yards, but raised to the equivalent thereof with a detachable compactor operated between collections and removed prior to collection
- Must have a gross weight filled of less than 6000 lb.
- Must have features equivalent to a Dempster Dump Master brand container
- A minimum of 1 dumpster for every 25 units must be provided, unless otherwise approved by the Solid Waste Services Director
- No more than 9 containers shall be located within a single development
- If the number of dwelling units in a development requires more than 9 containers, a roll-off refuse container or containers as noted below is required

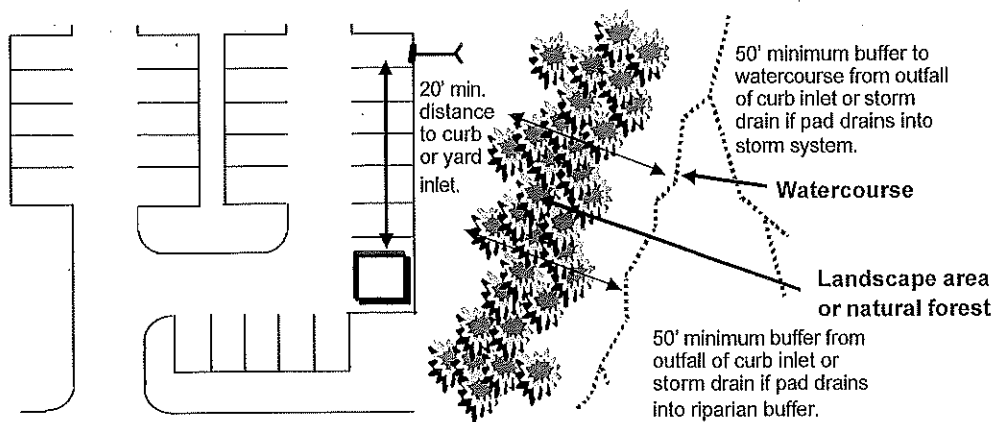
Roll-off Refuse Container

- Must have a capacity of no less than 35 cubic yards and no more than 46 cubic yards
- Must have features equivalent to a Dempster Dinosaur brand container of such volume

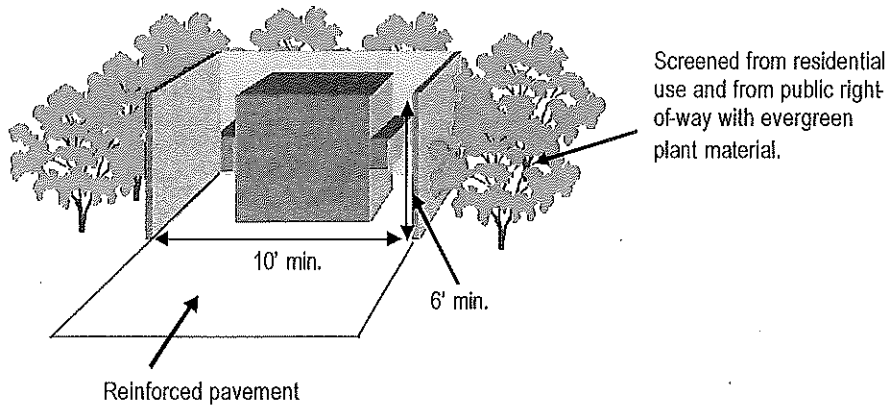
Cardboard Recycling Container

- The container should be a dumpster modified or manufactured as a cardboard container. The 8 cubic yard capacity is recommended.

- Cardboard recycling containers are required for non-residential developments except as may be varied on a case-by-case basis by the Solid Waste Services Director for commercial developments in primarily residential areas or in the downtown area as noted in Section B above. (Though a cardboard recycling facility is not required for residential developments it is strongly encouraged).
- C-2. Site plans for approval of all commercial developments must show a designated pad for a dumpster and cardboard recycling container of a standard size and construction as noted in C-6 below. This is true even if the building is to be served by individual refuse containers. The businesses noted in B-4 above are exempt from this requirement.
- C-3. Site plans for all multi-family or group housing developments that require a dumpster or compactor shall also show a designated pad for residential recycling facilities, which must be a minimum 8' deep x 12' wide and allow enough room for (6) 35-gallon containers. These areas must be screened and located in accordance with C-4, C-7 and C-8 below.
- C-4. Site plans for all single-family townhome developments must show how standard 96-gallon residential individual roll-out refuse containers will be stored and made available by residents at the curb, or a designated pad for dumpster or compactor and residential recycling facilities must be shown, or a specific alternate plan must be reviewed and approved in writing by the Solid Waste Services Director.
- C-5. Collection devices must not be located in any street yard, transitional protective yard or tree protection area required by Section 10-2082.5, 10-2082.9 or 10-2082.12 of the City Code, or in any open space area required by Section 10-2103(d) in group housing developments, or in any regulated floodway. Dumpster pads must be a min. 20' from any curb inlet or yard inlet for stormwater collection. The outfall of any stormwater pipe that drains the area where a dumpster pad is located must traverse a min. of 50' of vegetated area before reaching the bank of the watercourse itself. Where dumpster pads are adjacent to a watercourse and where stormwater drains in sheet flow directly into the watercourse, a minimum landscape area of 50 feet must be maintained between the pad and the bank of the watercourse.



- C-6. Commercial and residential developments may be exempted from C-2 above if they enter into a shared refuse collection facility agreement with a neighboring business. A copy of this agreement must be submitted as part of the site plan approval package, and must specify the location and maintenance responsibility for the shared facilities.
- C-7. Collection Device Pads must be a minimum 10' wide x 16' deep, and must be constructed of reinforced paving material, able to withstand 50,000 lb. load (6" concrete over 6" compacted stone on compacted soil). Areas 30' in front of the pads should also be reinforced to a pavement strength that will withstand the pressures of a 25 ton collection vehicle; 8" sub-base and 3" asphalt surface course or 8" reinforced concrete.
- C-8. Collection devices must not be placed in any area where they will block sidewalks, parking spaces or be located within public rights of way. They must be located in accordance with access standards noted in Sec. A above, and must be screened from view of the public right-of-way and from residential properties in accordance with C-8 below.
- C-9. Collection devices must be screened from view by means of a closed fence or wall at least 6 feet high, and consist of the same or compatible material and color of the principal structure on the property, or by a landscape screen consisting of evergreen plant materials which will reach a height of 6 feet or greater within 3 years, or by a combination of earth berm and plant materials that will collectively reach a height of 6 feet within 3 years. The minimum size of plant materials at the time of installation is 3 feet with no gap between plants greater than 4 feet (Code reference: 10-2082.8). The opening of any screening structure must be a min. 10' in width. If a gate is to be used on an enclosure structure, the gate must be opened prior to the collection time, and the gate doors must be able to be secured in an open position. Drivers of collection vehicles will not open or close enclosure doors.



- C-10. Overhead clearance for collection vehicles at the collection device is 32'.

