

11 82 13 – Solid Waste Bins

1. Introduction

A. This Construction and Design standard covers solid waste bins guidelines including equipment placement and access, pads, bollards, screening, drainage and lighting required for trash dumpsters, roll off containers and food bins. This document is to be used in conjunction with other related sections listed below:

11 82 26	Waste Compactors and Destructors
11 82 23	Recycling Equipment
A11 82 13	Solid Waste Bins Appendix

B. Design considerations for waste and recycling containers must be based on the building's usage and occupancy.

1. Site dimensions and configurations should be adjusted accordingly. Ideally, the recycling carts and dumpsters will be on the same pad in the same enclosure.
2. In some cases it is necessary for the dumpsters (or compactors) to be located on separate pads from the carts.
3. A variety of programs, i.e., animal bedding, grease, and food waste collection can also utilize these stations.
4. The Sanitation and Recycling Office should be contacted to help determine the number of solid waste bins needed, size and type of any additional equipment.

2. References

- A. This site [www.p2pays.org/food/main.oil.htm] provides information regarding fats, oils and grease (FOG) management in North Carolina.
- B. NC General Statute 130A-309.10(f).
- C. Durham County Regulations.
- D. University policy regarding hazardous materials.
- E. BWE Bakers Waste Equipment – Standard Colors For Waste Equipment.

3. Design Standards

- A. All buildings must have a trash dumpster or compactor.
- B. Trash Dumpsters
 1. Trash dumpsters must be accompanied by a unit for cardboard collection.

2. All food service dumpsters are required to have drains to a sanitary sewer.
3. The quantity, size, and type of dumpsters needed are dependent on the building use and size. When volume or special needs dictate a larger dumpster, compactors are recommended. These may be used for trash or cardboard.
4. Always try to use the largest container possible for the space while allowing for easy loading of materials by workers.
5. All dumpsters must meet or exceed these specifications.

C. Roll-off Containers

1. Theatres, art studios, and maintenance shops often produce bulky waste such as construction debris, pallets, scrap metal, etc. on a regular basis may include theatres (set striking debris) and maintenance shops (Athletics, Facilities Services, etc.) that cannot be collected in front load dumpsters. Open top roll-off containers must be sited in some instances.
2. Other areas utilize roll-off containers seasonally or temporarily for special events such as festivals, sporting events or student move-in and move-out.
3. Position the container pad such that the truck can back straight up to the compactor. To do this, take into consideration the turning radius, truck length, and angle of approach.

D. Food Bins

E. Placement and Access

1. Position the dumpster pad such that the truck can approach the containers head on. To do this, take into consideration the turning radius, truck length, and angle of approach.
2. Dumpsters are to be serviced by a front load truck.
3. If the design includes outdoor recycling bins, there must be a ramp at least 5' wide for access to the recycling containers.
4. All containers shall be located on an accessible path of travel per the ADA and State Building Code.

F. Pads

1. The pad for the standard outdoor service area must be at least 12' x 12' for a single dumpster, and 14' deep x 24' wide to accommodate both dumpsters and outdoor recycling bins.

2. Each pad is to include a 5' deep apron to support truck wheels. Slope pad such that water does not pool around dumpsters or carts.
3. The pad should be a minimum of 3,000 PSI concrete, with #4 bars at 12" on center each way, and 6" thick. Pour the pad on compacted earth with a minimum base of 4" ABC stone. These are minimum requirements.
4. Final structural design of the pad shall be based on project requirements.
5. Dumpster pads shall be designed to not allow any other surface drainage into sanitary sewer.

G. Bollards

1. Bollards are required for all dumpsters.
 - a. Use bollards at the wall entrances by the dumpsters to protect the walls from being hit by the service truck.
 - b. Use bollards behind the container to protect the walls from being hit by the dumpster.
2. Bollards are to be 6" in diameter and filled with concrete. These should be located 12" from the center of the bollard to the rear of the pad (or screen wall).
3. The bollards shall be 6' 6" in total length with at least 2' set in reinforced concrete.
4. Finish the bollards with one coat exterior metal primer, and two coats exterior safety yellow.

H. Screening

1. Where required, use enclosure walls to screen sites from public view with constructed elements and landscaping. An enclosure is required for all outdoor service areas unless exempted by the Architects Office.
2. The interior and exterior enclosure walls shall be determined by the University Architect or other appropriate person or office.
3. Match the exterior architectural finishes of the adjacent building(s).
4. Enclosure walls shall have weeps evenly spaced around the bottom edge to allow for drainage. The weeps and the grade of the floor shall direct the run-off into landscaped areas rather than onto concrete sidewalks and driveways.
5. The minimum recommended wall height to screen dumpsters is 7' and to screen carts is 4'.

6. Consideration should be given to maintaining visibility for vehicular and pedestrian safety issues.
7. Priority should be given to any power requirements or drainage needs of the units.
8. Do not install any piping equipment, utility walls or access hatches inside the outdoor service area enclosure.
9. All walls should meet current building codes.

I. Drainage

1. Do not locate grease pit/traps for cafeterias inside the outdoor service area enclosure.
2. Pipe drain into sanitary sewer system and provide an oil water separator system. Drain size should be consistent. Please consult DUES to finalize drain sizes.
3. The floor of the enclosure (or the pad) shall slope 1/8" per foot to allow rainwater and other liquids to drain off without puddling.
4. If a grease pit/trap is necessary for the building, it shall have an enclosure separate from the outdoor service areas enclosure. The two may share a common wall, but they shall have their own enclosure walls and separate entrances.

J. Lighting

1. Provide sufficient lighting per Section 26 56 29 – Site Lighting for the security of the personnel and campus community using the sight at night and during the early morning hours.
2. Provide adequate illumination per Section 26 56 29 – Site Lighting inside and outside the enclosure and on the normal routes to/from the adjacent building(s).
3. Solar power and motion and daylight sensors may be used.

K. Paint

1. All trash dumpsters are to be painted BWE Chocolate Brown (FN007).

4. Documentation and Review Requirements

- A. All equipment and receptor layout is to be submitted to the Sanitation and Recycling Office for approval. Contact the Sanitation and Recycling Office for assistance before ordering equipment to meet the needs for the specific building.
- B. It is important to review the plan carefully to ensure the collection of all bins, dumpsters, etc. can be accessed by the associated truck in the designed location.

5. Installation and Performance Requirements

- A. Containers ordered as part of a capital project are to be installed by the project. For containers purchased outside of a capital project please contact the Sanitation and Recycling Office to coordinate installation.

6. As-Built Requirements

- A. Locations for all equipment and bins should be noted on the as-built drawings along with their use and size.
- B. Any changes to the layout, pads, ramps, or drainage should all be noted on the as-built drawings.