Orange County Solid Waste Management
Waste Collection & Recycling Facilities Design Guidelines

I. General Purpose:

These guidelines shall serve as general guidance for the development of waste collection and recycling facilities at new and expanding development projects within Orange County. *Where projects are located within the Towns of Hillsborough, Chapel Hill, and Carrboro, Orange County Solid Waste (OCSW) staff will defer final decision on the means and methods of solid waste collection to the appropriate town.* However, Orange County staff will review and approve all recycling infrastructure prior to the approval of the required Solid Waste Management Plan. *Further, approval of the Solid Waste Management Plan by OCSW does not constitute the acceptance of the site for mixed recycling collection by OCSW.*

II. Solid Waste and Recycling Generation Rates:

Designer shall consider solid waste generation and recycling rates for the highest allowable use in each structure when allocating space for recycling and solid waste disposal. However, at a minimum, the following must be addressed:

1. **Solid Waste**:
   i. Roll carts may be allowed if 5 or fewer residential units
   ii. Bulk containers (dumpsters) required if more than 5 residential units and for all multi-family, commercial, retail, and institutional uses
2. **Corrugated Cardboard** (Is a regulated recyclable material and must be recycled):
   i. Dumpster or Compactor (provided and serviced by private contractor)
   ii. Alternative methods (including the use of the County's recycling drop-off sites) must be approved by OCSW
3. **Mixed Recyclables** (includes magazines, newspapers, office paper, glass, bottles and jars, aluminum/steel cans, plastic bottles, jugs, plastic cups and tubs (#2, #4, #5):
   i. Dumpster (if private collector) or 95 gallon carts (if collected by OCSW)
   ii. Single Family, Townhouse and Duplexes may be provided curbside service along streets constructed to public standards or at alternate locations with OCSW approval.
   iii. Alternative methods must be approved by OCSW
4. **Industry Specific Waste**:
   i. Food/Grease
   ii. Industry Specific Byproducts

III. Access to Solid Waste & Recycling Area:

Access to all collection sites must be via a hard-surfaced, heavy duty public roadway or private driveway constructed of concrete or bituminous asphalt.

1. In cases of communities with roadways not meeting public street design standards, private collection may be required in lieu of curbside collection.
2. For Multifamily (MF), Commercial, or Institutional sites, access must be via heavy duty pavement or a waiver of damage must be placed on the approved plans *("Orange County will not be responsible for any pavement damage that may result from service vehicles.")*
3. If food service is provided in the development proposal, the applicant must comply with Orange County Health Department's *Food Service Plan Submittals* guidelines which require provision for the on-site or off-site cleaning of garbage and food service recycling receptacles that contain food waste.
4. For MF residential projects, refuse and recycling containers/enclosures must be located on an ADA accessible pedestrian route.

5. Parking adjacent to the waste and recycling area(s) shall be designed to avoid blocking service areas and/or so as not to impede collection.
6. Shared access agreements may be allowed on a case by case basis as determined by OCSW and any such agreement shall be recorded with the Register of Deeds.
7. Where dumpsters are proposed to be placed at an angle to the centerline of the driveway or drive aisle, this angle shall not exceed 30 degrees.
8. Where dumpsters are proposed to be placed on sloped sites, the truck vehicle approach to the dumpster should be at the same slope as the dumpster and should not exceed 5%.
9. Bulk container (dumpster) collection vehicle requirements: Plan design must consider the County and its contractors' vehicle turning radii, height and width as listed below to allow access without unnecessary backing or maneuvering:
    - Vehicle length: 33'
    - Vehicle height (travel way clearance) to avoid overhead obstructions: 15'
    - Inside turn radius: 33'
    - Outside tire radius: 43'
    - Overhang radius: 45'
    - Maximum straight line backing distance: 100'
10. Recycling roll-cart collection vehicle requirements: Plan design must consider the County and its contractors' vehicle turning radii, height and width as listed below to allow access without unnecessary backing or maneuvering:
    - Vehicle length: 32'
    - Vehicle height (travel way clearance) to avoid overhead obstructions: 14'
    - Inside turn radius: 33'
    - Outside tire radius: 43'
    - Overhang radius: 45'
    - Maximum straight line backing distance: 100'

IV. Bulk Collection:

In multifamily, commercial and office/institutional uses, bulk collection of trash, corrugated cardboard and mixed recyclables is required and shall meet or exceed the following design standards:

1. **Dumpster Pad and Enclosure Design (See Detail on Last Page):**
   Dumpster pads shall be constructed of concrete with a minimum compressive strength of 5,000 psi. For a typical single dumpster the pad shall be 12'[1] wide and 20' deep. For two dumpsters the pad shall be 24' wide and a minimum of 20' deep. For all pads, the apron shall be a minimum of 8 inches thick. Two concrete filled 6" I.D. steel pipe bollards shall be installed 4' apart and 1' from the rear edge of the pad behind each dumpster to protect the adjacent screening materials. The bollards shall be set in concrete footings at a minimum depth of 2 ½ feet.
2. **Screening:**
   i. For projects located within incorporated town limits, applicant shall consult with the appropriate local planning department for specific screening requirements however for those projects located in unincorporated areas the following shall be minimum requirements:
      - All waste and recycling collection areas shall be screened from view by landscaping or via a constructed opaque fence constructed of wood, concrete, cinderblock or brick.
      - Screen height shall extend 1 foot above the top of the tallest dumpster, stationary compactor, or cart. If recycling carts are included in the design, the minimum height is 7'. For enclosures containing only recycling carts, the minimum height is 4'.

[1] 12' clearance must be exclusive of any gate retainers.

- A waiver of the screening requirement may be requested from the jurisdictional authority if the facility is located in such a manner as to effectively screen the area from all public streets and adjacent property, and which discourages illegal dumping.

3. **Joint/Shared Use Agreement** – OCSW may allow the use of shared refuse and/or recycling facilities on a case by case basis and any such approved agreement must be recorded with the Register of Deeds.
4. **Mixed Recycling Cart Configurations:**
   i. Design should include a minimum of 6 roll-carts per recycling site for mixed recyclables. Fewer or more carts may be appropriate as determined by OCSW at the time service is requested on a case by case basis depending upon the project's specific use.
   ii. Carts may be arranged in any manner so long as the front of each cart is accessible for deposit of materials and each cart can be removed individually for collection.
   iii. Carts may be placed inside the dumpster enclosure, on back, or side of enclosure, or may be in their own enclosure.
   iv. If carts are located behind dumpsters, allow additional space to allow the cart to pass between/around the dumpster, bollards and side of enclosure. It is recommended that a 4' aisle be provided.
   v. Cart width = 3' per cart, allowing for spacing between carts
   vi. Cart depth = 4'
   vii. Cart height = 4'
   viii. Access aisle clearance around the carts shall be at least 3' to allow for users to access the site and for staff to service the carts.
   ix. Access to the carts may be through a separate entrance or by walking around the dumpsters if there is sufficient room to do so.
   x. Carts may be located outside of the dumpster enclosure with approval of OCSW but in such cases the storage location must be approved and may require its own enclosure/screening.
   xi. Adequate lighting should be provided to reduce shadows and dark areas in and around the collection site for safety purposes.

V. <u>Mixed Recycling Collection Program Eligibility:</u>

1. Orange County Solid Waste Management may provide curbside mixed recycling collection to all single family residences within predetermined service areas outside of incorporated municipalities and to all single family dwellings accessed by public streets within incorporated municipalities. Town homes (in groups of no more than 6) and duplexes **may** also receive curbside collection if they are located along public right of ways and if it would be mutually beneficial to the County and developer.

2. Multifamily complexes may receive mixed recycling collection services under the OCSW Multifamily recycling program. Recycling site must conform to the standards above in Section 4 i. – xi. and be approved by the **Recycling Program Manager** prior to establishment of service.

3. Commercial, Industrial and Office/Institutional mixed recycling may be available from OCSW. Any new site must meet the standards above and be pre-approved by the OCSW Recycling Programs Manager.

4. If mixed recycling service for any project is available from OCSW and the developer elects to use a private collector (with prior approval by OCSW), the following note shall be placed on the plans in a prominent location:

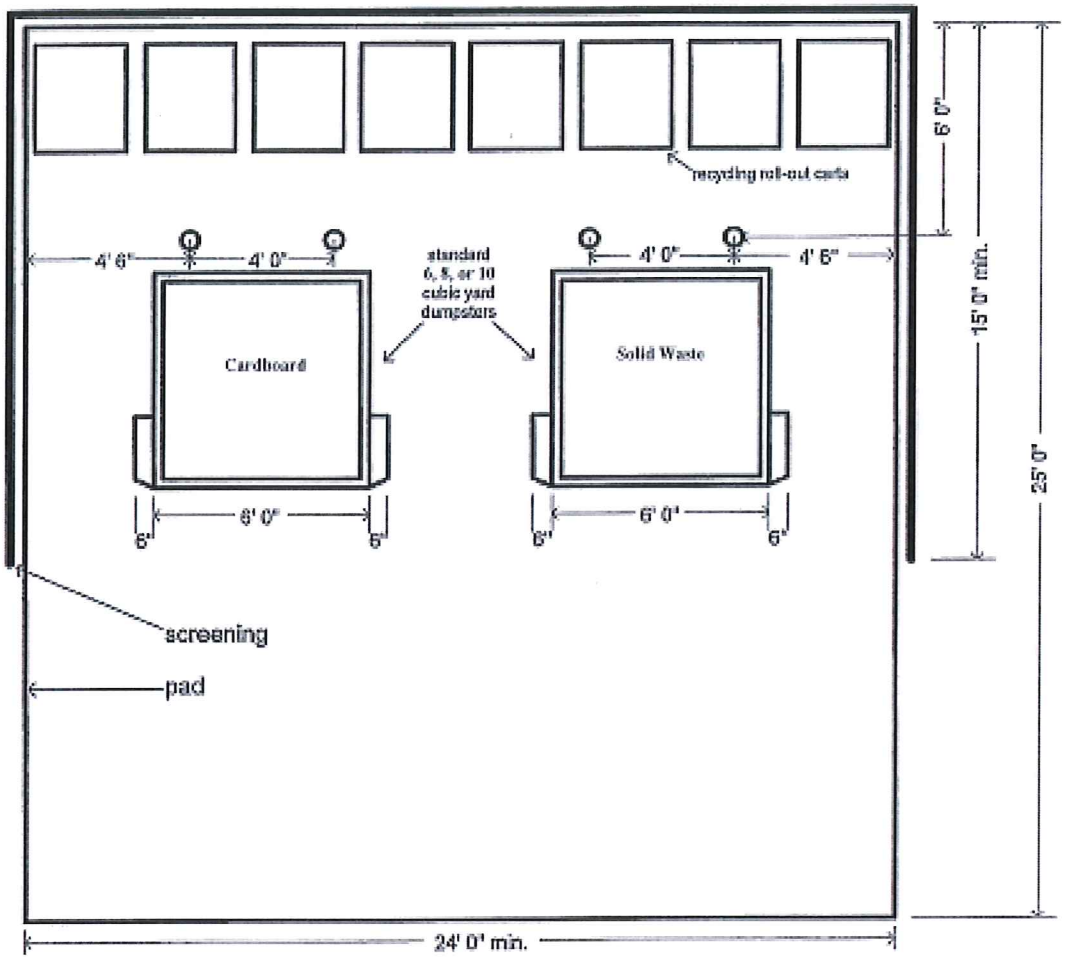
   Election to forego mixed public recycling:
   - Applicant elects to provide private mixed recycling service to this property in lieu of building a mixed recycling center constructed to OCSW specifications. The site will not receive public mixed recycling collection now or in the future unless such a mixed recycling center is constructed or contingency for such a center is included on development plans.
   - Applicant must require at least the same level of current and future mixed recycling service to its residents as that provided by OCSW.
   - County fees for mixed recycling collection and waste management associated with this property will not be waived.

VI. Standard OCSW Construction Notes:

1. The following standard notes shall be placed on the project plans in a prominent location:

   Construction Waste:
   - All existing structures 500 Square Feet and larger in size shall be assessed prior to demolition to ensure compliance with the County's Regulated Recyclable Materials Ordinance (RRMO) and to assess the potential for de-construction and/or the re-use of salvageable materials.
   - By Orange County Ordinance, clean wood waste, scrap metal, and corrugated cardboard present in construction or demolition waste must be recycled.
   - By Orange County Ordinance, all haulers of mixed construction and demolition waste that includes any regulated recyclable materials shall be licensed by Orange County.
   - Prior to any demolition or construction activity on the site the Applicant shall hold a pre-demolition/pre-construction conference with the Solid Waste staff. This may be the same pre-construction meeting held with other development/enforcement officials.
   - The presence of any asbestos containing materials ('ACM') and/or other hazardous materials in construction and demolition waste shall be handled in accordance with any and all local, state, and federal regulations and guidelines.

Orange County Solid Waste Management
Solid Waste & Recycling Storage Requirements



Dumpster Pad Design Requirements:

- Pads shall be constructed from concrete with a minimum compressive strength of 3,500 PSI.
- Pad and approach (measured 25' from back of pad) shall be a minimum of 8" thick.
- 2 concrete-filled 6" I.D. steel pipe bollards shall be placed as shown on the detail above and shall be set in concrete footings to a minimum depth of 2'.
- All pads shall be screened/enclosed on 3 sides (sides, back) and shall meet the requirements designated by the jurisdiction (as to materials, height).
- If gates are to be installed on the front, they shall be equipped with retainers to hold the gates in the open and closed position and shall be installed in such a manner as to provide a minimum clear opening width of 12' for each dumpster (exclusive of mounting hardware).
- Unless alternate arrangements have been made and approved for the recycling of corrugated cardboard, 1 dumpster shall be designated for corrugated cardboard and 1 for solid waste.
- The number of mixed-recyclable carts to be used shall be determined by the proposed use and as agreed upon at the time the formal request for service is made to Orange County Community Recycling by the owner/Applicant.
- For multifamily residential projects, it is reccomended that an entry gate be installed on one side of the enclosure to provide access to the recycling carts without having to open the front gates (if so equiped).

(7/14/15 JS)