**Checklist for Design Projects:**

What is the project?

What is being done to which building or area of campus? Perform a walkthrough to see the area being renovated; check the size of the location and how easy it will be to remove materials. Is there room for tilt trucks, or hand trucks, or will debris need to be carried out?

What type of waste will be created? How much can be recycled?

Are there reusable materials, or is everything to be discarded? Will the project create one main type of material, or will there be several disposal streams? Will there be any trash, or is everything recyclable?

Can materials be easily separated (either removed one at a time or placed in separate bins? ­

Is insulation attached to wood, metal, or sheetrock? Is wood attached to other materials? If separating materials will be time intensive, it may be easier to send out to a processor. If materials can be easily separated, is it possible to remove one type of material at a time (i.e. metal first, then wood), or are materials interconnected?

Is there space for multiple types of bins?

If there is trash to be disposed of, is there room for two containers?

**Goals:**

**Metal:** Recycle 75% of metal from demolition and renovation projects.

**Justification:** Metal is easily separated from other materials for recycling, and can easily be sold to recover costs. Scrap metal companies generally provide containers and pickup at no cost.

**Notes:** Pressurized containers (propane or helium tanks) should be kept separate for safety.

**Concrete & Asphalt:** Recycle 100% of concrete and asphalt from demolition projects.

**Justification:** Projects containing these materials should mainly be single-stream, and will already be separated from other recyclables. Due to the weight of concrete and asphalt, it is much cheaper to recycle than it is to landfill.

**Notes:** Some rebar is acceptable, but recycling companies need to be notified if there is a lot of rebar.

**Cardboard:** Recycle 75% of cardboard from renovation projects.

**Justification:** Cardboard is easily separated and can be sold to recover costs. Cardboard is also a bulky item that takes up space in roll-off containers without adding weight. Finally, in Mecklenburg County, there is a cardboard recycling ordinance. While this ordinance does not currently affect temporary jobsites (like construction and demolition areas), cardboard will probably be a recycling requirement in the near future.

**Notes:** Wet cardboard should be kept separate. On projects that do not have a lot of cardboard, there are cardboard bins located around the campus, and the Recycling Department may be able to pick up from some project areas.

**Carpet:** Recycle 75% of carpet from renovation projects.

**Justification:** Carpet and carpet padding can be recycled at no cost just a few miles from campus. With the amount of carpet that needs to be replaced on campus, carpet recycling is an easy way to save the University money.

**Notes:** Need to know what type of carpet and whether there is padding or not. Bonitz already recycles all carpet (corporate policy).

**Wood:** Recycle 100% of clean wood waste.

**Justification:** Untreated lumber can be ground into mulch and reused on site, or hauled to a grinding facility and mulched for sale.

**Notes:** Must be untreated and unpainted. Pallets and yard debris are banned from landfill disposal, so they must be recycled.

As per Facilities Management’s Strategic Goal #6, Objectives 6.2.1 and 6.2.2, the University is moving towards a sustainable campus, and is encouraging building and renovations processes that create as little waste as possible. In addition, for waste materials created during projects, as many materials as economically feasible shall be recycled or salvaged for reuse. To this end, the University has established a goal of diverting a minimum of 35% of construction, demolition, and renovation waste materials from landfill disposal.

**To: All Design Project Managers**

**From: Shannon Caveny-Cox,**

**Construction/Demolition Recycling Coordinator & Waste Contract Administrator**

**Re: Renovation/Project Recycling Information for Design**

As a State agency, UNC Charlotte must meet State and University specifications for sustainability and recycling. Some of the regulations that affect the University are listed at the end of this note, and officials are constantly looking to update and expand current policies.

The role of the Construction/Demolition Recycling position is to make recycling and waste disposal as easy and efficient as possible while ensuring that projects adhere to State requirements and meet the University’s recycling and sustainability goals.

**Responsibilities of the Office of Waste Reduction & Recycling:**

1. Determine what materials can be recycled from different projects.
2. Act as a resource for waste disposal and recycling information. Locate recycling companies for waste materials as needed.
3. Assist contractors with developing waste plans that keep with the University’s goals. Work with the contractor to minimize waste handling and disposal costs.
4. Assist with determining what size(s) and type(s) of bins are needed, and help site potential location(s) for containers.

If requested, the Construction/Demolition Recycling position can act as liaison between the contractor and waste haulers, scheduling drop-offs, pickups, and establishing recycling locations.

**Responsibilities of the Contractor**

1. As a general rule, contractors are responsible for waste disposal. This includes getting materials into correct bins and paying any hauling/disposal costs.
2. Copies of all weight tickets from trash and recycling should be submitted to the Office of Waste Reduction & Recycling. If weight tickets are not available, volume numbers or load counts are acceptable.
3. Unless there is extreme contamination (asbestos, insulation, etc.), the following materials are to be recycled:
   1. Asphalt
   2. Cardboard
   3. Carpet
   4. Concrete/Brick
   5. Metal
   6. Untreated Wood Waste

Determination of contaminated loads will be made on a case-by-case basis. For mixed loads of construction/demolition materials, some local companies will sort materials and recycle or landfill individual materials as appropriate. If space and time constraints do not allow the contractor to sort materials for recycling on-site, mixed loads can go to one of these processors for sorting and recycling.

1. Depending on the scope of work, additional materials may be determined to be recyclable (ceiling tiles, sheetrock, etc.). We will not ask for materials to be recycled if there is not an outlet.

**Responsibilities of the Design Group**

1. Notify me when you are assigned a construction or renovation project.
2. Allow me to walk through the project area and talk to contractors.
3. Let me deal with all the debris and trash disposal and hauling.

**These Materials are Really Easy (and Cheap) to Recycle:**

**Asphalt**

**Cardboard**

**Carpet**

**Concrete**

**Metal** (stair railings, light poles, wire and cabling, doors and door frames, ceiling grid, ductwork from HVAC projects)

**If you have a project with any of these items, please let me know!**

**Shannon Caveny-Cox**

**Office of Waste Reduction & Recycling**

**704-687-4983**

**sccaveny@uncc.edu**

1. Include me in all pre-bid and pre-construction meetings with contractors.

**Policies and Legal Requirements for Recycling:**

1. **UNC Charlotte Policy Statement #110: Solid Waste Reduction and Recycling**. Defines the University’s support for recycling and waste reduction, and lists out how goals will be accomplished:

*“Facilities Management recycling includes construction/demolition debris, fluorescent light bulbs, motor oil, oil filters, paint, pallets, refrigerants, scrap metal, solvents, tires, yard waste, and additional items as implemented.”*

*“The Vice Chancellor for Business Affairs will be responsible for implementing this Policy by designating personnel in Facilities Management to ensure that all new construction includes designated areas for recycling and solid waste collection and removal”* and *“encouraging all contractors to adhere to on-campus recycling policies and procedures.”*

1. **Mecklenburg County Ordinance to Require the Source Separation of Designated Materials from the Municipal Solid Waste Stream for the Purpose of Participation in a Recycling Program.** Requires businesses generating at least 500 pounds of corrugated cardboard or office paper and contracting for the collection of more than 16 yd3/week of municipal solid waste to separate corrugated cardboard and office paper for recycling.
2. **North Carolina General Statutes (N.C.G.S. 130A-309.14): Duties of State Agencies** (Part of Article 9: Solid Waste Management). Defines the duties of State agencies (including the UNC educational system) with regard to collecting recyclable materials and states:

*“Each State agency…shall provide that recycling containers are readily accessible…and shall provide for the collection of all of the following recyclable materials.*

* 1. *Aluminum*
  2. *Newspaper*
  3. *Sorted office paper*
  4. *Recyclable glass*
  5. *Plastic bottles.”* and

*“Each State agency…shall provide procedures for collecting and storing recyclable materials, containers for storing materials…”*

1. **Executive Order #156: State Government Environmental Sustainability, Reduction of Solid Waste, and Procurement of Environmentally Preferable Products**. Requires state agencies to:

*“Reduce and recycle material recoverable from solid waste originating at their facilities and from the construction and renovation of new facilities”* and states that

*“All state agencies shall seek opportunities to reduce environmental impacts associated with capital improvements throughout project planning, site and building design, and construction. Agencies shall, to the extent feasible and practicable, implement project initiatives or modifications that result in…pollution prevention, solid waste reduction…during the construction and operation of agency facilities.”*

**Demolition Materials from Projects:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Project | Waste Materials | Recycle | Reuse | Landfill | Notes |
| Demo interior walls | Sheetrock | ✓ |  | ✓ | Recycle only new boards (no paint or wallpaper). |
| Studs (Metal) | ✓ |  |  |  |
| Cabling & Conduit (Metal) | ✓ |  |  |  |
| Metal Doors | ✓ |  |  |  |
| Wood Doors |  | ✓ | ✓ | Check with Habitat first. |
| Windows |  | ✓ | ✓ | Check with Habitat first. |
| Wood (Treated) |  |  | ✓ |  |
| Wood (Untreated) | ✓ |  |  |  |
| Parking lot repairs | Asphalt | ✓ |  |  |  |
| Concrete | ✓ |  |  | Check for rebar in concrete. |
| Dirt |  | ✓ |  |  |
| Stairs/Walkways | Concrete | ✓ |  |  | Check for rebar in concrete. |
| Brick | ✓ |  |  |  |
| Rails (Metal) | ✓ |  |  |  |
| Ceiling replacement | Tiles | ✓ |  |  |  |
| Ceiling Grid (Metal) | ✓ |  |  |  |
| Floor repair/replacement | Concrete | ✓ |  |  | Check for rebar in concrete. |
| Carpet | ✓ |  |  |  |
| Carpet Padding | ✓ |  |  |  |
| HVAC Work | Ductwork (Metal) | ✓ |  |  |  |
| Insulation |  |  | ✓ |  |
| Plumbing Work | PVC | ✓ |  | ✓ | Depends on amount and what pipes were used for. |
| Metal Pipes | ✓ |  |  |  |
| Toilets/Sinks |  | ✓ | ✓ | Check with Habitat. |

The Office of Waste Reduction & Recycling is required to report annual recycling numbers to the State of North Carolina. Please call or email me as soon as you are starting a project so that I can walk through the area to get an idea of the amount of materials to be disposed of.