SECTION 12 46 33

WASTE RECEPTACLES

PART 1 - GENERAL

1.1 INTRODUCTION

   A. Stanford University has set a goal to divert 90% of its waste from landfills by 2030. Below are the design requirements for new buildings in order to reach this goal. This section includes, but is not limited to:

   1. Waste Receptacles
   2. Centralized Zero Waste Stations
   3. Bins, Cabinets & Signage
   4. Single Stream Recycling Collection
   5. Compostables Collection
   6. Reusable Dishware
   7. Bottled Water Reduction
   8. Electronics, Batteries and Regulated/Specialized Waste
   9. Lab Recycling
   10. Café Recycling
   11. Public Recycling, Compost & Landfilled Trash Bins
   12. Dumpster Enclosures

1.2 REFERENCES

   A. Stanford Guidelines for Sustainable Buildings
   B. Stanford UACPD Guidelines – Dumpster Enclosures
   C. Food Establishment Standard of Care

1.3 SUSTAINABILITY

   A. For a complete summary of Stanford’s vision refer to Stanford Guidelines for Sustainable Buildings.

1.4 DESIGN SUBMITTALS

   A. General:
1. Design drawings, data, and calculations at various stages of completion shall be submitted for each phase of the University's plan review process.

2. University approval is required at each review phase. Approval of design work that proceeds ahead of the review schedule is contingent on the incorporation of recommended revisions from the most recent review phase.

3. Refer also to Section 01 33 00, Submittal Procedures.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Pre-Purchased Equipment: The Contractor responsible for the pre-purchase specifications for equipment or materials shall consult the Project Manager regarding coordination of delivery, inspection and acceptance, storage, and handling of the product.

PART 2 - PRODUCTS

2.1 WASTE MANAGEMENT

A. Each building will allow for a 3-stream sort of waste: Single Stream Recyclables, Compostables, and Landfilled Waste. Specifications for bin types, locations, and colors are provided below.

B. Centralized Zero Waste Collection Stations

1. Establish centralized collection points for recycling and landfilled waste (and compost if there are not kitchens, pantries, or breakrooms nearby) a reasonable distance from occupants’ desks but no less than 6 feet away from any one desk for health & safety reasons. Custodial deskside collection of waste and recycling will be eliminated.

C. Bins, Cabinets & Signage

1. Each bin or cabinet and/or associated signage will be color coordinated by material type, per state of California regulation (SB1383):
   a. Blue for Recyclables
   b. Green for Compostables
   c. Gray/Black for Landfill Waste

2. Each bin or cabinet should have a restrictive opening and signage that corresponds to the bin type and color.

3. Cabinets will be sized to fit the standard size campus bins so that custodians can use campus wide standardized liners. If not, bin size must conform to ergonomic standards and purchased by user including spare rigid liners and appropriately sized or compostable liners.
D. Single Stream Recycling Collection

1. Design space for a recycling bin in every copy room or mail room or other high paper generating location, along with a landfilled waste bin and a slotted cabinet or other mechanism to collect flattened cardboard that doesn’t fit into the recycling bin.

![Example of slotted cabinet to collect flattened cardboard.](image_url)

E. Compostables Collection

1. Design space for a compost bin in every kitchen, pantry, breakroom or where food will be consumed along with a recycling and landfilled waste bin. Bins will be color coded and labeled appropriately.
2. Design space near coffee makers for convenient composting and disposal of coffee grounds and/or K-cup recycling.
3. Design space for a compost bin in every restroom to collect paper towels, along with a landfilled waste bin. The compost bin will be the bin under the paper towel dispenser. If there are free-standing bins, the compost bin will be larger than the landfill bin.
   a. The trash cans in restroom stalls will be for landfilled waste.
   b. Design space for color coded signage on or near each bin.

F. Reusable dishware

1. Design space to hold reusable cups, bowls, plates, utensils and serving utensils, and containers and/or compostable versions of these products. Include in the design space a place to hold reusable dishware while it dries. Include dishwasher sized for occupancy and include a sign that says whether dishes are clean or dirty.

G. Bottled Water Reduction

1. Install water filtration system so that purchasing bottled water is not necessary.
2. Install water bottle refilling stations.
H. Electronics, Batteries, and Regulated or Specialized Waste

1. Design space for the collection of batteries.
2. Design space for the collection of electronic waste including toner cartridges.
3. Design space for any other regulated waste or specialized waste such as polystyrene or plastic film that is generated in that space.

I. Lab Recycling

1. In addition to the normal 3-stream sort, there should be separate bins or multi-bins in each lab to collect separately:
   a. lab rigid plastics
   b. lab polystyrene
   c. lab plastic film
   d. lab glass
   e. large glass bottles
   f. lab gloves
   g. scrap metal or metal cans
   h. cardboard boxes (slotted cabinets to collect flattened cardboard)
   i. Other materials generated by lab that are considered reusable or recyclable.

J. Café Composting and Recycling Program

1. 1. Refer to the Food Establishment Standard of Care.
2. Install 3-stream collection bins for inside the operating area for staff use, including color coded bins and signage.
3. Incorporate reusable serviceware and a system for reusable dishes to be washed and stored.
4. Install 3-stream collection bins for customer use, including color coded bins and easy to read customized signage.
5. Design space for a compostables collection bin in the Dish Room.

K. Public Recycling, Compost, and Landfilled Trash bins

1. Install recycling and landfilled trash bins together in pairs including color coded bin and signage.
2. Install outdoor public compost collection bins in locations near eateries or outdoor eating areas including color coded bins and signage. Sample café bins are shown below. Contact the UACPD Office for specifications for these bins.
L. Dumpster Enclosures

1. Enclosures will be large enough to accommodate all required waste bins and/or dumpsters including single stream recycling, compostables and landfill waste.
2. Enclosures will include appropriate “Entering Zero Waste Sorting Zone” signs and/or color-coded signage above each dumpster.
3. In addition, space may be needed for specialized waste like polystyrene, wood pallets, electronics, equipment, scrap metal, lab glass, and tallow based on building type.
4. Enclosures should follow the UACPD guidelines document [UACPD Guidelines-Dumpster Enclosure](#) and the detail drawings and specifications on the Facilities Design Guidelines:
   a. MA-16 Dumpster Enclosure
   b. MA-17-01 Covered Dumpster Enclosure
   c. MA-17-02 Covered Dumpster Enclosure
   d. MA-18 Custom Recycle Receptacle Layout

5. New enclosures are covered by a solid roof and provide a sanitary sewer drain connection (per Municipal Regional Stormwater Permit)
6. Enclosures will meet vehicle collection requirements and consider user access, including provision of lighting for user safety at night.
7. All siting and design detailing is reviewed and approved by the UA/CPD Office.

M. Specific locations

1. Athletics Facilities will have space for recycling bins, along with landfilled waste bins in locker rooms and work out facilities and compost bins where paper towel use is high.
2. Classrooms will have recycling, compost and landfilled waste bins in common spaces outside of classroom (such as a hallway or kitchenette), rather than inside classroom. Signage should be placed inside classroom that indicates where the waste station is located.
3. Conference rooms will have recycling, compost and landfilled waste bins inside room or access to 3-sort bins just outside of room with signage inside room that indicates where the waste station is located.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions and in proper relationship with adjacent construction.

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION