

ATTACHMENT D CART SPECIFICATIONS

A. CART DESIGN REQUIREMENTS

1. General

- a. The Carts shall be manufactured by injection or rotational molding and meet the Cart design and performance requirements specified below. The Containers shall be designed to be emptied by both semi-automated and fully-automated Collection systems and designed to be lifted by a lift unit so that its contents are deposited in the hopper of a standard rear, front, or side-loading Collection vehicle.

Contractor must submit Cart orders (including material and design specifications, colors, and identification marks) to Agency and obtain written approval from the Agency prior to submitting the order to the manufacturer.

- b. The body of the container shall be composed of recyclable polyethylene resin from a nationally recognized brand supplier. Contractor or Cart manufacturer shall maintain, on file, certification by the resin vendor that the resin supplied and used for construction of the Carts meets published physical properties for each lot of resin purchased.

Each fully assembled Cart must contain a minimum of 10% and subject to material availability, up to 30+% of post-consumer recycled content (PCR). Non-recyclable material such as cross linked polyethylene will not be acceptable. For each component listed below, the associated minimum PCR is listed:

Cart body	10-30% of PCR to be used
Lid	10-30% of PCR to be used

Any manufacturer making the recycled content claim must be able to document its claim by disclosing the source and origin of the resin used and also provide a tour to the Member Agencies and SBWMA, of the Cart manufacturing facility.

Manufacturers who are listed in the California Integrated Waste Management Board's Recycled Product Directory can provide documentation showing recycled content certification. Any manufacturer making the recycled content claim must be able to document it by providing source and origin of resin.

The container and its component parts, shall meet all testing standards as set forth by ANSI Waste Container Safety Requirements (Z245.30-1999), Product Safety Signs and Label Requirements (Z535.4-1998), and Waste Container Compatibility Dimensions (Z245.60-1999). Proposer must submit certified copies of all ANSI test results with its proposal.

The SBWMA reserves the right to request, at no charge to the SBWMA, a sample of the carts from Contractor. This sample will be kept by the SBWMA and may be used in tests conducted by the SBWMA or its designated testing agent to measure weight, wall thickness, PCR, etc. The SBWMA reserves the right to require the Contractor to select an alternative Cart vendor if the provided sample fails any field test which may include, but are not be limited

to, drop tests, grabber simulation tests, weight tolerance, PCR, and wall thickness.

2. Materials Identification and Decals

Carts or their lids must be in readily identifiable colors to facilitate Customer's ready recognition of Solid Waste, Recyclable Materials, and Organic Materials, subject to Agency's written approval as described in this Attachment. Contractor shall provide and attach decals or other markings, subject to City approval, displaying Contractor's name, and telephone number. Contractor shall emboss or hot-stamp information describing correct materials and methods for Collection; forbidding disposal therein of Hazardous Waste and describing proper disposal thereof; and, forbidding scavenging (through words and international symbols) and describing the penalties therefore under California law or City/County municipal code.

Each Cart shall include a bar code numbering system for the purpose of Cart tracking and identification. The bar code (whether hot stamped or labeled) shall be affixed on the Cart body in an area where it is readily accessible for electronic scanning.

3. Cart Handles

The Cart handles and handle mounts shall be an integrally molded part of the Cart body only. The Cart handles shall provide comfortable gripping area for pulling or pushing the Cart or lifting the lid. Pinch points are unacceptable.

4. Cart Lid

Each Cart shall be provided with a lid that continuously overlaps and comes in contact with the Cart body or otherwise causes an interface with the Cart body that simultaneously:

- Prevents the intrusion of rainwater, rodents, birds, and flies;
- Prevents the emission of odors;
- Enables the free and complete flow of material from the Cart during the Collection cycle without interference with the material already deposited in the truck body or the truck body itself and its lifting mechanism;
- Permits users of the Cart to conveniently and easily open and shut the lid throughout the serviceable life of the Cart;
- The lid handle shall be an integrally molded part of the lid;
- The lid (and body) must be of such design and weight that would prevent an empty Cart from tilting backward when flipping the lid open; and,
- The lid shall be hinged to the Cart body in such a manner so as to enable the lid to be fully opened, free of tension, to a position whereby it may rest against the backside of the Cart body.

The inside and exterior of the lid must contain a permanent caution label as per ANSI Product Safety Signs and Label Standards (Z535.4-1998). The image shall be warranted for ten years; shall not fade, discolor or disfigure; and shall not peel or wear off under normal use.

5. Wheels and Axles

Wheels shall be a minimum of 10" in diameter and manufactured from polyethelene.

For ease of assembly, wheels will be designed for “snap-on” or equivalent attachment. Wheels shall attach securely to the Cart by means of a self-locking hub with internal wheel-retention details that snap into a corresponding groove on the axle.

The axle must be solid steel construction, plated to protect against corrosion and must be mounted in the cart body through axle fittings integrally molded as part of the cart body.

6. Cart Colors

The Solid Waste, Recyclable Materials, and Organic Materials Carts shall be differentiated by color. The colors shall be colorfast and resistant to fading as a result of weathering or ultraviolet degradation. The Cart must be stabilized against ultraviolet degradation with not less than 0.5% of UV 531 or equivalent additive in order to ensure a ten (10) year life cycle of outdoor exposure. Color of lids and Cart bodies must be uniform for each Cart type (i.e., Solid Waste, Recyclable Materials, and Organic Materials). Solid Waste Cart lids shall be black, brown, or gray. Recyclable Materials Cart lids shall be blue. Organic Materials Cart lids shall be green. Contractor may propose other colors for Cart lids or Carts, which are subject to written approval by the Agency. For all colors including those prescribed in this paragraph, the Contractor shall obtain written approval from the Agency for the Cart colors, by providing samples thereof, before Contractor’s purchase of the Carts.

7. Identification Markings

All markings on the Carts shall be approved by the City in advance of ordering Carts. An arrow (at least 3 inches by 5 inches) hot stamped in white color shall be placed on the lid, indicating the direction of Cart placement.

In character size of no less than 3/16 inches, the phrase:

**PLACE CART WITH ARROW FACING
STREET FOR COLLECTION
COLOQUE EL RECIPIENTE CON LAS FLECHAS
HACIA LA CALLE**

Additionally, the words “GARBAGE”, “RECYCLING”, or “ORGANIC MATERIALS” must be hot stamped in white on the front or sides of the Cart in characters no less than one inch in height.

8. Lift System

Each container shall be equipped with attachment points which make it compatible with standard American semi-automated bar-locking lifters and fully automated arm lifters. The upper lift point must be integrally molded into the body of the container. The lower lift bar must be designed to withstand ten (10) years of lifting, rotate a full 360° on its own axis, and be manufactured from galvanized steel or composite materials. The lower bar must be factory installed and cannot be attached by means of rivets, screws, bolts, fasteners, etc.

B. CART PERFORMANCE REQUIREMENTS

1. General

All Carts shall be designed and manufactured to meet the minimum performance requirements described below.

2. Cart Load Capacity

Depending on the capacity, the Carts shall have a minimum load capacity as noted below without Cart distortion, damage, or reduction in maneuverability or any other functions as required herein. Proposer is encouraged to offer carts of alternative sizes for collection of Recycling and Organics Materials if available.

Cart Size(+/- 2%) (Gallons)	Minimum Load Capacity (Pounds)
94-96	329-335
64-68	224-238
32-35	112-123
20	70

3. Cart Durability

Carts shall remain durable, and at a minimum, shall meet the following durability requirements to satisfy their intended use and performance, for the term of this Agreement:

- Maintain original shape and appearance;
- Be resistant to kicks and blows;
- Require no routine maintenance and essentially be maintenance free;
- Not warp, crack, rust, discolor, or otherwise deteriorate over time in a manner that shall interfere with intended use;
- Resist degradation from ultraviolet radiation;
- Be incapable of penetration by biting or clawing of household pets (i.e., dogs and cats);
- The bottoms of Cart bodies must remain impervious to any damage that would interfere with the Cart's intended use after repeated contact with gravel, concrete, asphalt, or any other rough and abrasive surface;
- All wheel and axle assemblies are to provide continuous maneuverability and mobility as originally designed and intended; and,
- Resist degradation by other airborne gases or particulate matter currently present in the ambient air of the Agency.

4. Chemical Resistant

Carts shall resist damage from common household or Residential products and chemicals. Carts, also, shall resist damage from human and animal urine and feces.

5. Stability and Maneuverability

The Carts shall be stable and self-balancing in the upright position, when either empty or loaded to its maximum design capacity with an evenly distributed load, and with the lid in either a closed or an open position.

The Carts shall be capable of maintaining their upright position in sustained or gusting winds of up to twenty-five (25) miles per hour as applied from any direction.

The Carts shall be capable of being easily moved and maneuvered, with an evenly distributed load equal in weight to its maximum design capacity on a level, sloped, or stepped surface.

6. Lid Performance

Cart lid assemblies shall meet the following minimum requirements:

- Prevent damage to the Cart body, the lid itself or any component parts through repeated opening and closing of the lid by users or in the dumping process as intended;
- Remain closed in winds up to twenty-five (25) miles per hour from any direction. All lid hinges must remain fully functional and continually hold the lid in the original designed and intended positions when either opened or closed or any position between the two extremes; and,
- Lid shall be designed and constructed such that it prevents physical injury to the user while opening and closing the Cart.

7. Reparability

Damage to hinges, wheels, axles, hardware, and other component parts shall be readily repairable or replaceable. All repairs must restore the Cart to its full functionality to meet the design and performance requirements as set for herein. If the Cart body is cracked or has holes, the Contractor shall repair the Cart or replace the Customer's Cart with a Cart that is not damaged.

8. Warranty

The Cart body, wheels, axle, and all necessary hardware must be covered by a ten (10) year warranty. Any component parts that are found to be defective in materials or workmanship shall be replaced at no charge. Documentation of such warranty shall be made available to Agency upon request.

9. Additional Information

Contractor shall supply complete technical data on the specific Cart being used. The data should include manufacturing specifications and ANSI certification and test data. Contractor must also provide a detailed user's list of other customers who used the same make and model of cart. SBWMA or their designate may use this information as a reference list regarding the quality of products and service records of the manufacturer.

Proposers are also encouraged to submit information that details any advantages that the proposed Cart might offer that will contribute to the overall viability of the new Solid Waste and Recycling Collection service. Information such as Cart buy-back programs, life cycle costing, emerging technologies (e.g., RFID) or other options that enhance the longevity, effectiveness and/or aesthetics of the program are encouraged.