

Shipping Containers

Are you considering a shipping container for your garden site? Shipping containers are a way to store garden tools and equipment. They can also be a great backdrop for a mural, shade sail, or welcome sign. Gardeners have even installed green roofs/growing spaces and solar panels on top of their containers. Are you curious if a shipping container would work for your site? This guide will walk you through the steps of deciding if a container is the right solution for you!

Things to think about in preparing for your container

Is there room on your site for the delivery truck?

You will need enough space for the truck to make wide turns, get between gates or other obstructions, and safely set up for delivery. 100 feet of clearance is needed to deliver a 40 foot container. *(Image source: Western Container Sales)*



Do you have enough overhead clearance?

Trucks are usually 13'6", and can be up to 16' tall as they tip the container into place. Make sure there are no overhead powerlines or tree limbs in the way.

Is your ground firm?

The delivery truck can weigh as much as 45,000 pounds (for 40 foot containers). It can get stuck in mud or wet grass. If there is a risk of sinking in, the driver may refuse delivery at the site.

Is your ground level?

You'll want to prepare your site for the container so that it cannot slide; a site that is on an incline would be unsafe. Additionally, when placed on uneven surfaces, the container can twist just enough for the doors to not line up properly and be difficult to open and close. You can level the ground with added packed soil, rocks, concrete, or timber.

You will need to stake out your site

Using stakes, twine, flags, or other markers, determine the placement of the container on your site. Putting markers at the rear corners especially will help the delivery driver know how to position it during installation.

Permits

If your container is less than 400 square feet you will not need a permit. Baltimore City follows the International Building Code. Section 1809.5 exempts any free-standing buildings less than 400 square feet (with eaves lower than 10 feet) from needing a foundation. However, it is a good idea to create a solid and level foundation for your container and to raise it off the ground slightly to allow for the doors to open and clear the ground. If you want to install a concrete foundation you may need a permit. See below for foundation options.

Ownership

Once you purchase your container, it's yours! You can put shipping containers on land with an Adopt-A-Lot agreement. Just remember that under that agreement the City has the right to enforce a 30-day vacate period and you will be required to move the container or otherwise forfeit it to the City. Consult your land occupancy paperwork before you install a container on your site.

How do you get a container?

You can buy a shipping container with your own money or apply for a CSX grant to get one donated. Guides on each are below.

Purchasing

Picorp, Inc. of Baltimore
 Baltimore, MD
 Armand Patella
 apatella@picorpbalt.com
 410-633-7800 (office)

Baltimore Mobile Shipping Container Storage
 Dundalk, MD
 chesapeakecont@aol.com
 410-686-4430

CubeDepot
 Santa Barbara, CA
 Zach Witter
 zachary@cubedepot.com
 805-200-4210 (direct)

Many other suppliers can be found by searching Craigslist's "for sale" section. If ordering from a company outside the region, allow for more days between payment and delivery.

Estimates

Estimates are from Spring 2016 for used containers, not including tax. (Don't forget to provide your tax exempt number if you have one!) Please call or e-mail companies for updated quotes.

Size	Estimate	Delivery
20' long x 8' wide x 8'6" high	\$1550 (Picorp)	\$195
20' long x 8' wide x 8'6" high	\$1620 (CubeDepot)	\$250
10' long x 8' wide x 8'6" high <i>(under 20 feet is custom and thus more expensive)</i>	\$2800 (Picorp)	\$195

Requesting a donation from CSX

From their website: "CSX occasionally donates materials, supplies and used railroad equipment based on availability. The online in-kind application can be used to request the donation of railroad-related items including **unused intermodal containers** and rail cars. ... Applicants will be contacted if the requested item becomes available within 90 days of their online submittal. At that time, arrangements will be made to transfer possession of the requested item. All applicants will be asked to resubmit their application at a later date if the requested item does not become available within the 90-day period."

- Visit <http://www.beyondourrails.org/index.cfm/community/giving-gateway/> to get started on your application.
- Your organization must have a 501c3 tax ID number in order to apply.
- CSX prioritizes funding projects focused on safety, environment, wellness, and community leadership.

Things to think about when picking a container

Exterior Appearance

Suppliers will typically guarantee that the container will be watertight, but cannot guarantee that it is free of rust or blemishes. If appearance is important to you, search for “one trip containers,” which have only been in use for one or two years. They are generally double the cost of a typical used container.

Doors/Direction

Typical shipping containers only have doors at one end. You can hire a fabricator to modify your container if you’d prefer side doors, etc. You’ll need to tell the delivery truck driver which direction the doors should face when they load it on the truck. The truck will tip the container up, dropping the back corner of the container first. The doors can face the rear of the truck or face the driver. Once the container is in place, it cannot be moved easily.

Temperature

The containers will reach high temperatures quickly in the summer; ventilation is recommended if you plan to use your container to store temperature-sensitive equipment or seeds, or spend any more than a few moments inside gathering supplies. You can have a metalworker cut holes in the roof and add vent fans. Be aware that any openings can compromise the security of the container.

Paint

Container suppliers won’t allow you to choose your container color, but you can powerwash and paint the exterior. Choose an exterior-grade paint. Some people opt for an oil-based, industrial alkyd enamel that adheres well to metal and has a high sheen.

1. Peel off the shipping line stickers (you may need a razor blade). If you don’t care that much about the final product, you can skip this step.
2. Wash the container. A power-washer is recommended. Careful - some paint may contain chemicals that are hazardous to ingest, so be cautious when doing this around edible gardens.
3. Once the container is dry, determine if you need to address any rust on your container. If you have a grinder, grind off any heavier rust. If it is just light surface rust, you can usually keep that. The more you prep, the better it looks in the end. Just be sure to grind right before you paint so that it doesn’t have time to rust again.
4. Paint! You can either spray or roll your paint on.

(Paint tips source: www.supercubes.com/blog/2012/02/how-to-paint-a-container)

Locks

Shipping containers close with four lockable metal levers that can be locked with padlocks. Padlocks can be cut by bolt cutters, so there are other recommended options to secure your container:

- There may be a covered padlock box already on your container. The padlock arcs over a metal hook on one door and is covered by a metal box that closes over it when the doors meet. The hook of the padlock cannot be accessed when the doors are closed, however a key can be inserted on the bottom of the padlock to release the doors.
- A hidden shackle padlock is an enclosed padlock that you can install yourself on the container.



Padlock on metal levers



Hidden shackle padlock with high security hasp.



Covered padlock box



Cargo door lock

Foundation options

Your container must be placed on level and strong ground. If the ground is not solid, the container may sink over time. If the ground is uneven, the container may twist slightly and make it difficult for the doors to open and close easily. A foundation also allows air to circulate under the container, which reduces the potential for condensation to collect and contribute to rust, and raises it so rodents can't burrow below without being detected. When deciding on which foundation you'll use, consider the following factors: the size and weight of your container, the consistency of the soil on site, the water level on site, material and labor costs, permits required, and whether your site ownership/lease allows you to install permanent features such as concrete.



Timbers

Gravel

Concrete slab

Concrete footings

	Timbers	Gravel	Concrete slab	Concrete footings
Pros	<ul style="list-style-type: none"> Can be maneuvered while the container is being lowered to adjust placement. 	<ul style="list-style-type: none"> Flexible; easy to level Can be used on its own or along with timbers to drain away water to prevent timbers from rotting. 	<ul style="list-style-type: none"> Provides a solid, stable surface for the container. 	<ul style="list-style-type: none"> Covers just the areas under the edges of the container. Cheaper than laying an entire concrete slab.
Cons	<ul style="list-style-type: none"> Timbers may eventually rot. 	<ul style="list-style-type: none"> May shift over time. Heavy to move; most likely opt for delivery. 	<ul style="list-style-type: none"> Expensive Will need to fasten shipping container to concrete (bolts are common) May need to excavate the area to the frost line to make sure it doesn't crack with temperature changes. 	<ul style="list-style-type: none"> Will need to fasten shipping container to concrete (bolts are common) Trenches or holes for piers must be dug below the frost line to make sure it doesn't crack with temperature changes.
Apprx. cost	\$30 per timber (6"x6"x12')	Crushed stone #57 – ¾ inch pieces area covering 20ft x 8ft x 4inch bed = 3 tons (2 yards of stone) Estimated cost of stone + tax + delivery to Baltimore City = \$350	Will depend on your site conditions and depth of slab.	Will depend on your site conditions and depth of footings.
Source	Hardware store	CD Thomas (www.cdthomasco.com)	Local contractors	Local contractors
Permit	None needed	None needed	Concrete is considered a permanent installation, so a permit is required.	Concrete is considered a permanent installation, so a permit is required.

Note: Bricks and cinder blocks aren't good options as they may crack and crumble under the weight of the container.