Here are the build instructions and local material pricing estimates for constructing the 3-bin pallet composting system detailed in the blueprints.

Build Instructions: 3-Bin Expandable Composter

This plan utilizes the "single-to-three compartment expansion plan" from image_8.png.

Phase	Description	Key Components
Phase 1	Construct the initial Starter Bin.	4 Pallets, 4 T-Posts
Phase 2 & 3	Expand to two additional bins.	+4-5 Pallets, +4 T-Posts

Necessary Tools:

- Post driver or sledgehammer
- Work gloves
- Safety glasses
- Drill/Driver with deck screws (optional but recommended for a sturdier build than twine alone)

Step 1: Material Acquisition and Preparation

The success of a low-cost build depends on efficient material gathering.

1. **Source Free Pallets:** Free pallets are often available from local stores, hardware stores, or feed mills. Ask permission before taking pallets.
2. **Selection:** Select pallets with an "HT" stamp (Heat Treated), which are safe for composting food scraps. Avoid those stamped "MB" (Methyl Bromide), which are chemically treated. For this plan, you need approximately **7 to 9 pallets** in total for a full 3-bin system, or **4** to start with a **single bin.**
3. **Breakdown (Optional):** If you plan to build the removable front slat panels from Image B, set aside **one pallet** to disassemble for its slats.

Step 2: Phase 1 – The Starter Bin

1. **Level the Ground:** Clear an area approximately **4ft x 4ft** at your designated site. Level the soil.
2. **Anchor the Corners (Detail A):** Drive **two** 7ft Steel T-Posts securely into the ground, spacing them **48" (4ft) on center** (O.C.). They should be plumb and driven until approximately **3ft (36")** is left exposed, matching Front Elevation View.
3. **Install the Walls:**
    - Stand one standard shipping pallet upright against the two driven T-Posts. This becomes your back wall.
    - Place two side pallets perpendicular to the back wall at each front corner, creating a U-shape.
4. **Finalize the Front Corners:** Drive the remaining **two** Starter T-Posts at the front corners, flush with the side pallets.
5. **Secure with Twine:** Wrap weatherproof twine tightly around the pallet stringers and the T-Posts, using a "2-turn figure-8" lashing pattern (Detail A) to securely bind the corners. *If you prefer a more rigid structure, use deck screws to fasten the pallets to each other and u-strapping to attach them to the posts.*

Step 3: Expansion to 3-Bins (Phases 2 & 3)- Can be done later

The design allows you to seamlessly attach the next compartments by reusing a common dividing wall.

1. **Add common walls:** For the second bin (Phase 2), set a back pallet and a final side wall. The side wall of the Starter Bin now becomes the shared divider between Bin 1 and Bin 2.
2. **Drive expansion posts:** Drive **two** additional 7ft T-Posts at the new common corners and new outer corners, ensuring they match the original spacing (Top-Down Footprint Plan).
3. **Secure:** Lash the new pallets to the existing common walls and the new posts. Repeat these steps for the third bin.

Step 4: Optional Components (Removable Front Panels)- screws/nails are used in this step to make cleats

Refer to Image B in the original schematic.

1. **Create Tracks (Cleat Brackets):** Nail or screw small wooden cleats to the inner front faces of the side pallets, leaving a **3/4” gap** between them.
2. **Make Removable Slats:** Cut the slats you set aside earlier to **48"** length. You need about **6 slats** per bin to stack from the ground to the desired height.
3. **Install:** Slide the slats into the gaps you created to form a removable front wall that holds the pile in place while allowing access.

Local Material Pricing & Cost Estimator

Pricing is estimated for **Abingdon, Virginia**, based on typical agricultural and hardware supply costs for May 2026. The key is to minimize purchased components.

Cost Table (Estimated for 3 bins)

Item Description	Required Qty (For 3 Bins)	Estimated Unit Cost	Source Type	Estimated Total
Standard Shipping Pallets (HT)	**9 qty.**	**$0.00**	**Local Shops**	**$0.00**
Steel T-Posts (7' length)	8 qty.	~$7.00/each	Ag/Hardware Store	~$56.00
Weatherproof Twine (Heavy Duty)	1 roll (100+ ft)	~$10.00/roll	Ag/Hardware Store	~$10.00
Hardware Add-on: Deck Screws/Staples	1 box/pack	~$15.00/box	Hardware Store	*$15.00*
***	***	***	***	***
Minimum Estimated Project Cost-all 3 compartments			**Twine/T-Posts Only**	**~$66.00**
Project Cost with Screws			*Recommended Build*	*~$81.00*

***Note: Pallets are free from local sources; T-Posts are required for reinforcement and spacing.*

What to compost

Compost needs a mix of “greens and browns”
Green items

- Grass clippings
- Leaves
- Coffee grounds
- Fruit/ vegetable scraps
- Vegetable Garden trimmings
- Hair clippings

Brown items

- Cardboard
- Paper shreddings
- Chopped up branches or wood chips (untreated)
- Drier lint

None of the below

- Meat scraps
- Fats/oils
- Pet waste

Smaller items decompose faster- hand tear cardboard to the size of you hand or smaller

Hot composting and cold composting instructions are readily available online

https://www.pubs.ext.vt.edu/426/426-703/426-703.html