Bear-Resistant Trash Can Caddy: Enclosed Design

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The Florida Fish and Wildlife Conservation Commission offers the following design for areas with frequent bear visits. Some photos show the caddy built with untreated lumber. It is recommended to use pressure-treated wood and/or use sealant for longer-life and lower maintenance. These instructions should enable a person with some woodworking experience to construct the caddy with minimal difficulty. Experienced woodworkers may prefer slightly different methods. FWC encourages people to try modifications and variations and contact us (BearManagement@MyFWC.com) with their results so we can pass them on to others. The caddy was designed to accommodate one 95 gallon plastic garbage can.

Required Materials:

Quantity:	Materials:
6	2" x 4" x 8’ Pressure Treated Lumber
1	2" x 6" x 10’ Pressure Treated Lumber
2	2" x 2" x 8’ Furring Strip
4	4’ x 8’ x 7/16" Plywood Sheets
7	8" Drywall Corner Strips
1	6’ Aluminum Door Channel Tubing
2	5" Heavy Duty Deadbolts
2	6" Heavy Duty T-Hinges
1 Box	2 ½" Wood Screws
1 Box	1 ⅝" Wood Screws
1 Box	1 ½" Nails (ring nails are encouraged)
1	9" Strap Plate
3	24" Strap Plates
1	30" Strap Plate
2 Packets	¾" Nuts and Bolts

Approximate materials cost: $150.00

Quantity:	**Tools and Optional Items:**
1	8’ Landscape Timber (to anchor box) with or without deadman anchor
1	7" Bolt, Nut, Washer (to tie caddy to anchor)
1	Water Sealant or Paint (to protect caddy)
1	8oz. Silcone Window and Door Caulk (to cover sharp edges of drywall corners)
1	Circular Saw
1	Hammer
1	Framing Square
1	Hand Drill
1	Tape Measure
1	Eye/Hearing Protection
1	Post Hole Digger
1	Metal Snips
1	Level
1	Dremel

Lumber Cuts

2” x 2” x 8’

Piece #1: (1) – 2” x 2” x 50 ¾” and (1) – 2” x 2” x 32 ½” long pieces
Piece #2: (2) – 2” x 2” x 32” and (1) – 2” x 2” x 32 ½” long pieces

2” x 4” x 8’

Piece #1: (2) – 2” x 4” x 30” and (1) – 2” x 4” x 33” long pieces
Piece #2: (2) – 2” x 4” x 30” and (1) – 2” x 4” x 35 ½” long pieces
Piece #3: (1) – 2” x 4” x 38” and (1) – 2” x 4” x 55 ½” long pieces
Piece #4: (1) – 2” x 4” x 38” and (1) – 2” x 4” x 55 ½” long pieces
Piece #5: (2) – 2” x 4” x 36” long pieces
Piece #6: (2) – 2” x 4” x 36” long pieces
Extra will be used for door stops – 3 pieces cut to fit

2” x 6” x 10’

(2) – 2” x 6” x 55 ½” long pieces

Plywood
Sheet #1: (1) – 39” x 55 ½” x 7/16” and (1) – 39” x 39” x 7/16”
Sheet #2: (1) – 39” x 55 ½” x 7/16” and (1) – 39” x 39” x 7/16”
Sheet #3: (1) – 40” x 56 ½” x 7/16”
Sheet #4: (1) – Door cut to fit

Parts List

Trashcan Caddy Frame

(3) – 2” x 4” x 36”	Caddy Frame (Top Front, Top Back and Bottom Back)
(2) – 2” x 4” x 38”	Caddy Frame (Top Sides)
(1) – 2” x 4” x 37 ½”	Caddy Frame (Bottom Lock Side)
(1) – 2” x 4” x 36 ½”	Caddy Frame (Bottom Hinge Side)
(2) – 2” x 6” x 55 ½”	Caddy Frame (Vertical Front Posts)
(2) – 2” x 4” x 55 ½”	Caddy Frame (Vertical Back Posts)
(4) – 2” x 4” x 30 ½”	Caddy Frame (Frame Braces Top and Bottom Sides)
(3) – 2” x 4” x (cut to fit)	Door Stops on Vertical Front Post Between Deadbolts

Trashcan Caddy Sides

(2) – 41”x56 ½”x 7/16”	Caddy Right and Left Sides
(1) – 40”x56 ½”x7/16”	Caddy Back
(2) – 39”x41”x7/16	Caddy Top and Bottom
(1) – 33”	Aluminum Channel Tube for Bottom Front

Trashcan Caddy Door

(1) – ~36”x~51”x 7/16”	Door (Cut Approximately ¼” Smaller Than the Box Opening)
(1) – 2”x2”50 ¾”	Door Brace (Vertical on Hinge Side)
(2) – 2”x2”x32”	Door Braces (Horizontal)
(2) – 2”2”x32 ½”	Door Braces (Vertical)
(1) – 34 1/2”	Aluminum Channel Tube for Bottom of Door

Trashcan Caddy Anchor (Optional)

(1) – 2”x4”x36”	Landscape Timber Anchor Brace
(1) – 8’	Landscape Timber

Assembly is best done on a flat, solid surface like a concrete pad or driveway. If assembling inside a workshop, be sure the exit door is large enough to allow the fully constructed caddy to pass through (approx. finished size 40”x40”x8’). Two people are recommended during the assembly process. Depending on ability and experience, it will take about 6 hours to assemble the caddy. The unit will be heavy (150 lbs. or more) and cumbersome when assembled and will take 2 or 3 people to move it to the installation site and to install. *NOTE: Determine which way the door should swing open before proceeding with construction.*

Step 1:

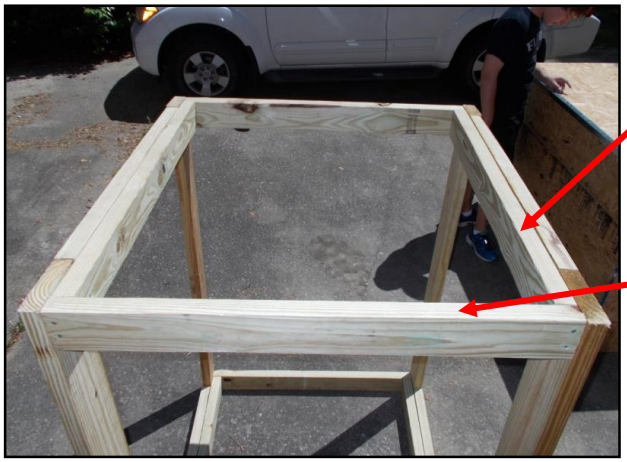
Assemble the bottom frame of the caddy using (3) pieces of lumber, cut to dimensions 2”x4”x37½” (lock side), 2”x4”x36½” (hinge side) and 2”x4”x36” (bottom back), ensure the two longest boards are parallel as they will become the sides of the caddy.

Next, attach (2) vertical front posts, 2”x6”x55½”, to the outside of the frame using 2½” wood screws. The vertical front post on the lock side should be set forward ½” beyond the bottom frame piece and the vertical front post on the hinge side should be set forward 1½”.

The bottom frame is cut shorter than the top frame to allow room for the door. The hinge side of the bottom frame should be 1½” shorter than the vertical front posts and the lock side of the bottom frame should be ½” shorter.

(NOTE: Plywood is seen in photos, but will not be installed during this step).

Then attach the (2) vertical back posts, 2”x4”x55½” flush along longer bottom frame pieces using 2½” wood screws.



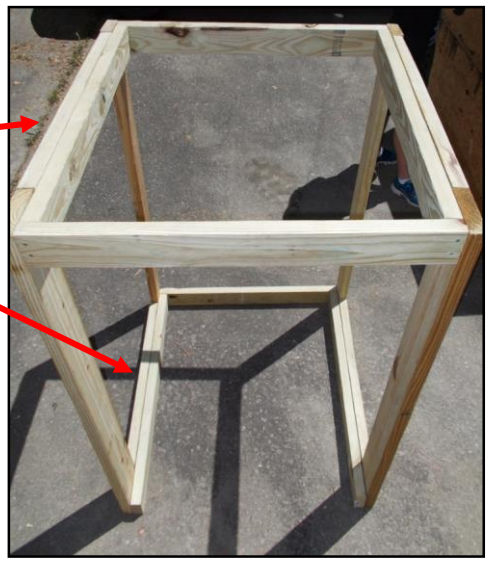
Step 2:

Position the top frame sides (2) 2”x4”x38” and connect to posts using 2½” wood screws.

Next, using 2½” wood screws, attach (2) 2”x4”x36” to finish the top square, these are the top front and the top back pieces. Use a framing square to keep the frame as square as possible.

Step 3:

Attach (2) 2”x4”x30½” braces to the top sides of the frame and then repeat with (2) 2”x4”x30½” braces to the bottom sides of the frame. Connect the braces using 2½” wood screws.



The finished frame should have 30½” frame braces on top and bottom sides.

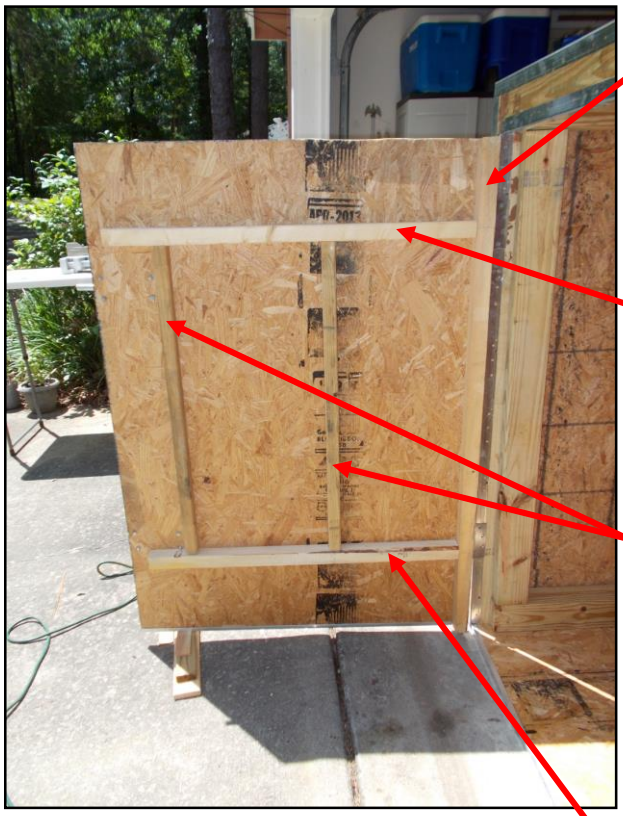
Step 4:

Cut (2) 41”x56½”x7⁄16” plywood pieces, and attach to sides of caddy using 1⅝” wood screws. Repeat the process with the back sheet, 40”x 56½” x 7⁄16”, leaving approximately ½” of overhang on all four edges when attaching to caddy frame using 1⅝” wood screws. The overhang will allow all edges to be flush when caddy is fully assembled.

Cut (2) 39”x41”x$\frac{7}{16}$” plywood pieces, for the top and the bottom of trash can caddy. Slide each piece into place and attach to frame using 1$\frac{5}{8}$” wood screws.

Step 5:

To make the door, cut (1) ~36”x ~51”x$\frac{7}{16}$” plywood piece (approximately ¼” smaller than the box opening). Cut out (5) door braces: (1) 2”x2”x50¾”, (2) 2”x2”x32”, (2) 2”x2”x32½”, and attach the braces to the plywood door using 1⅝” wood screws and braces to one another as appropriate using 2½” wood screws (see diagram below).



The longest wood brace, 2”x2”x50¾”, will be vertically attached flush along the hinge side, with a small gap along the bottom to allow for aluminum channel tubing (later step).

The top horizontal wood brace, 2”x2”x32”, should be about 7” down from the top of the door. This piece will also serve as an anchor for hinge screws in the next step.

The (2) vertical wood braces, 2”x2”x32½”, should come down from the top horizontal wood brace, ensuring brace closest to lock side is no less than 6” from that edge.

The bottom horizontal wood brace, 2”x2”x32”, should be attached about 7” from the bottom of the door and rest against the bottom edge of the vertical wood braces. This piece will also serve as an anchor for hinge screws in the next step.

Step 6:

Measure drywall corners to fit over all bear caddy seams (top, sides, and bottom). Overlap the drywall corners where they meet to enhance protection.

Nails attaching drywall corners to the inner door frame should be placed both inside and outside of the frame.

Drywall corners should be attached on the sides and top of the door opening to prevent a bear from scratching or ripping the wood frame.

Use metal shears to cut drywall corners and attach to caddy with 1¼” nails (ring nails are encouraged).

Do not attach a drywall corner to the bottom of the box, but rather use a rubber mallet or hammer to tap the aluminum channel tubing, 33”, and on the bottom of the door, 34½”.

Step 7:

Attach (2) 6” heavy duty hinges to the outside of the door, approximately 7” from the top and the bottom using package provided screws. Ensure the hinges align with the horizontal braces on the inside of the door for secure anchoring.

Arrange the door in the open position.

Brace the outer edge of the door and ensure it is level.

Attach the hinge to the inner door opening frame using 1⅝” wood screws.

Step 9:

Using ¾” bolts and nuts, attach (2) 5” heavy duty deadbolts to the door below the upper horizontal door brace and above the lower horizontal door brace. Make sure the deadbolt is level and the leading edge is even with the door edge before securing.

Align the deadbolt keeper with the deadbolt and attach the keeper to the front vertical frame post using the provided package screws.

Step 8:

Create (3) door stops, 2”x4”x (cut to fit), using excess 2”x4” pieces. When attached to the inside of the frame on the lock side, the door stops should be inset ½” from the front edge of the frame (allowing room for the door to close flush from the outside).

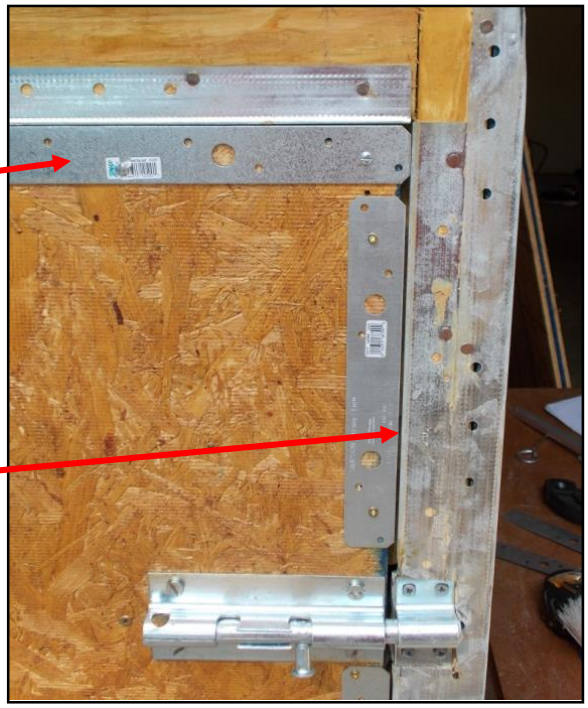
The door stops must be cut to a size that leaves room for the locks on the door to fit in between.

The following are photos of a completed bear-resistant trash can caddy door with hinges and deadbolts installed.

Step 10:

Attach 9”, 12”, 24” and 30” metal strap plates, using ¾” nuts and bolts, along the edges of the door along the top and both sides. In some cases the metal strap plates may have to be cut to fit with a hacksaw.

Allow metal strap plates to extend beyond the door edge to minimize any gaps between the door and frame, thus preventing areas where a bear can get a claw in and pull on the door.



On the hinge side of the door 1⅝” screws can be used in place of bolts because of the 2”x2” wood brace along the inside of the door.

Step 11 (Optional):

Depending on where the caddy is being installed an anchor may be necessary to ensure the bear does not tip the caddy over while attempting to access the contents.

Attach caddy anchor brace, 2”x4”x36”, to the inside back of the box 36” up from the bottom of the caddy with 1⅝” screws. Drill the screws from the outside of the box into the brace.

Step 13:

Bury 8’ landscape timber post approximately 4’ into the ground in the desired permanent location for the caddy. The post can be put in less than 4’ based on the soil the hole has been dug into. A deadman anchor can also be used to ensure the landscape timber is secure.

Line up the landscape timber with the middle of the caddy anchor brace and drill a ½” hole into the center through the plywood and 2”4”x36”. Attach the timber to the caddy through this hole with a nut and bolt on the inside of the caddy.

TIPS:

Use sealant or paint to protect shed from weathering.

Use caribeeners or other locking fasteners to secure door latches.

Wash down the caddy and garbage cans occasionally to reduce any lingering odors that could attract bears.

Completed Bear Resistant Trashcan Caddy

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