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### **Construction-grade Concrete Turck**



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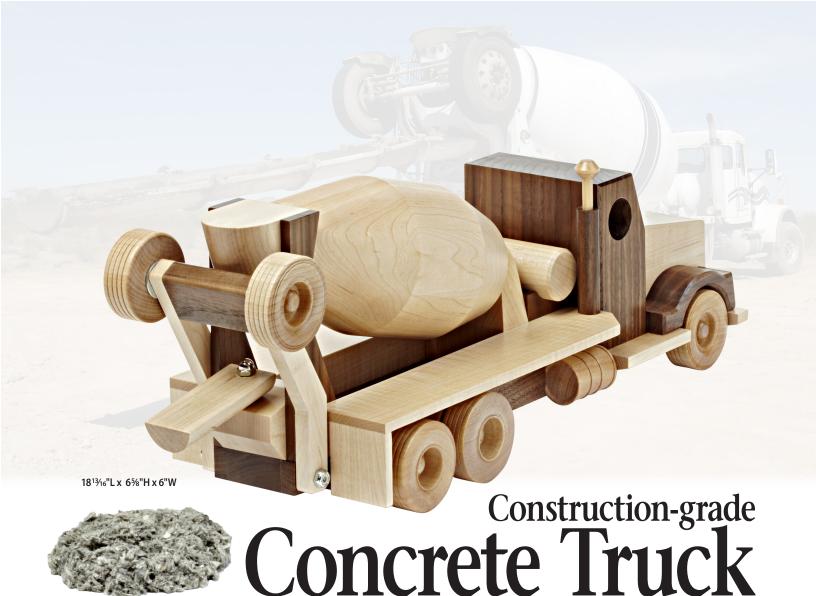


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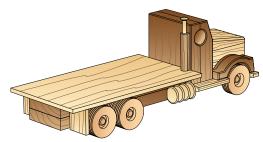


hen the digging and grading wrap up, the pour can begin. And this truck hauls the goods. The solid-wood drum adds a good bit of heft to the truck and gives you a chance to try some basic turning.

### Start with a rock-solid chassis

Cut the chassis (A) to size [Materials List]. Notch the back end where

### **BUILD IT AS A FLATBED**



A simple modification converts the concrete truck to a straight truck. Find the free plans at woodmagazine.com/straighttruck.

shown in **Drawing 1**, then drill the  $^{11}/_{32}$ " and  $^{3}/_{16}$ " holes in the edges [**Drawing 2**].

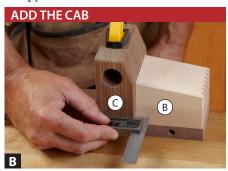
Laminate and cut to size a  $2\frac{1}{2}$ "-thick maple blank for the hood (B) [**Drawing 1**]. Spray-adhere photocopies of the **Hood Side-view** and **Top-view Patterns** to the blank. Install a rip blade in your tablesaw, and cut the grooves in the hood to create the grill. Bandsaw and sand the bevel where shown; then, rout



Resting the chassis (A) on your bench and clamping the hood (B) to it makes it easier to align the ends and edges of the parts as you apply pressure. the chamfers. **Note:** Throughout the build, after cutting a patterned part to shape, apply mineral spirits to the pattern, scrape it away, and finish-sand the part to 220 grit.

Glue the hood (B) to the chassis (A) with their front ends and edges flush [Photo A].

Laminate a 2"-thick walnut blank for the cab (C) and cut it to size. Adhere a copy of the **Cab Pattern** to one side of



Glue the cab (C) to the chassis (A) and hood (B). After centering the cab on the width of the chassis, clamp across the cab and hood. the blank, drill and chamfer the hole where indicated, then cut the bevel for the windshield. Finish-sand the cab; then, glue it behind the hood [Photo B].

5 Cut the wheel spacers (D) to size from ¼" maple [Drawing 1]. Rout ½" chamfers on the ends and drill the hole where shown. Glue the wheel spacers to the chassis [Photo C].

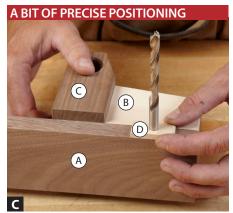
### Add the details

■ To the edge of a 1×1¼×12" walnut blank, apply two copies of the Fender Pattern. Bandsaw and sand the fenders (E) to shape; then, rout 1/16" chamfers where shown, making sure you end up with a mirrored pair of fenders. Glue the

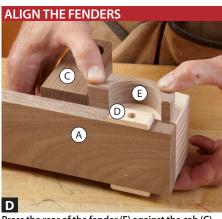
fenders to the hood (B) [Photo D].

 $\blacksquare$  Bevel-rip the edge of a  $\frac{1}{2} \times 1\frac{1}{4} \times 12$ " maple blank as shown in **Drawing 1a**. Crosscut the steps (F) and bumpers (G) to length from the blank [Drawing

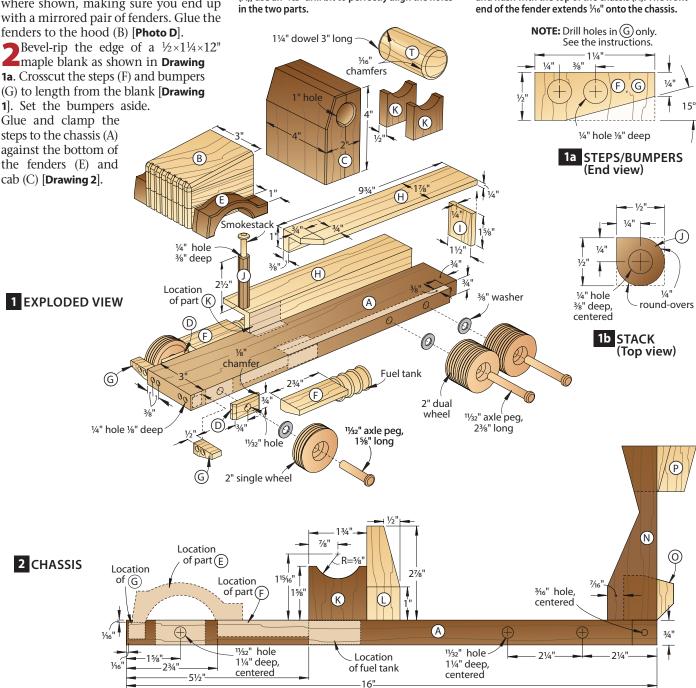
steps to the chassis (A) against the bottom of the fenders (E) and cab (C) [Drawing 2].



When gluing the wheel spacers (D) to the chassis (A), use an 11/32" drill bit to perfectly align the holes



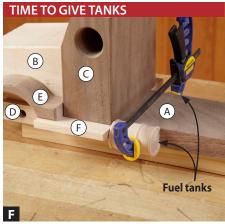
Press the rear of the fender (E) against the cab (C) and flush with the top of the chassis (A). The front



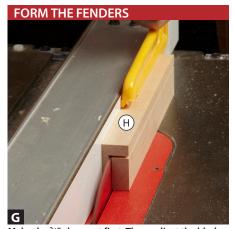
woodmagazine.com 2



Grip the fuel tank in a handscrew, then doublefaced-tape a straight-edged scrap to serve as a visual guide as you cut away one edge.



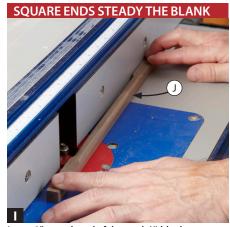
Glue and clamp each fuel tank to the chassis (A) and against a step (F), aligning the top of the tank's cut edge with the top of the chassis.



Make the ¾"-deep cut first. Then, adjust the blade and rip fence to intersect the first kerf. Use a zeroclearance insert [More Resources] during this cut.



Glue and clamp the rear fender/mud flap assembly (H/I) so the inside edge of the fenders rests flush with the edge of the chassis (A).



Leave 2" at each end of the stack (J) blank unrouted. This provides flat surfaces for guiding the blank past the round-over bit.



After drilling the 11/4" hole, cut away the waste area between the tank cradles (K) and cut the remaining cradle from the blank.

**3** Bandsaw a flat edge on each of the fuel tanks [Source, page 5; Photo E]. Sand the cut edges smooth and glue the fuel tanks to the chassis (A) [Photo F].

Retrieve the bumpers (G), grip them in a handscrew, and drill ¼" holes ½" deep to form the headlights [Drawing 1a], creating a mirrored pair.

Quick Tip! Use a brad-point or Forstner bit to drill flat-bottomed holes.

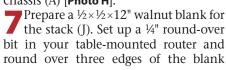
Glue the bumpers to the fenders and chassis [Drawing 2].

Prepare two 1×1%×10" maple blanks of the rear fenders (H). Cut intersecting kerfs in each blank [Photo G, **Drawing 1**]; then, crosscut the fenders to length to match the distance between the rear of the cab (C) and the notch in the chassis (A). Bevel-cut the front end of each fender. Finish-sand the pieces.

Cut the mud flaps (I) to size, finishsand them, and glue one to each rear fender (H), flush with the rear end. After the glue dries, glue this assembly to the chassis (A) [Photo H].

[Photo I, Drawing 1b]. Cut away one square end of the blank, then cut the stack to final length. Clamp the stack in a handscrew and drill a 1/4" hole centered on its diameter. Glue the flat face of the stack to the passenger side of the cab (C) so the square corner of the stack faces the middle of the cab. Glue the smokestack [Source] in the hole in the stack.

To make the tank cradles (K), start with a  $\frac{1}{2} \times 134 \times 5$ " blank. Lay out and mark two blocks 1%" long and 5%" apart. Mark the centerpoint between the two blocks and drill a 11/4" hole centered on the mark [Photo J]. Cut the tank cradles



November 2009)

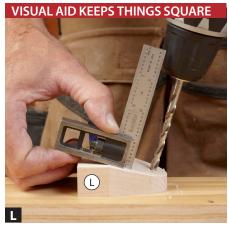




For heavy hauling, fill the dump truck (issue 215, November 2012). Move earth with the bulldozer (issue 199, September 2010).



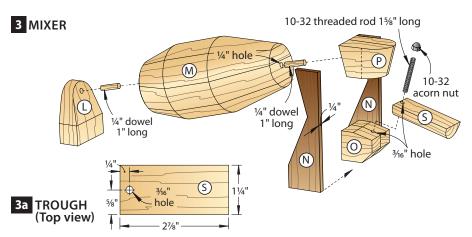
Adhere the drum pivot (L) to a scrap with doublefaced tape so you can cut the bevel while keeping your hands well away from the blade.



Set a small square on the beveled face of the drum pivot (L). Keep your drill bit parallel to the square as you drill the  $\frac{1}{4}$ " hole  $\frac{1}{2}$ " deep.



Use the line on the Side-view Pattern to set the tilt of the bandsaw table. Then round off the rear of the hopper (P).



to length, finish-sand them, and glue them inside the rear fenders (H), snug against the cab (C) [**Drawing 1**].

#### Get a fix on the mixer

**1** Cut a  $1\times21/4\times2\%$ " blank for the drum pivot (L). Spray-adhere the **Drum Pivot Front-view Pattern** to the blank and bandsaw and sand the curve. Apply the **Drum Pivot Side-view Pattern** to an edge of the blank and bandsaw and sand the bevel [**Photo K**]. Drill the hole as shown in **Photo L**, finish-sand the pivot, then glue it to the chassis (A) and tank cradles (K) [**Drawing 2**].

Note: Turn the drum on your lathe or, if you'd rather, order a ready-made drum.
See Source on page 5. Spray-adhere a copy

of the **Drum Template** to a piece of poster board and cut along the lines. Using this to check your progress, turn the drum (M) [**Materials List**] to shape. Drill into each end of the drum a ½" hole ½" deep, centered on the diameter of the end. Cut and glue a 1" length of dowel into each hole.

Cut two  $\frac{1}{4} \times 1\frac{1}{2} \times 5\frac{1}{4}$ " walnut blanks for the pedestals (N), double-faced-tape them together with their ends and edges flush, and apply a copy of the **Pedestal Pattern**. Cut the pedestals to shape, then separate them.

Prepare a 1¾×1½×1½" maple blank for the trough pivot block (O), sprayadhere the **Trough Pivot Block Pattern** to its edge, and cut and sand it to shape.

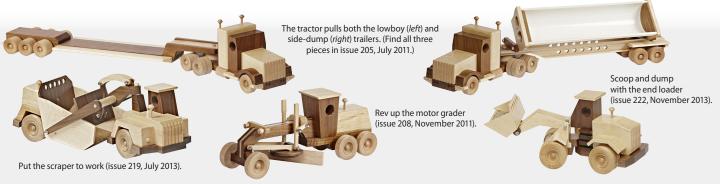


The front face of the hopper (P) aligns with the front edges of the pedestals (N). The face of the trough pivot block (O) rests %6" from the front pedestal edge.

Drill the 3/16" hole centered on the block's width.

Apply the **Top Hopper Side- and Topview Patterns** to a  $1\frac{3}{4} \times 1\frac{3}{8} \times 2\frac{1}{4}$ " maple blank. Tilt your drill-press table to 15° and drill the  $\frac{1}{4}$ " hole where shown. Then, tilt your bandsaw table to 15° and cut the curve on the **Top-view Pattern** [**Photo M**]. Reset the table square to the blade and cut the remaining line on the **Side-view Pattern**.

**6** Dry-fit the pedestals (N), trough pivot block (O), and hopper (P) and check for a snug fit between the rear fenders (H). Glue up the pedestal assem-



bly [Photo N, Drawing 2]. After the glue dries, glue the pedestal assembly in place, trapping the drum (M) [Photo O].

Prepare two %×2¼×5" maple blanks for the booster axle arms (Q) and double-faced-tape them together. Following the Booster Axle Arm Pattern, cut the arms to shape, and drill the holes.

Cut the booster axle brace (R) to size [Materials List] and round over the long edges [Drawing 4]. Drill the holes in the ends ¾" deep.

Quick Tip! To locate the holes precisely, dry-fit the brace between the booster axle arms (Q) [Drawing 4] and drill through the existina holes in the axle arms.

Glue the brace between the axle arms, using axle pegs to align the holes between the parts. Remove the axle pegs after clamping so they don't get glued in place.

### Now the finishing touches

Cut two 3" lengths of 11/4" dowel for the trough (S) and water tank (T). Glue one between two scraps [Photo P], and resaw the assembly in half to create the trough (S). Cut away the blocks and crosscut the trough to 2%" long. Drill a 3/16" hole centered on the trough's width [Drawing 3a]. Rout 1/16" chamfers around the ends of the water tank and glue it to the tank cradles (K), centered.

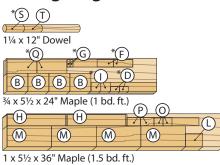
Apply a finish to all pieces. (We sprayed on three coats of aerosol lacquer.) Then attach the wheels with axle pegs and washers [Drawings 1 and 4]. Epoxy a 1%" length of 10-32 threaded rod into the trough pivot block (O) and mount the trough (S) [Drawing 3].

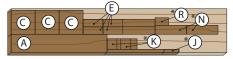
Cut a 3¼" length of 10-32 threaded rod and use it to attach the booster axle assembly (Q/R) to the chassis [Drawing 4]. Snug the lock nuts enough to hold the assembly up when desired.



Glue the pedestal assembly (N/O/P) to the rear fenders (H), trapping the drum between the drum pivot (L) and hopper (P). Make sure the drum turns freely.

### **Cutting Diagram**

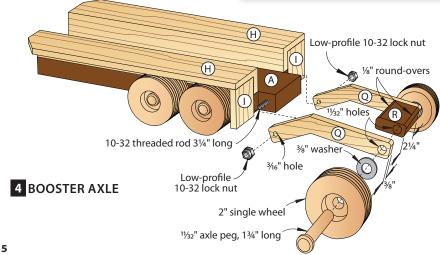




34 x 71/4 x 36" Walnut (2 bd. ft.) \*Plane or resaw to the thicknesses listed in the Materials List

### **More Resources**

- Find plans for a zero-clearance insert for your tablesaw at woodmagazine.com/zeroinsert
- Prefer slightly larger big-boy toys? Check out some ½-scale versions at woodmagazine.com/bigmodels.





By gluing two equal-sized scraps to the ends of the dowel, you can cut a straight line through the dowel to create the trough (S).

### Materials List

FINISHED SIZE						
Part		T	W	L	Matl.	Qty.
Α	chassis	3/4"	3"	16"	W	1
В	hood	2½"	3"	3½"	LM	1
C	cab	2"	4"	4"	LW	1
D	wheel spacers	1/4"	3/4"	1½"	М	2
E*	fenders	1"	11/4"	35/16"	LW	2
F*	steps	1/2"	11/4"	2¾"	М	2
G*	bumpers	1/2"	11/4"	1/2"	М	2
H*	rear fenders	1"	1%"	9¾"	М	2
Ι	mud flaps	1/4"	1½"	1%"	М	2
J*	stack	1/2"	1/2"	21/2"	W	1
K*	tank cradles	1/2"	1¾"	1%"	W	2
L	drum pivot	1"	21/4"	2%"	М	1
М	drum	3½" diam.		<b>7</b> ½16"	LM	1
N	pedestals	1/4"	1½"	51/4"	W	2
0	trough pivot block	1%"	1¾"	1½"	LM	1
Р	top hopper	1¾"	1%"	21/4"	LM	1
Q	booster axle arm	%"	2¼"	5"	М	2
R	booster axle brace	5/8"	11/4"	21/4"	W	1
S	trough	5/8"	11/4"	2%"	М	1
Т	water tank	11/4"	diam.	3"	М	1

\*Parts initially cut oversize. See the instructions.

Materials key: W-walnut, LM-laminated maple, LW-laminated walnut, M-maple.

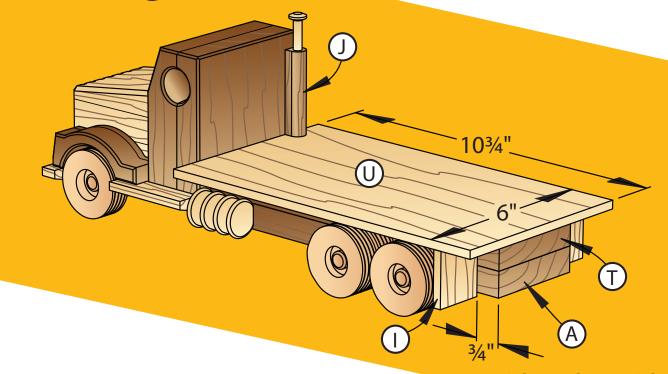
Supplies: 11/4" maple dowel 12" long, 1/4" dowel 6" long **Bits:** 1¼", 1", 1<sup>1</sup>/<sub>32</sub>", ¼", <sup>3</sup>/<sub>16</sub>" drill bits; 45° chamfer, ¼" and ½" round-over router bits.

**Kits:** Two kits are available, one with a ready-made drum (part M), and one without. Kit no. RS-01003a contains all the specialty parts (wheels, axle pegs, smokestack, fuel tanks) and hardware (no lumber) needed to build one concrete truck. Kit no. RS-01003a-t is identical, and also includes the drum (M); 888-636-4478, woodmagazine.com/concrete.

Produced by Craig Ruegsegger with Kevin Boyle Project design: Kevin Boyle Illustrations: Lorna Johnson

woodstore.net

# Construction-grade Straight Truck



ou can easily adapt the concrete-truck plan from *WOOD*® issue 224 (March 2014) to build a flatbed straight truck. And just as with our other Construction-grade toys, we've assembled a kit with all the specialty parts and hardware [**Source**].

To build the straight truck, follow the instructions in the issue for the concrete truck through **Step 4** under "**Add the details**," where you glue the bumpers (G) to the fenders (E) and chassis (A), with one exception: In the very first step, do not cut the notches or drill the ¾16" holes in the rear of the chassis (A).

After gluing the bumpers to the fenders, do the following:

**1** From walnut, cut the bed filler (T) to size [Materials List]. Finish-sand it; then glue it to the chassis (A) flush on the end and edges.

**2**Cut the flatbed (U) to size and finish-sand it. Then, glue and clamp it on top of the bed filler (T), snug against the cab and centered from side to side.

**3** Cut the mud flaps (I) to size and finish-sand them. Apply glue to one end and edge of a mud flap and clamp it

under the flatbed and to the chassis (A) and bed filler (T), ¾" from the rear of the chassis. After the glue dries, repeat this process for the remaining mud flap on the opposite side.

Prepare a  $\frac{1}{2} \times \frac{1}{2} \times 12$ " walnut blank for the stack (J). (The long blank allows you to work safely while making the stack.) Set up a 1/4" round-over bit in your table-mounted router and round over three sides of the blank [Photo I in the original article]. Cut away one square end of the blank, then cut the stack to final length [Materials List]. Clamp the stack in a handscrew and drill a 1/4" hole centered on its diameter. Glue the flat face of the stack to the passenger-side of the cab (C) so the square corner of the stack faces the middle of the cab. Glue the smokestack [Source] in the hole in top of the stack.

Apply a finish to all pieces. (We sprayed on three coats of aerosol lacquer.) Then, attach the wheels with axle pegs and washers [Drawings 1 and 4 in the original article].

**Note:** Part H, and parts K through S are not needed for the straight truck.

### **Straight Truck Materials List**

		FINISHED SIZE			N4-41	٥
Pa	rt	T	W	L	Matl.	Qty.
_A	chassis	3/4"	3"	16"	W	1
В	hood	2½"	3"	3½"	LM	1
C	cab	2"	4"	4"	LW	1
D	wheel spacers	1/4"	3/4"	1½"	М	2
E*	fenders	1"	11/4"	35/16"	LW	2
F*	steps	1/2"	11/4"	2¾"	М	2
G*	bumpers	1/2"	11/4"	1/2"	М	2
Part H not needed						
Т	mud flaps	1/4"	1½"	1%"	М	2
J*	stack	1/2"	1/2"	2½"	W	1
Parts K through S not needed						
Т	bed filler	3/4	3"	10½"	W	1
U	flatbed	1/4"	6"	10¾"	М	1

\*Parts initially cut oversize. See the instructions.

Materials key: W-walnut, LM-laminated maple, LW-laminated walnut, M-maple.

**Blade and bits:** Dado blade, 1",  $1\frac{1}{32}$ ",  $\frac{3}{16}$ ",  $\frac{1}{4}$ " drill bits;  $45^{\circ}$  chamfer router bit.

#### Source

**Kit:** Contains all the specialty parts (wheels, axle pegs, smokestack, fuel tanks) and hardware (no lumber) needed to build one straight truck; \$10.95+shipping. Kit no. RS-01003a-2, 888-636-4478,

woodmagazine.com/sttruckkit.

WOOD magazine March 2014 6

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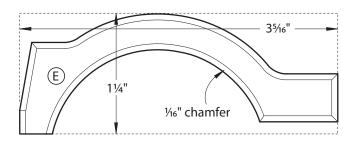


Trio of Bookcases DP-00301

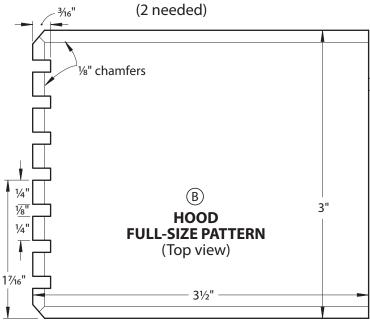


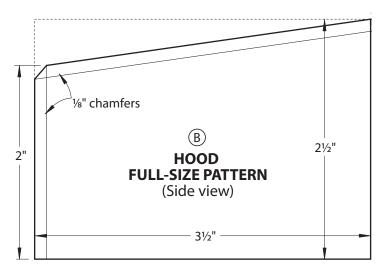
Contractor Grade Mobile Crane Plan DP-00594

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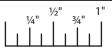
### FENDER FULL-SIZE PATTERN

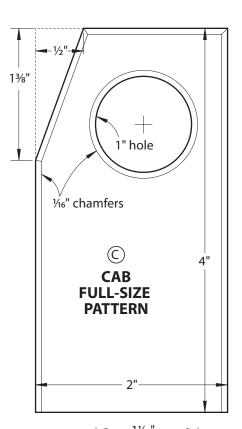


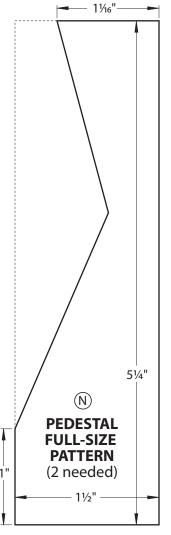


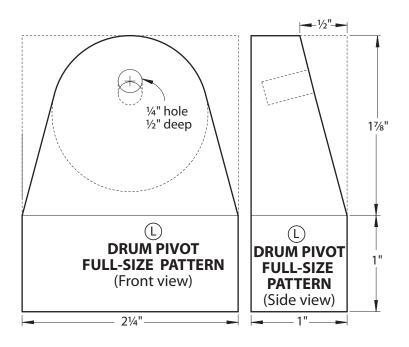
### Construction-grade Concrete Truck

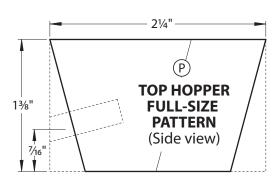
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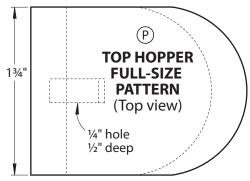


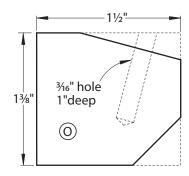




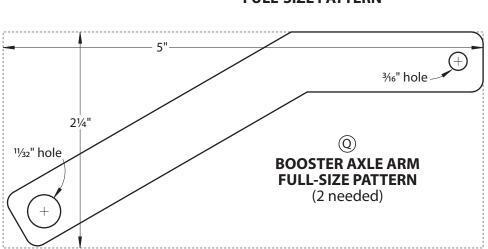






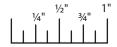


## TROUGH PIVOT BLOCK FULL-SIZE PATTERN



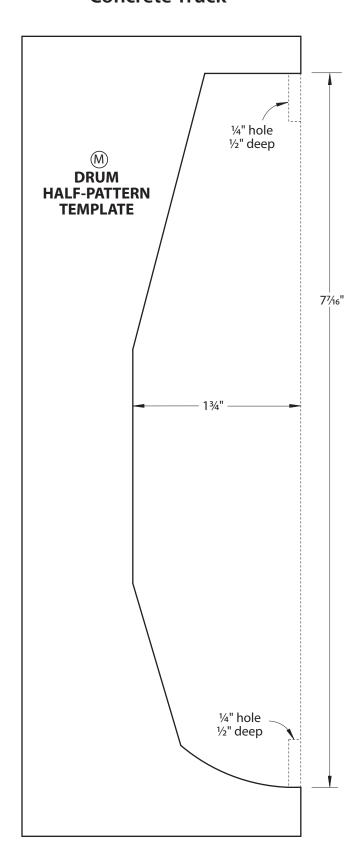
### Construction-grade Concrete Truck

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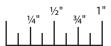


WOOD magazine March 2014 8

### Construction-grade Concrete Truck



To ensure full-size patterns are correct size, your printer should be set to print at 100% (not fit to page). Measure full-size patterns to verify size.



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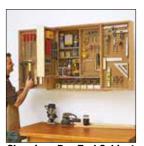
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Double Settee WP-0FS-1075



Adirondack Chair and footstool MD-00197



Flower Tuteur MD-00185



Planter Box MD-00265



Arched Bench and Chair WP-0FS-1040



Folding Adirondack Chair WP-0FS-1062



Porch Glider WP-0FS-1028



Porch Rocker WP-0FS-1008



Picnic Table Suite MD-00110



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