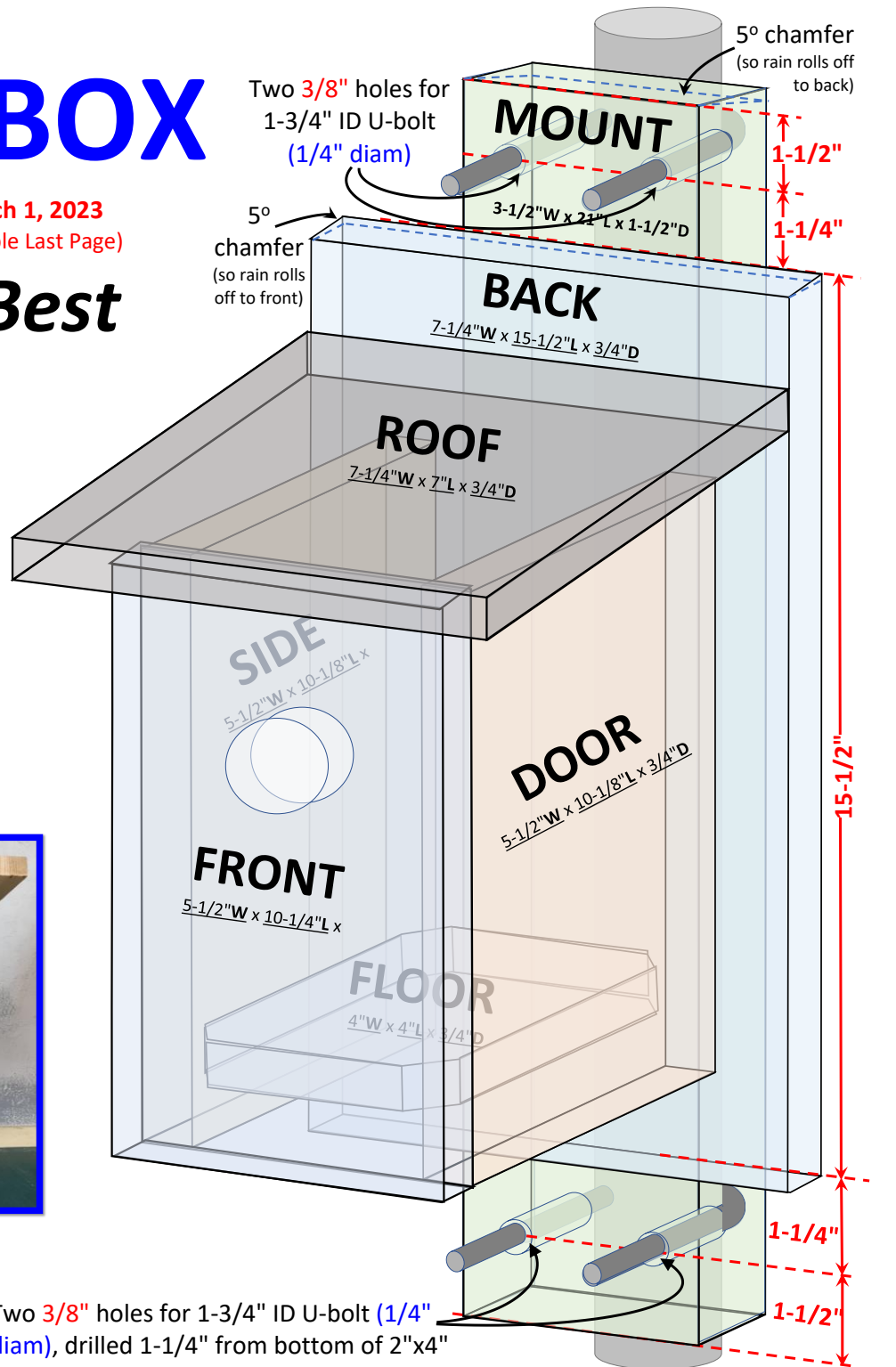
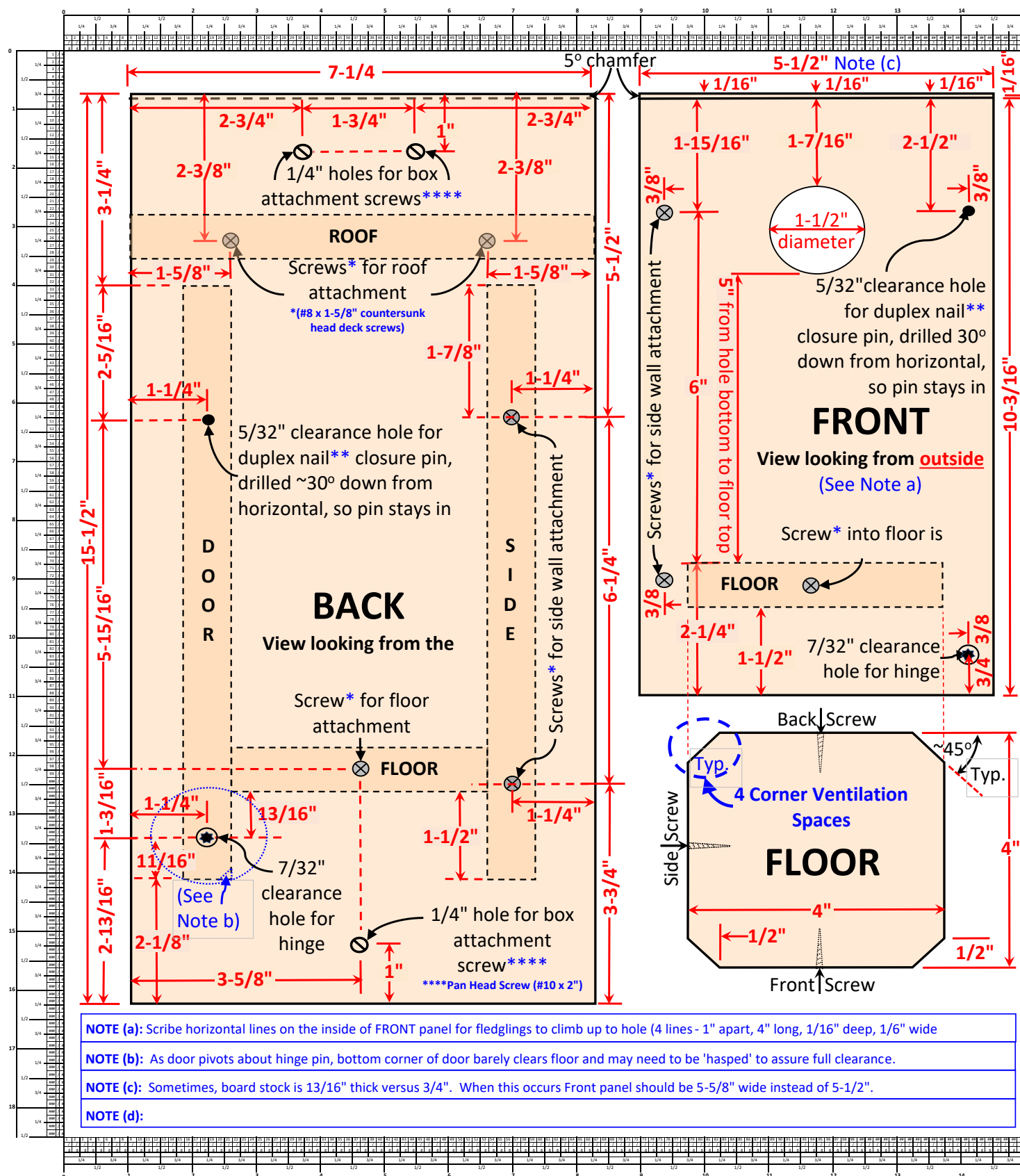


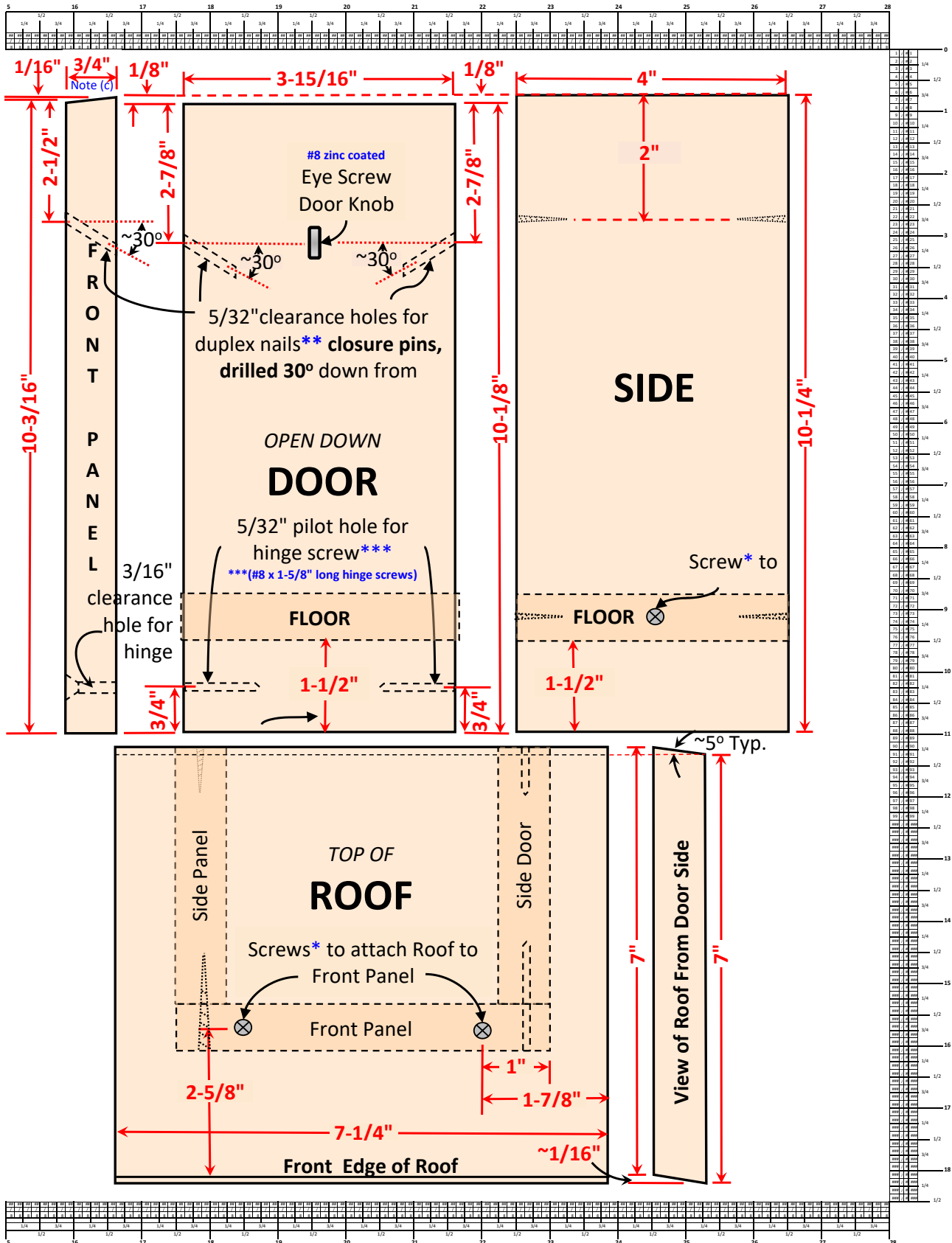
REX BOX

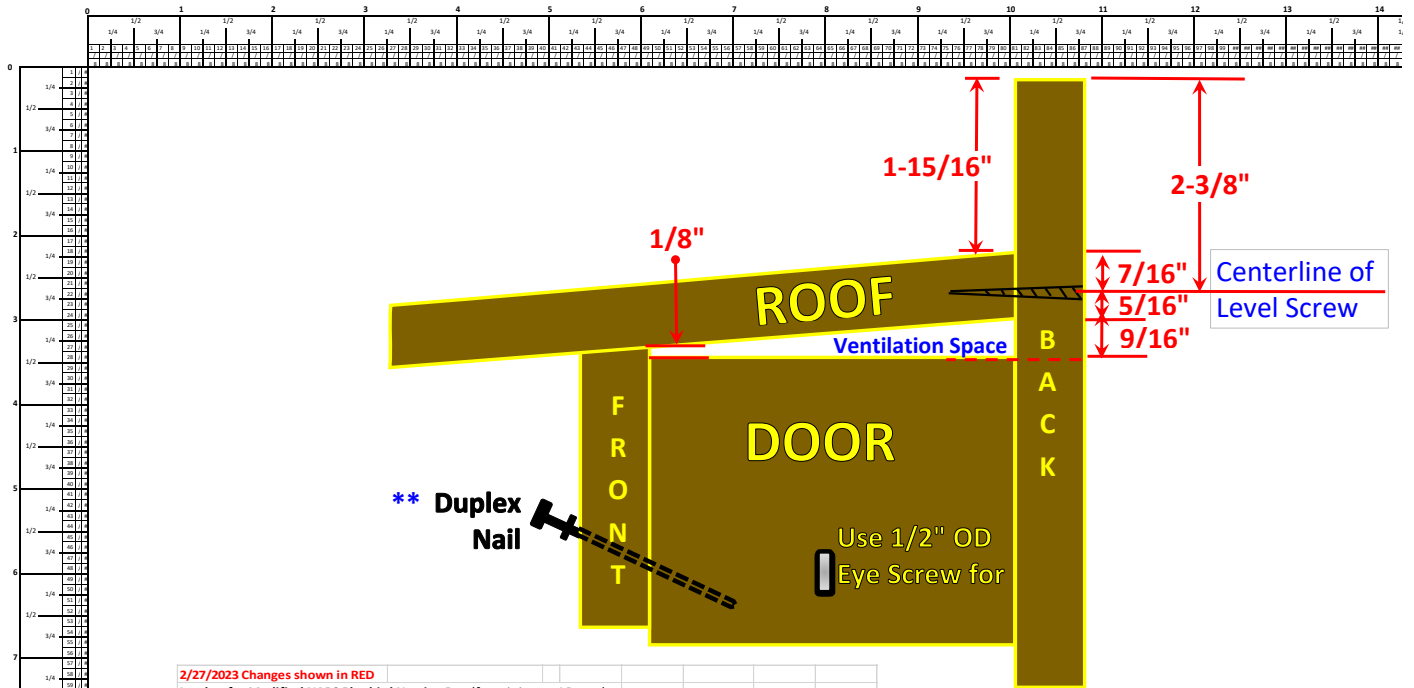
Version March 1, 2023
(See Edit Log Table Last Page)

The Best









2/27/2023 Changes shown in RED

Lumber for Modified NABS Bluebird Nesting Box (for minimum 4 Boxes):

- (2) 1"x 8"x 8' nominal boards of rough cedar to make **fronts, backs & roofs**
• Note: actual board dimensions will be 7/8"x 8", with thicknesses of 5/8", 3/4", or 13/16", depending on supplier
- (3) 1"x 6"x 8' nominal board of rough cedar to make **doors, sides & floors**
• Note: actual board dimensions will be 5/8"x 8", with thicknesses of 5/8", 3/4", or 13/16", depending on supplier
- (1) 1"x 4"x 8' nominal board of rough cedar to make **noel guard blocks** (3/4"x 3 3/4"x 5 1/4")
• Note: actual board dimensions will be 3/4"x 8", with thicknesses of 5/8", 3/4", or 13/16", depending on supplier
- (1) 2"x 4"x 8' nominal fir board for **pole mount** (why fir? ... see below)
• Note: actual board dimensions are 1 1/2"x 3 3/4"x 8'

Lumber details: Preferred wood is rough cedar, as flat and straight as possible, with no loose knots or cupping. Smooth side of boards should form the outside of the box for better rain runoff. NEVER USE TREATED LUMBER!!

- (1) - 1"x 8"x 8' = (6) 1"x 7 1/4"x 15 1/2" back panels, and
(1) - 1"x 8"x 8' = (4) 1"x 5 1/2"x 10 1/4" fronts & (7) 1"x 7 1/4"x 7" roofs.
- (1) - 1"x 6"x 8' = (23) 4"x 4" box floor panels, (1) - 1"x 4"x 8' = (17) 1"x 3 1/4"x 5-3/8" noel guard blocks
(1) - 1"x 6"x 8' = (9) 1"x 4"x 10 1/4" side panels, and
(1) - 1"x 6"x 8' = (9) 1"x 3-15/16"x 10 1/4" doors. (1) - 2"x 4"x 8' fir = (4) 2"x 4"x 21" support panels

Hardware for Modified NABS Bluebird Nesting Box (to make 4 Boxes):

- (4 x 1 = 4) #8 screw eye for door handle
(4 x 3 = 12) Hillman SS Pan Head Phillips Screw, #10 x 2", 100-Pack \$23.99 for connecting box to 2x4 mounting board.
(4 x 2 = 8) #8 x 1 1/4" deck screws (to attach noel guard to front of box without going through)
(4 x 2 = 8) Duplex nails (angled keeper pins for 4 BB boxes): cut to 2 inches long, then grind to rounded tip
(4 x 10 = 40) #8 x 1-5/8" deck screws (for attaching panels, roof and floor to each other)
(4 x 2 = 8) Hinge Screw: #8 yellow zinc plated constr screw T-25 star head w/ min 1/2" unthreaded shank below head

Tools Required to make Box, Cone and Noel Guard

- Table Saw, Miter Saw, Hand Drill
- 3/16" brad point drill bit (for hinge clearance holes)
- 7/64" drill bit (for hinge pilot holes)
- 7/16" brad point drill bit (for U-bolt holes)
- Phillips & Star screwdrivers, and Tin Snips
- Clear sealant for exposed cuts
- Rivet Tool
- Various jigs to assist assembly

Cone Predator Guard: Cut out 55" section from 2' diameter circle of 28-gauge sheet metal. Center hole is diameter of the pole. Flaring of center hole is to seal against pole. Pull edges together and hold with 3/16" pop rivets to form cone. Thread cone over pole and support underneath with hose clamp or screws so it wobbles.



Noel Guard: Take 3 1/4" x 5 1/4" Noel block with 1 1/2" hole core drilled 3/4" from top edge and cut 1/2" angles off corners. Then cut 6"x 18" strip of hardware cloth and bend around block, tying ends together and affixing with 1/2" staples. Bend exposed spines stick outward to prick predator paws.



Why use FIR versus PINE or WHITEWOOD for the 2"x4" mounting board?

- Grain and Stability:** If wood grain lines are straight and close together, wood is strong and stable. Fir has tight, close grain lines. Pine has broad grain lines that wander, making it far weaker than fir. The soft wood between the grain lines shrinks and expands, making the wood cup or twist. Fir has little soft grain; much less than Pine. Fir is much less prone to warping or twisting, and much stronger than pine.
- Weathering:** Fir offers stability when used for exterior applications. Even though fir will shrink and expand as it absorbs moisture, it always returns to the same shape. When fir stabilizes, it will take on the shape of wherever it is installed. Pine, under the same circumstances, will take on moisture, swell and warp completely out of its original shape.

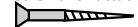
*** Hinge Screws: Simpson Strong-Tie Galv #9 x 2.5 Hex Drive Screw



*** Hillman SS Pan Head Phillips Screw, #10 x 2", 100-Pack \$23.99



**** Noel guard Block Screws: #8 x 1-1/4" deck screws for attaching panels to each other.



Conversion Table for Different Board Thicknesses

DRWG NOTES	5/8"		3/4"		13/16"	
	Inches	Decimals	Inches	Decimals	Inches	Decimals
a	5/8"	0.625	3/4"	0.75	13/16"	0.8125
b	5/8"	0.625	3/4"	0.750	13/16"	0.813
c	2-7/16"	2.438	2-3/8"	2.375	2-11/32"	2.344
d	2-7/16"	2.438	2-3/8"	2.375	2-11/32"	2.344
e	1-5/16"	1.313	1-1/4"	1.250	1-7/32"	1.219
f	1-5/16"	1.313	1-1/4"	1.250	1-7/32"	1.219
g	5-7/8"	5.875	5-15/16"	5.938	5-31/32"	5.969
h	1-1/4"	1.250	1-3/16"	1.188	1-5/32"	1.156
i	1-5/16"	1.313	1-1/4"	1.250	1-7/32"	1.219
j	15/16"	0.938	13/16"	0.813	3/4"	0.750
k	1-5/8"	1.625	1-1/2"	1.500	1-7/16"	1.438
l	1-5/16"	1.313	1-1/4"	1.250	1-7/32"	1.219
m	2-11/16"	2.688	2-5/8"	2.625	2-19/32"	2.594

Edits

Date	Description of Change	Author
12/20/2022	Changed Hinge screws from 1-5/8" to 2-1/2".	Rex
12/20/2022	Added Note (c) stating that if board thick-ness was 13/16" instead of 3/4", that front panel would be 5-3/8" wide, not 5-1/2".	Rex
12/20/2022	Changed 2x4 Mount holes from 7/16" to 3/8"	Rex
2/27/2023	Changes hinge screw to #8 yellow (Home Depot)	Rex
3/1/2023	Changed details of Cone Predator Guard	Lou