

# *Perimeter Security Products*

# **Standard Ground Bunker**

# **Installation Instructions**



**Perimeter Security Products**

**DIVISION OF SPIRIT OF AMERICA CORPORATION**

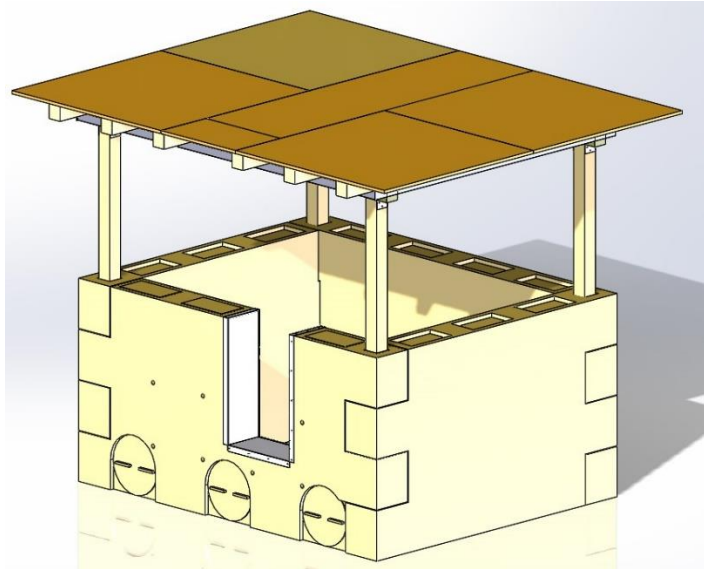
60-432-7158 Phone 260-459-0929 Fax 800-860-2855 Toll-free [www.soacorp.com](http://www.soacorp.com)

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### Components

Items packaged for the Standard Ground Bunker include:

1. 1 – 4' (tall) x 8' (long) Wall Sections – Long
2. 1 – 4' (tall) x 8' (long) Wall Sections – Long with Walk Thru
3. 2 – 4' (tall) x 6.5' (long) Wall Sections – Short
4. 2 – Joist Stringer
5. 10 – Treated 4 x 4 x 96 (4 Posts & 6 Rafters)
6. 1 – Treated 4 x 4 x 84
7. 4 - Plywood Roof Panels – 48" x 48"
8. 1 – Plywood Roof Panels – 24" x 96" with Hinged Access Door
9. 4 – Corner Tie Down Bracket
10. 1 – Sheet of Rubber Roofing
11. Hardware - Misc
12. Tools – Misc



*Note: Read the entire set of instructions prior to beginning the installation of the Standard Guard Tower.*

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### Introduction

The Ground Bunker itself is manufactured with four separate wall units that allow quick and easy assembly. Once in position, the walls are filled from the top using sand as ballast. The sand filled walls provide the guards inside with 360 degrees of protection from 9mm, 5.56, and 7.62 threats. 12" dumps are provided for easy removal of the ballast allowing the Standard Ground Bunker to be repositioned as needed.

The overhead cover is 3/4" plywood. Lights, sensors, and antenna can be installed if desired. Access onto the cover can be reached via a hatch type access panel that is pre-installed for convenience. The Standard Ground Bunker eliminates the time and the mess associated with using sandbags. This product is a recoverable asset that can be broken down and stored.

### Preparation

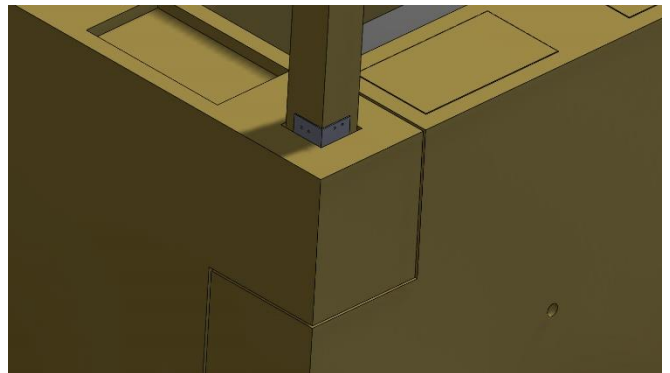
It is suggested that the contents of the crate be unassembled, set aside, and readied for assembly. Verify that all components are accounted for, especially if the Bunker has been assembled and disassembled in the past.

The footprint of the Ground Bunker is about 7' x 8'. Clear and level the ground where the box will be placed. The ground should be firm. Position the Ground Bunker so the access opening is towards the non-threat side.

### Wall Assembly

There are four wall sections on the Standard Guard Tower, two longer and two shorter. Note, one long wall has access opening and should be placed toward non-threat side. When connecting the walls, place the sand dumps so they will be on positioned on the outside of the Bunker.

After you have the 2 corners positioned together, slide the Corner Tie Down Bracket into the top tab and then insert an 8' long 4x4 into the opening. The Tie Down Bracket should be nailed to the post at this time to anchor the corner post to the walls. See drawing showing installed Bracket.



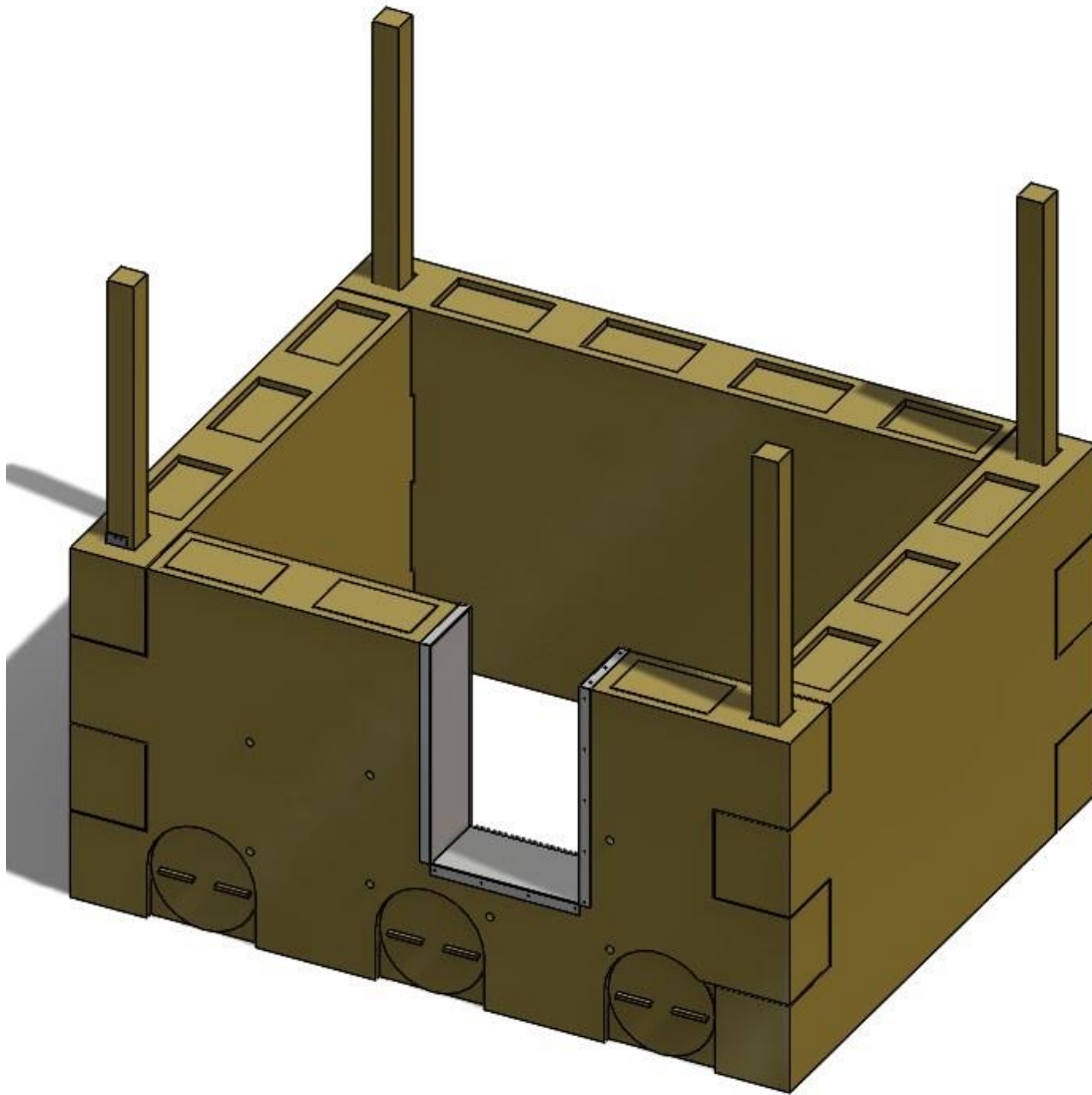
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Continue by connecting all of the wall segments together with the Tie Down Bracket. See drawing below.



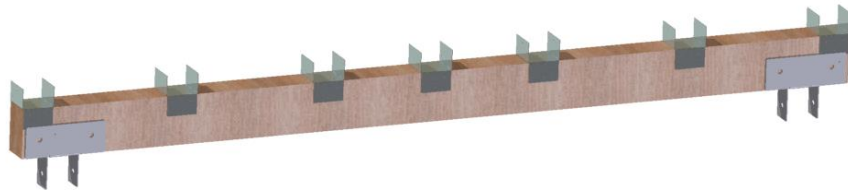
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## Roof Assembly

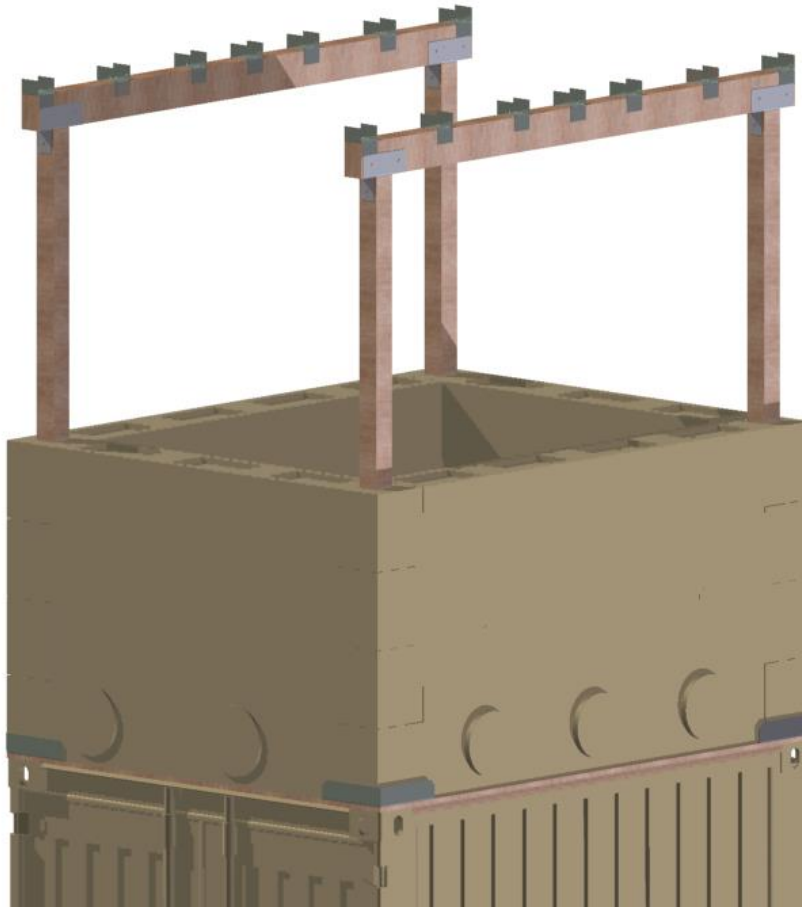
The next assembly is the roof. This will entail adding the joist stringer assemblies, rafters, sheeting, and rubber roof material.

### Joist Stringer Assemblies

There are two joist stringer assemblies with two post brackets and seven rafter brackets already attached. The bracket orientations are symmetrical on these joist stringers.



Fasten both joist stringers to the posts. The orientation will be from front to back as shown.

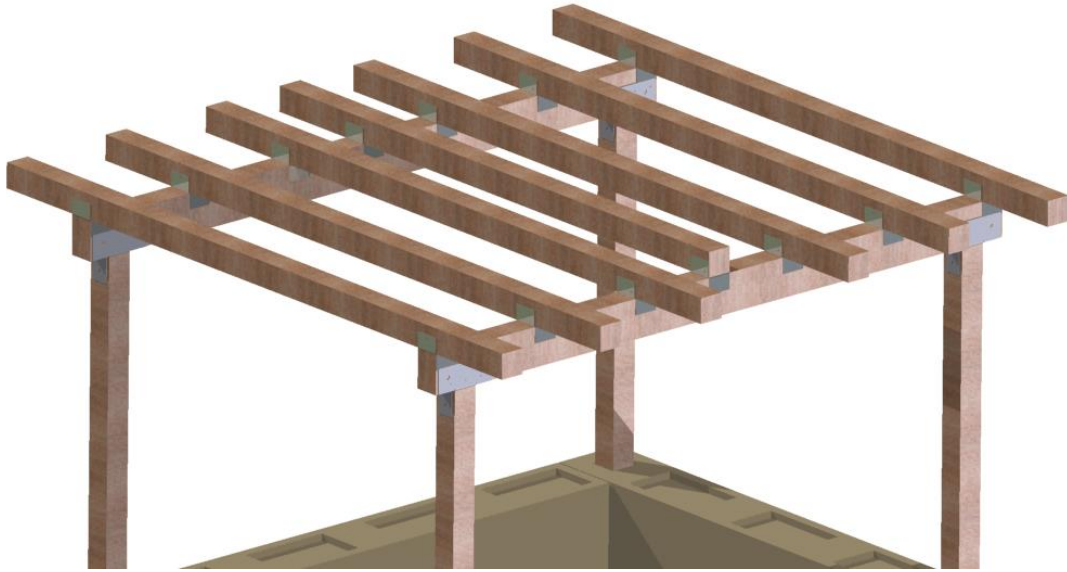


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### Rafter Installation

Install the remaining six 4" x 4" x 8' timbers and the shorter 4" x 4" as rafters as shown. The rafters need to extend past the joist stringer assemblies on the ends by **12 3/4"**. The shorter 4" x 4" will be flush with the joist at one end. This is where the access panel will be located. Orient the shorter 4" x 4" to give the best access to the roof. In these instructions it will be shown to the right.

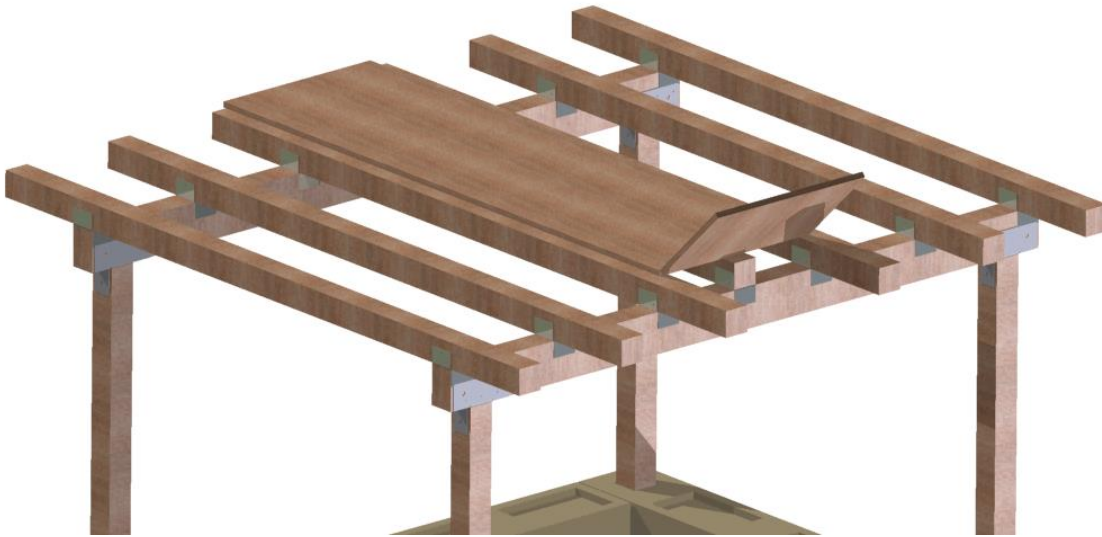


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## Roof Sheeting Installation

There are five roof panels on the Standard Ground Bunker. There are four 4' x 4' sheets of  $\frac{3}{4}$ " plywood and one hinged panel 24" wide and 8' long including the 14  $\frac{1}{2}$ " hinged access panel.

The sheeting will stick out about a foot on the front and back of the rafters and will be flush with the rafters on the sides. It is suggested to start with the 24" x 96" panel and locate it as shown centered on the rafters flush with the ends of the rafters. Make sure that the panel has the hinged end located where the middle rafter "falls short". Fasten in place to the rafters.



Add two of the 48" x 48" sheets as shown and fasten to the rafters.



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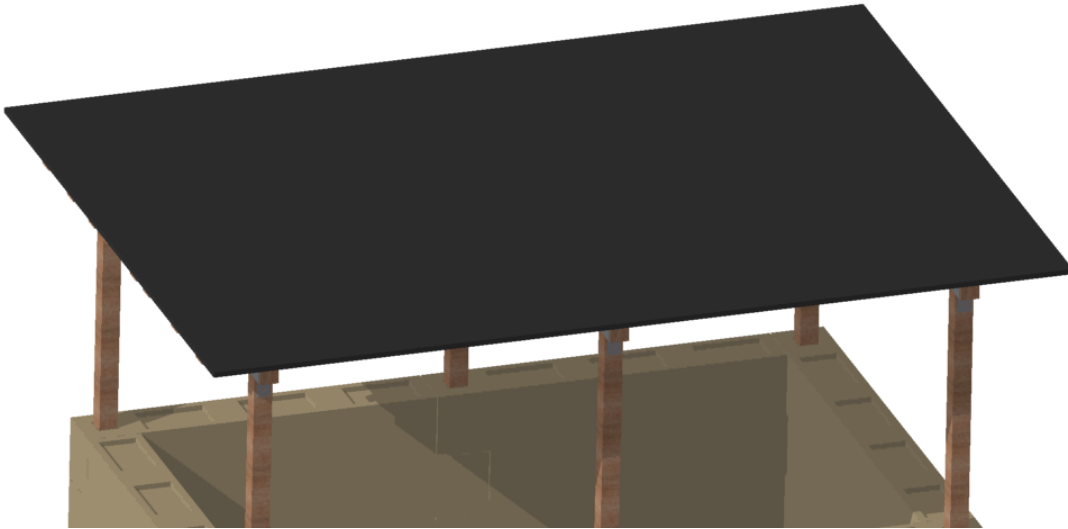


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Add the final two 48" x 48" sheets as shown and fasten to the rafters.



Stretch the rubber roof material over the top, pulling it down and fasten it on the underside of the roof panels. Using a sharp knife slit the material at the side seams of the access panel allowing it to be raised up.



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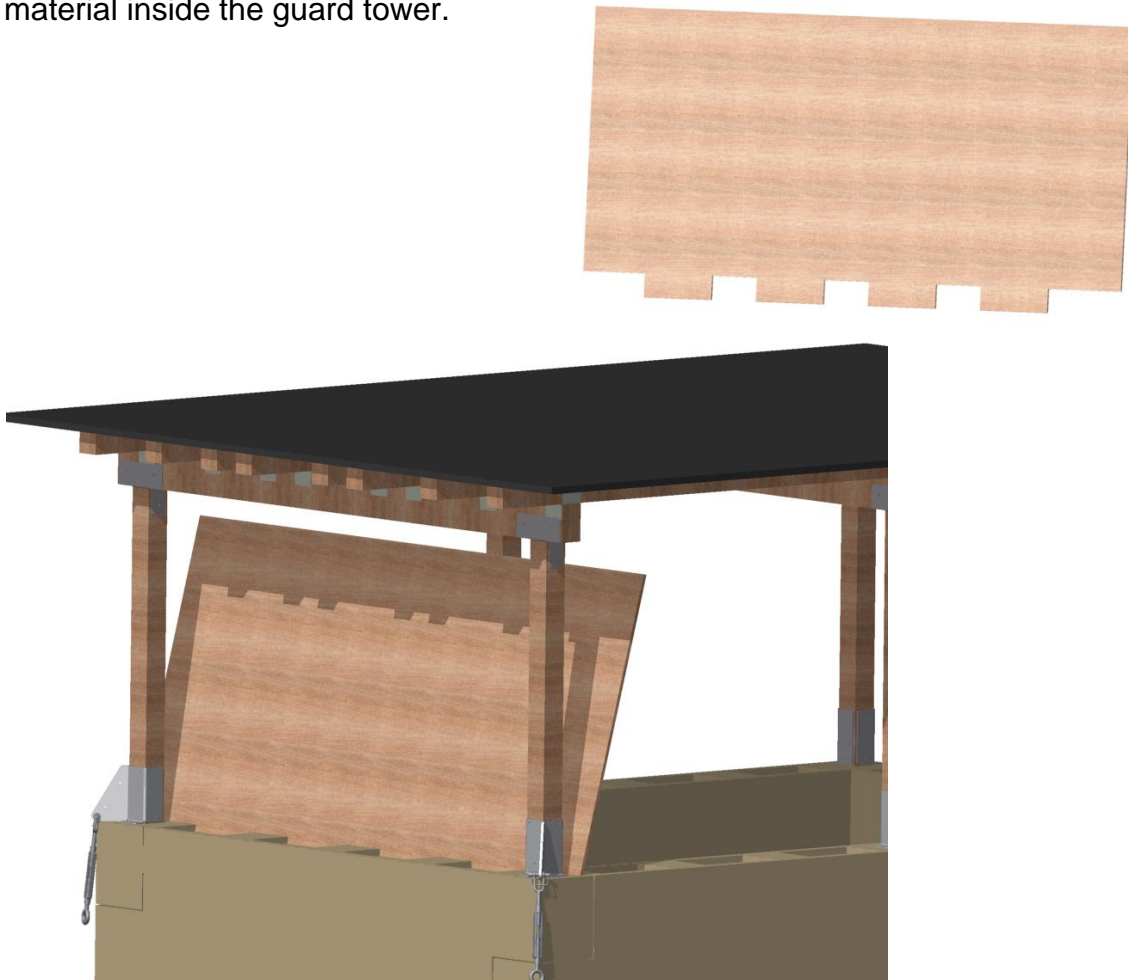
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### Ballast/Fill Material

The wall sections need to be filled with ballast, which will typically be sand. To add the fill material, remove the caps from the tops of the wall sections and fill with sand or similar fill material. Make sure that the fill material is worked into all corners to assure full ballistic protection. Once the ballast material is in place, the walls provide protection from weapons up to 7.62mm including armor piercing ammo.

The ballast material also makes the guard tower more rigid and able to withstand wind and seismic forces.

One way to speed up the filling of the wall sections is to take a piece of plywood and notch one side to fit the openings. With this tipped up and held in place a loader can slowly pour the fill material into the wall sections and not get a lot of material inside the guard tower.



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## Additional Comments

Congratulations on the completion of the installation of your Standard Ground Bunker. Your troops, equipment, or supplies are now able to be better protected. Through this installation manual we have provided a more or less step by step method to complete the installation. Understanding these methods is very important for the quickest and most functional implementation.

If you have specific questions regarding the installation of the Standard Ground Bunker, you may contact Perimeter Security Products at the following:

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