

INTRODUCTION

In the construction industry, falls are the leading cause of worker fatalities. Each year, on the average, between 150 and 200 workers are killed and more than 100,000 are injured as a result of falls at construction sites. The standard for fall protection deals with both the human and equipment-related issues in protecting workers from fall hazards. The unique feature of our product is the way it attaches and detaches to the top plate. After the entire roof is completed, you simply remove the safety pin and the top clamp bolt, and then let the bracket slip away from behind the frieze block.

OBJECTIVE

The objective of this booklet is to supplement the “Hands on” training class provided by FRAME PRO PRODUCTS, LLC. The Stacker Bracket System™ is a safety tool designed for protecting workers who perform stacking, fascia, sheathing, nailing, and any other roof edge operations on construction sites. The Stacker Bracket™ has been designed and engineered to meet OSHA requirements for scaffolding and fall protection.

In general the employers must ensure that:

- Safe work procedures are used.
- Workers are trained in the proper use and maintenance of **all** aspects of your protection systems.
- System is inspected daily for modifications or any unsafe condition.
- Daily inspections are documented and corrective actions taken.
- Those erecting, dismantling or modifying the system are under the direct supervision of a qualified person.

MATERIAL IDENTIFICATION AND INSPECTION

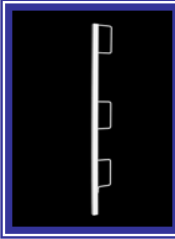
There are 4 basic parts to the Stacker-Bracket system.



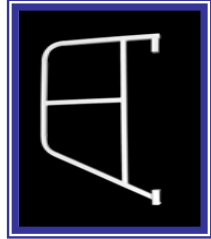
Support Bracket
Part #SBBF



Top Clamp
Part # SBTC4,6,8,12



Guard Rail Post
Part # SBGP



End Rail
Part # SBER



INSPECTION

Visually inspect all parts: brackets, clamps, guard-rail posts, and end rails, for broken welds, bent components, or stripped threads. Inspect planks and 2 x 4 rails for cracks and splits.

PRE-INSTALLATION

In the event that the parts aren't pre-assembled, you'll need to attach the Top Clamp to the support bracket. (Be sure to match correct Top Clamp with top plate size)

Using a small amount of thread lube, attach the Top Clamp to the Support Bracket. Start the hex bolt by hand and then use the ratchet to finish tightening approx. ¼ turn past snug. To avoid damaging the threads, DO NOT use an impact wrench with this system at any time.

Stage #1: Planning

A. Manpower:

1. Minimum of two (2) people trained on installation Procedures

B. Tools

1. Roof layout diagram
2. Spray paint or keel (layout)
3. 9/16" deep socket with 3/8" ratchet
4. Spray lubricant or lithium grease
5. Extension ladder with hook

C. Stacker Bracket™ System

1. One bracket with support brace
2. One top clamp (4" for 2x4 wall – 6" for 2x6 wall, Etc.)
3. One guard rail post per bracket
4. End Rail at end of scaffold run

INFORMATIONAL NOTE

With full hip roofs, brackets are placed all the way around the top plate with corners connected on a 45. End rails are not necessary on hip roofs.

5. One lowering strap per bracket at sheer wall locations

6.

D. Planking Material

1. Two (2) 2x10 – 10' Scaffold Planks or equivalent per section (OSHA approved)
2. Three (3) 2x4 – 10' DF#1 Hand Rail per section (OSHA approved metal rails are also acceptable)

WARNING

This system is engineered for use with **2x4 DF #1** handrails or approved metal rails and scaffold grade planks. Failure to use designated materials may result in bodily injury or death.

Stage #2: Layout

A. Roof Plan Diagram

1. The first step is to use a roof plan and layout the bracket location.
2. Place a mark on the floor 1'-0" from the outside corner of the building and continue marking the rest of the wall on 8'-0" centers at all eaves.

WARNING

Never use #1 D. F. 2 x 4's for spans greater than 8'-0".

3. When you get to the end of the wall, place a mark on the floor at 1 foot back from the end.
4. Continue around the house until all eave areas are laid out and marked on the floor.
5. Distribute the proper material to each mark on the floor.
 - a. One Stacker Bracket™ with Top Clamp attached. (Be sure to match clamp size with wall thickness)
 - b. One Guard Rail Post
 - c. One 36" Support Brace
 - d. Two 2x10x10'-0" scaffold planks
 - e. Three 2x4x10'-0" rails or approved metal rails.
 - f. End rails where necessary.
 - g. One optional lowering strap per sheer area.

Stage #3: Installation

1. Mark bracket location on 36" 2x4 making sure 2x4 crosses three studs, **even at sheer areas**.
2. Nail 2x4 to bracket at layout mark (NOTE! The bracket is not always in the middle of the 36" 2x4) DO NOT drive nail flush, as it must be removed later.

SAFETY NOTE

Prior to installation of the Stacker Bracket system, you must use a barricade to define a perimeter around the building to prevent injury from falling objects. Be sure to consult your local and state regulations for specific requirements.

Working from secured ladder (See page 11 for “Ladder Safety”)

3. Hang bracket over top plate at layout location



4. Using a ratchet handle, tighten the eyebolt at least 2 full turns past finger tight.
5. Install attached safety pin EVERY TIME.
6. Install guard rail post, with loops to the outside
7. Complete installing all brackets from a ladder, adding end rails as necessary.
8. At shear wall areas, the optional strap should be looped through the bracket with the free end over the top of the wall for future use.



SAFETY NOTE

Each Stacker Bracket© must have a plumb and line brace within one foot of bracket. (Please note that perpendicular walls are acceptable as a brace.)

Installing Planks and Rails

1. Spread Trus Joist™ Scaffold Planks, 2x4 D.F #1 handrails, to each bracket.
2. Always install first section of planks and rails, from an extension ladder.

SAFETY NOTE

Do not use a stepladder as a lean-to ladder.



3. From there, complete the entire run of planks and rails from either the scaffold or a ladder.



4. Continue lapping planks in one direction for consistent overlap.
(This simplifies the removal process.)

CARPENTRY INSTRUCTIONS

Before removing the Stacker Bracket© system, complete all roof carpentry, including the following.

- Install all roof vents and frieze blocks
- All hardware required by engineer. (L50, A35, H1, etc.)
- Complete all fascia
- Complete all roof sheeting and nailing
- All roof carpentry
- Nailing inspection approved and signed off
- Fireplace stacks, pop-outs, skylights, dormers, etc.
- Chevrons at gable ends w / OSHA approved harness.
- Holes cut for heat
- Tile kick at the eve installed



Stage #4: Removal

Note: Before removal, verify that caution tape is still in place around the entire building and have a Safety Monitor present at all times.

Safety Equipment Required (Must meet OSHA regs.)

- Full body safety harness (follow mfg. Instructions)
- Self-retracting life line (follow mfg. Instructions)
- Nail on roof anchors

Removal of Bracket System

1. Remove rails, uprights, and planks while working in reverse direction of installation.
2. Stack material on roof jacks, or lower to the ground.

SAFETY NOTE

Roof jacks must be properly made and secured.
CAUTION ! DO NOT overload jacks.



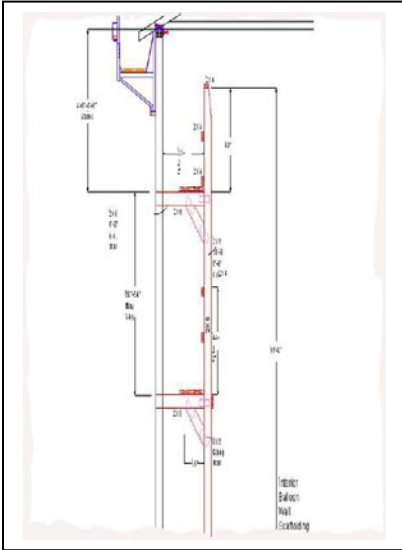
Dismantling Bracket System

1. At shear wall areas, attach the previously installed lowering strap to a rope or strap. While your assistant holds the strap, loosen the eyebolt and remove the top clamp. Then lower the bracket down using the strap or rope.
2. On walls without shear, remove the 36" 2x4, loosen the hex bolt, remove the top clamp, and bring bracket in between the studs.
3. Use a Safety Monitor to assure that lowering material does not injure someone.

Special Conditions

A. Balloon walls

O.S.H.A. requires interior fall protection at certain working heights. Since trigger heights vary from state to state, be sure to check local and state requirements. Below is an example of a variable height scaffold for use at interior locations of balloon walls. If you build or erect this first, it makes a good platform to work from while installing the bracket system.



Important !

- Notice both platforms and their heights.
- Sole plate allows for ease of assembly/removal
- Adequate bracing
- Maximum 8'-0" spans

SAFETY NOTE

Do not create a hazard at the balloon wall by having a platform at a high window without putting hand rails thru such openings.

B. Openings At Bracket Locations

When a Stacker Bracket© falls in an opening such as a window or doorway, you must install a double trimmer at that location, with three 16d nails at the top and bottom, along with the proper line brace.

C. Shear Walls

Where shear-walls occur, the optional strap should be looped through the bracket with the free end laid over the wall for future use.

D. Moving Installed Brackets

If a bracket needs to be moved for the framer/stacker, simply loosen the eye-bolt and move the bracket over a few inches. (Never loosen the hex bolt until you are ready to remove the entire system.)

Ladder Safety

Stairways and ladders are a major source of injuries and fatalities among construction workers. Below are some basic requirements from O.S.H.A. regarding ladder safety. Be sure to check with your local state for any special requirements.

- When portable ladders are used for access to an upper landing surface, the side rails **MUST** extend at least 3' above the upper landing surface.
- Ladders must be used **ONLY** for the purpose for which they were designed.
- Ladders must not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent movement.
- When ascending or descending a ladder, the worker must face the ladder.
- Each worker must use at least one hand to grasp the ladder when moving up or down the ladder.
- A worker on a ladder must not carry any object or load that could cause the worker to lose balance and fall.

Access Zones

Any employee working in a controlled area shall be under the direct supervision of a safety monitor, and shall comply with all safety regulations

Toe Boards

Regulations concerning toe boards include the following:

- Toe boards must be provided on all open sides and ends of railed scaffolds at locations where persons are required to work or pass under.
- A toe board must be securely fastened at a minimum of 4" (nominal) in height from its top edge to the level of the floor or platform. A toe board must have no more than 1/4 inch clearance above the floor level

Safety Monitor

The employer shall designate a competent person to monitor the safety of other employees, and:

- Shall be competent to recognize fall hazards
- Shall warn an employee when it appears that the employee is unaware of a fall hazard or is acting in an unsafe manner.
- Shall be on the same walking/working surface and within visual sighting distance of the employee being monitored.
- Shall be close enough to communicate orally with the employee.
- Shall have NO OTHER responsibilities which could take the monitor's attention from the monitoring function.

Summary

The most effective way to prevent job-related injuries is to implement and maintain a proactive safety program. A proactive safety program is one in which safety is a part of every decision made and activity performed during the course of the workday. The skill level of employees is such that it matches the job assignment, and appropriate training is provided to maintain such skills. A proactive safety program not only helps keep the workplace safe, but includes:

- Fewer work injuries
- Lower compensation insurance
- Lower absenteeism
- Lower employee turnover
- Higher job efficiency
- Higher employee morale
- Higher quality of work

Since safety awareness is not instilled in all people, it must be taught. However, all the training in the world cannot help those who cannot, or will not, master a safe mental attitude. So be willing to learn and enhance your safety skills in order to minimize the misery of accidents or death.

