

Adjust-A-Shore System™

Product Selection Guide



SHR



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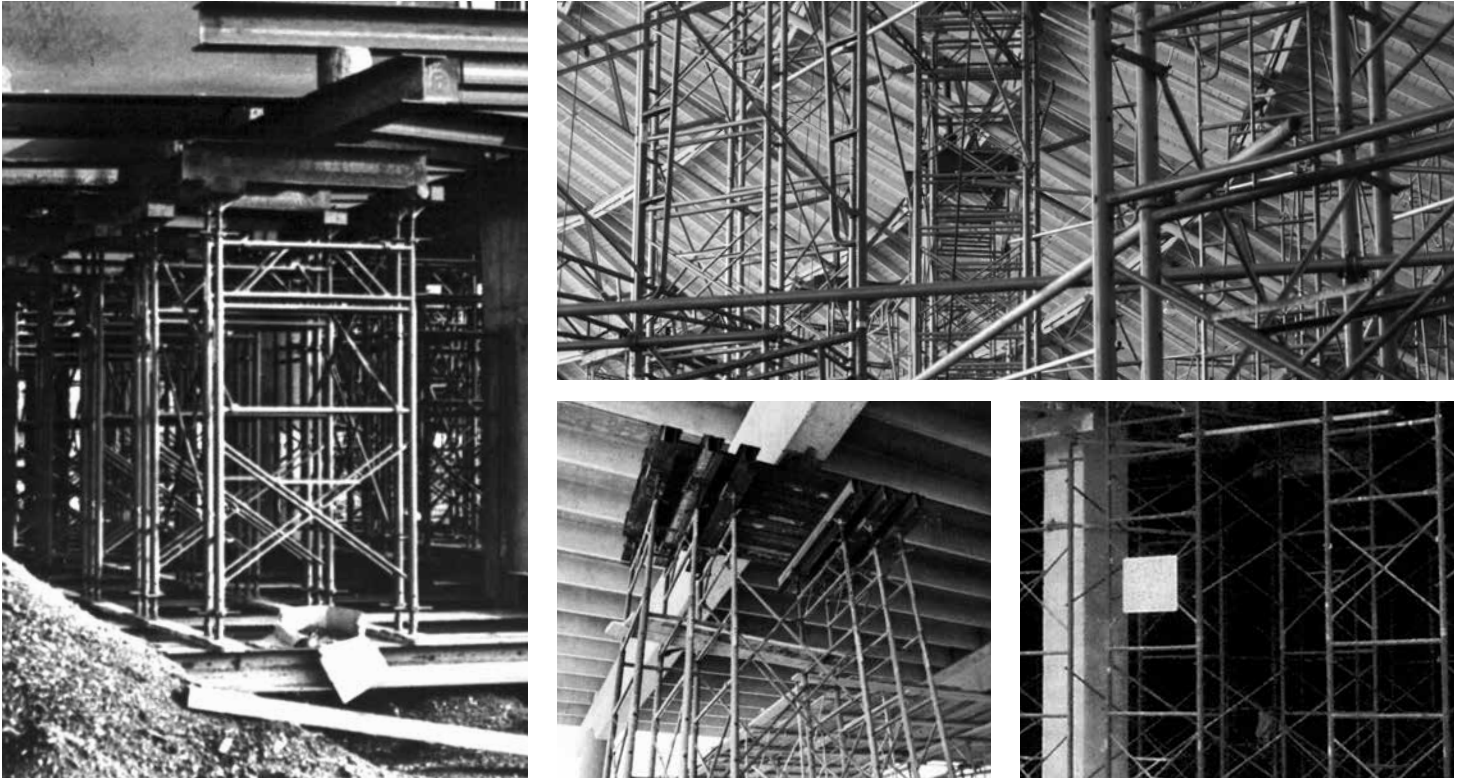
All drawings in this guide are for illustrative purposes only. This guide is intended for general information purposes only. Because of the many variables which affect the performance of the product line, some of the information in this brochure may not apply. For specific applications, contact BrandSafway.

Note: All scaffolds shall be erected, modified and dismantled only under the supervision of a Competent Person. Erection, use, maintenance and disassembly must conform to current manufacturer's instructions as well as all federal, state, provincial and local regulations. Copies of complete Safety Guidelines for these and other products are available from BrandSafway without charge.

Adjust-A-Shore System™

Raising the bar for quality construction

3



The Most Easily Adjusted Shoring System

The Adjust-A-Shore System™ demonstrates BrandSafway's innovative expertise and commitment to customer satisfaction. Only two types of frame base and extension (with screw jacks) are needed to reach virtually any shoring elevation.

Saving Money with Versatility

The innovation of the Adjust-A-Shore System™ provides multiple cost-saving benefits. Odd-sized frames and braces do not need to be inventoried, sorted and transported. The extension frame, which telescopes into the base frame and rests on the shore pins, may be fully extended (up to 5 ft.) without diminishing the 11,000 lbs. per leg (22,000 lbs. per frame) load capacity. This eliminates the necessity of considering decreased capacity due to shoring elevations or auxiliary lateral bracing. The extra capacity of the Adjust-A-Shore System™ reduces the number of towers needed, so engineering and supervision costs are reduced. On-site shoring layouts do not need to be revised if

shoring is erected before the support slabs are in place.

Saving Time with Simplicity

To reach a desired shoring elevation, final elevation adjustments are made with screw jacks and extension frames at the top of the tower instead of combining odd-sized frames and cross assemblies. The components fit together securely and easily, and cross braces attach to quick locks and on base frames. The diagonal gooser braces, which attach to the horizontal member of the frames, have spring-actuated locks.

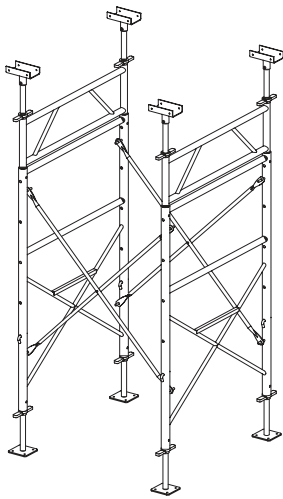


Figure 1 – Base with 1' 3" Extension

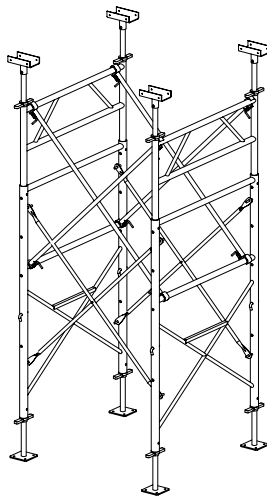


Figure 2 – Base with 2' Extension

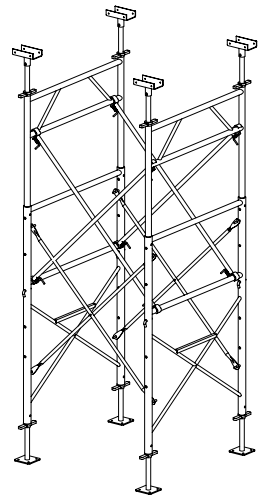


Figure 3 – Base with 3' Extension

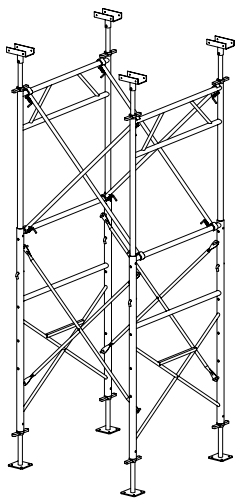


Figure 4 – Base with 4' Extension

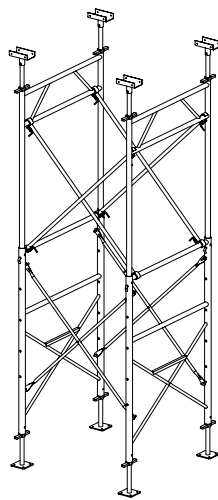


Figure 5 – Base with 5' Extension

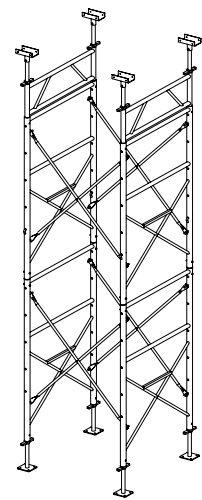


Figure 6 – Two-base

Extension frames can be extended from 1' 3" to 5' in height. Base and extension frames, with elevations shown from 7' 3" to 11', allow additional height provided by screw jacks (Figs. 1–5). A two-base and extension frame tower allows frame shoring elevations from 13' 3" to 17' (Fig. 6).

Additional base frames can be added as needed to reach virtually any shoring height.* Screw jacks at the top and/or bottom give final elevation adjustments. The extension frames are individually braced.

The positioning of the diagonal gooser braces start when the extension frame is set at a 2' or more extension (Figs. 2–5).

As the extension frames are extended, the diagonal gooser braces are connected

to various horizontals of the base frame and the extension frame. Diagonal gooser braces are attached to the bottom rungs of the base frame and extension frame for a 3' extension (Fig. 3). The placement of the diagonal gooser braces is simplified because there is only one combination per height adjustment.

A Dedication to Quality Service

Prior to painting, steel surfaces are etched with a phosphatized coating. Our dedication to high-quality service ensures long-lasting protection and paint adhesion.

Cross braces are stamped on the ends for quick and easy identification, and their tubular design allows for easier handling.

Quick locks, which attach to cross braces, speed the erection process and provide

years of trouble-free operation due to the stainless steel construction of latches and brass spacers. As part of the shoring system, we offer aluminum beams that can be used as joists and stringers, as well as Post Shores for applications where a frame system is inappropriate.

BrandSafway's expert staff of engineers and technicians is available to provide you with project-specific shoring layout needs. Contact your local BrandSafway branch for more information.

***Possible additional bracing required when extension exceeds 4'. Contact BrandSafway Engineering.**

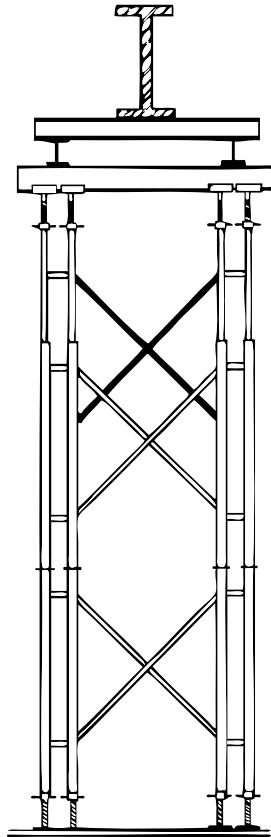


Figure 7 – Support of existing structural members (as in renovation work). Note use of spacer bars to increase tower capacity and steel cribbing to distribute loads to all legs.

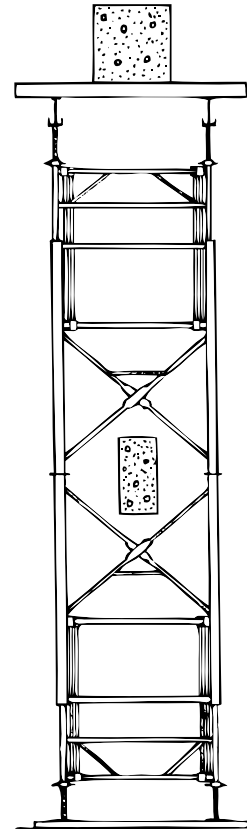


Figure 8 – Beam Shoring by straddling intermediate beam. Note that base and extension frames may be inverted.

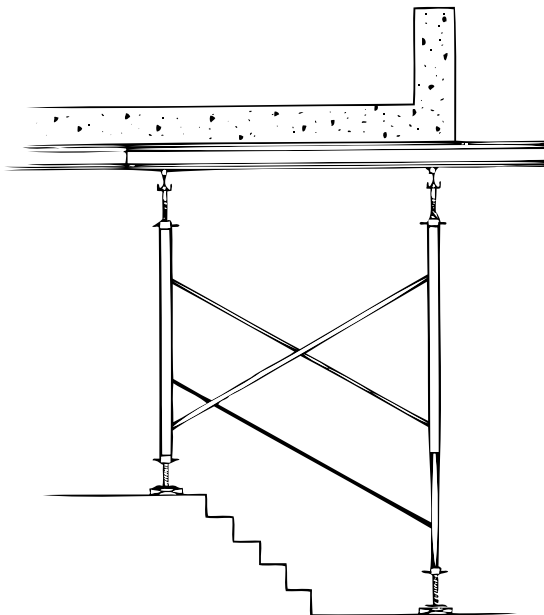


Figure 9 – Shoring with changes in base elevations. Note inverted base and extension frames.

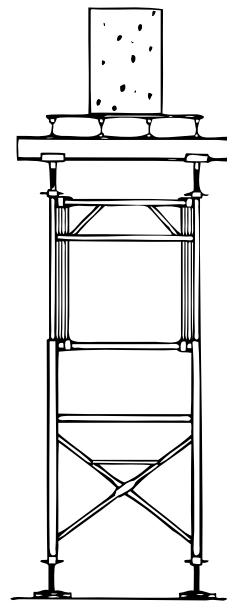


Figure 10 – Typical concrete beam shoring with Aluminum Shoring Joist.

Applications

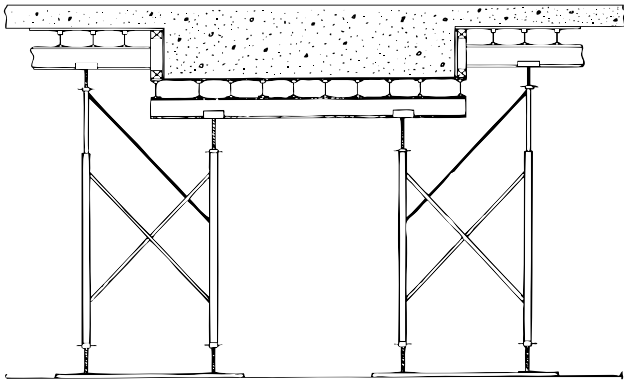


Figure 11 – Typical concrete drophead shoring with Aluminum Shoring Joists.

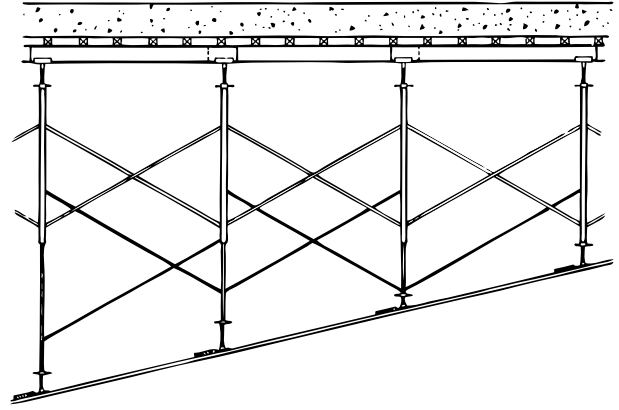


Figure 12 – Shoring from sloped surface below. Note inverted base and extension frames.

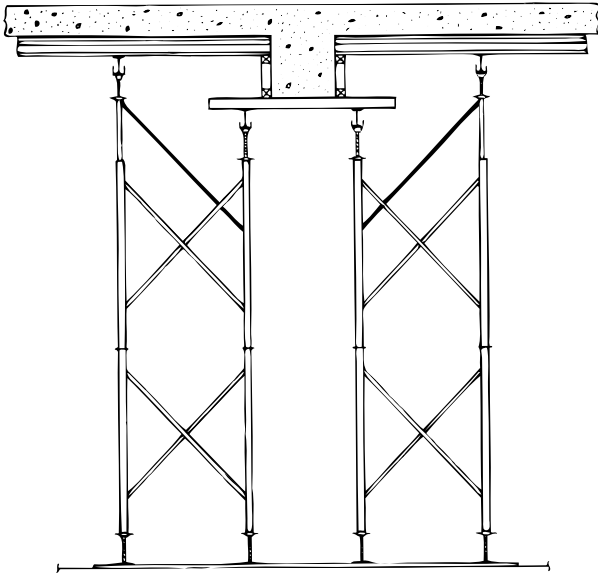


Figure 13 – Flat slabs with monolithic beams.

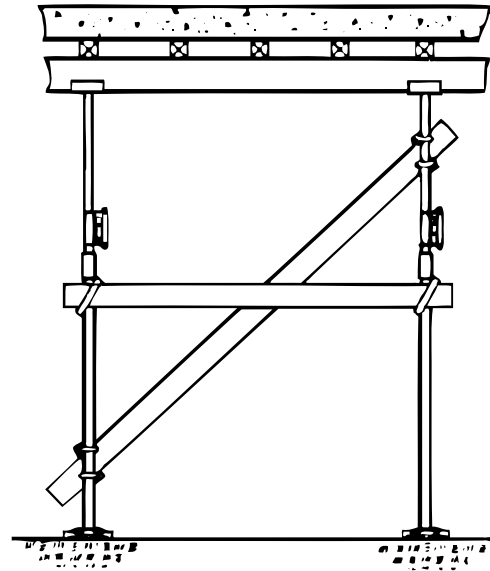
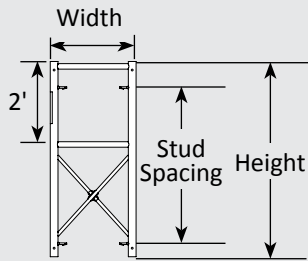


Figure 14 – Typical Post Shore application with wood plank bracing using timber bracing clamps.

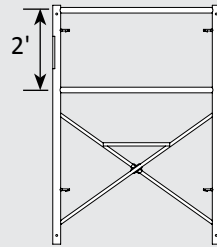
Note: Formwork above shoring towers is shown for illustrative purposes only. Site-specific forming details must be provided by a qualified formwork designer.

Frames

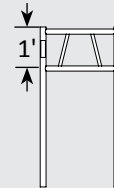
Part No.	Description	Width	Height	Stud Spacing	Weight
AS25	Base Frame	2'	5'	4'	50 lbs.
AS46	Base Frame	4'	6'	4'	66 lbs.
AS24	Extension Frame	2'	4' 4"		37 lbs.
AS45	Extension Frame	4'	5' 4"		50 lbs.



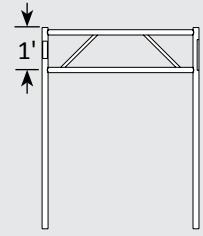
AS25



AS46



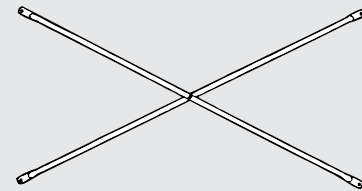
AS24



AS45

Cross Braces

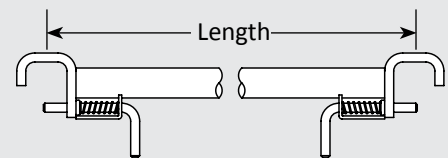
Part No.	Description	Weight
B44	4' x 4'	7.75 lbs.
B54	5' x 4'	9.25 lbs.
B64	6' x 4'	10.0 lbs.
B74	7' x 4'	12.0 lbs.
B84	8' x 4'	13.0 lbs.
B104	10' x 4'	15.75 lbs.



B_

Goosers

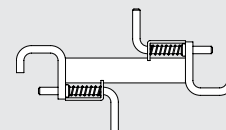
Part No.	Description	Weight	Length
G4	4' x 4'	11.1 lbs.	68 1/4"
G5	5' x 4'	11.9 lbs.	77 3/16"
G6	6' x 4'	12.9 lbs.	86 13/16"
G7	7' x 4'	13.9 lbs.	97"
G8	8' x 4'	15.0 lbs.	107 9/16"
G10	10' x 4'	17.1 lbs.	129 7/16"



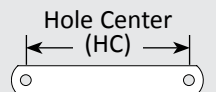
G_

Spacers

Part No.	Description	Weight	Length
G85	Goosener Spacer	5.2 lbs.	8 1/2"
G15	Goosener Spacer	5.8 lbs.	15"
SBX85	Spacer Bar	1.0 lb.	8 1/2" (HC)
SBX12	Spacer Bar	1.5 lbs.	15" (HC)



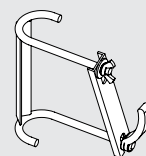
G85



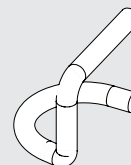
SBX_

Clamps & Pins

Part No.	Description	Weight
BC23	Timber Bracing Clamp	2.5 lbs.
ASP	Shore Pin	0.5 lbs.
HXCP	Coupling Pin	1.5 lbs.
SPTP	Shoring Pigtail Pin	0.33 lbs.



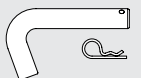
BC23



SPTP



HXCP



ASP

Bottom Jack Combinations

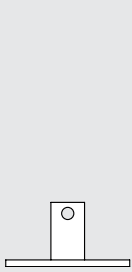
Part No.	Description	Weight	Dimensions
BPX	Base Plate	6.5 lbs.	7" x 7" x ¾"
SJ19/SJ23	Swivel Base Screw Jacks	21.0 lbs.	27¾" Long
SJ	Fixed Base Screw Jacks	14.0 lbs.	27" Long
C	Cap	0.25 lbs.	

Top Jack Combinations

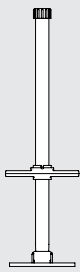
Part No.	Description	Weight	Dimensions
BPX	Base Plate	6.5 lbs.	7" x 7" x ¾"
SJ	Screw Jack	14.0 lbs.	27" Long
U8	U-Head, 4" x 8"	5.0 lbs.	4" x 8"
U88	U-Head, 8" x 8"	9.0 lbs.	8" x 8"

Clamps

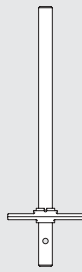
Part No.	Description	Weight
HDSA238	Swivel Clamp	4.0 lbs.
JBC	Junior Beam Clamp	0.5 lbs.



BPX



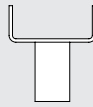
SJ19 / SJ23



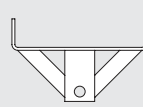
SJ



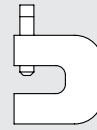
C



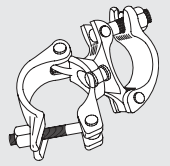
U8



U88



JBC



HDSA238

Components Required for Typical Tower Assemblies - 4'-Wide x 10'-Long Tower

Height	6' 10" – 8' 0"	8' 1" – 13' 0"	12' 10" – 14' 0"	14' 1" – 19' 0"	18' 10" – 20' 0"	20' 1" – 25' 0"	24' 10" – 26' 0"	26' 1" – 31' 0"	Extra 6' Section
Part No.	Qty.								
AS46	2	2	4	4	6	6	8	8	2
AS45		2		2		2		2	
ASP		4		4		4		4	
HXCP			4	4	8	8	12	12	4
G10		4		4		4		4	
B104	2	2	4	4	6	6	8	8	2
SJBPXC	4	4	4	4	4	4	4	4	
SJU88	4*	4	4*	4	4*	4	4*	4	
BC23					4	4	4	8	
Weight	339 lbs.	509 lbs.	508 lbs.	678 lbs.	688 lbs.	858 lbs.	857 lbs.	1037 lbs.	170 lbs.

Towers with base plate and screw jack on bottom and 8" x 8" U-Head screw jacks on top. If extension frames are extended only 15", deduct four G10 diagonal braces (56 lbs.).

*SJU88C required in place of SJU88 (spacer cap must be added).

1. Stripping allowance must be added to all minimum dimensions.
2. Whenever screw jack extensions exceed 12", consult BrandSafway Engineering.

Components Required for Typical Tower Assemblies – 2'-Wide Tower x 10'-Long Tower

Height	5' 10" – 7' 0"	7' 1" – 11' 0"	10' 10" – 12' 0"	12' 1" – 16' 0"	Extra 5' Section
Part No.	Qty.				
AS25	2	2	4	4	2
AS24		2		2	
ASP		4		4	
HXCP			4	4	4
G10		4		4	
B104	2	2	4	4	2
SJBPXC	4	4	4	4	
SJU88	4*	4	4*	4	
BC23			4	4	
Weight	307 lbs.	451 lbs.	454 lbs.	598 lbs.	138 lbs.

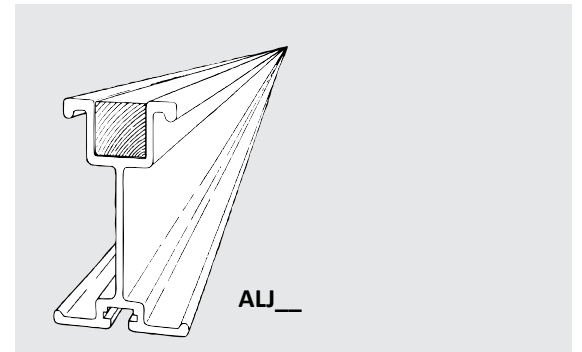
Towers with base plate and screw jack on bottom and 8" x 8" U-Head screw jacks on top. If extension frames are extended only 15", deduct four G10 diagonal braces (68 lbs.).

*SJU88C required in place of SJU88 (spacer cap must be added).

1. Stripping allowance must be added to all minimum dimensions.
2. Whenever screw jack extensions exceed 12", consult BrandSafway Engineering.

Aluminum Shoring Joists

Part No.	Length	Weight
ALJ7	7'	28 lbs.
ALJ9	9'	36 lbs.
ALJ11	11'	44 lbs.
ALJ13	13'	52 lbs.
ALJ15	15'	60 lbs.
ALJ17	17'	68 lbs.
ALJ19	19'	76 lbs.
ALJ21	21'	84 lbs.



Span and Load Capacities

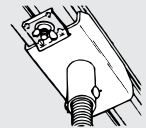
Simple Span (ft.)	4'	5'	6'	7'	8'	9'	10'	11'	12'
Total Load* (lbs./ft.)	2500	2100	1475	960	645	450	330	245	190

*Total load includes weight of formwork and concrete plus an additional 25% for live load. Deflection is limited to Length/360 calculated on dead load only. Minimum factor of safety is 2.2:1.

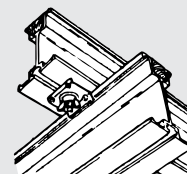
- Allowable uniform loads "simply" supported and laterally braced
- Reduces labor costs and lowers transportation costs
- 2" x 2" nailing strip for easy plywood attachment. Factory installed; field replaceable
- Reverse flange stiffening reduces damage during handling
- The channel on the underside of the beam accepts the ABC aluminum beam clamp or a ½" hex. head bolt
- 4"-wide flange fits standard 4"-wide U-Head on shoring jacks and post shores. Allows side-by-side installation in 8" wide U-Heads. Nests for compact shipment
- 6½" height compatible with other joists



ABC



Stringer to U-Head



Joist to Stringer

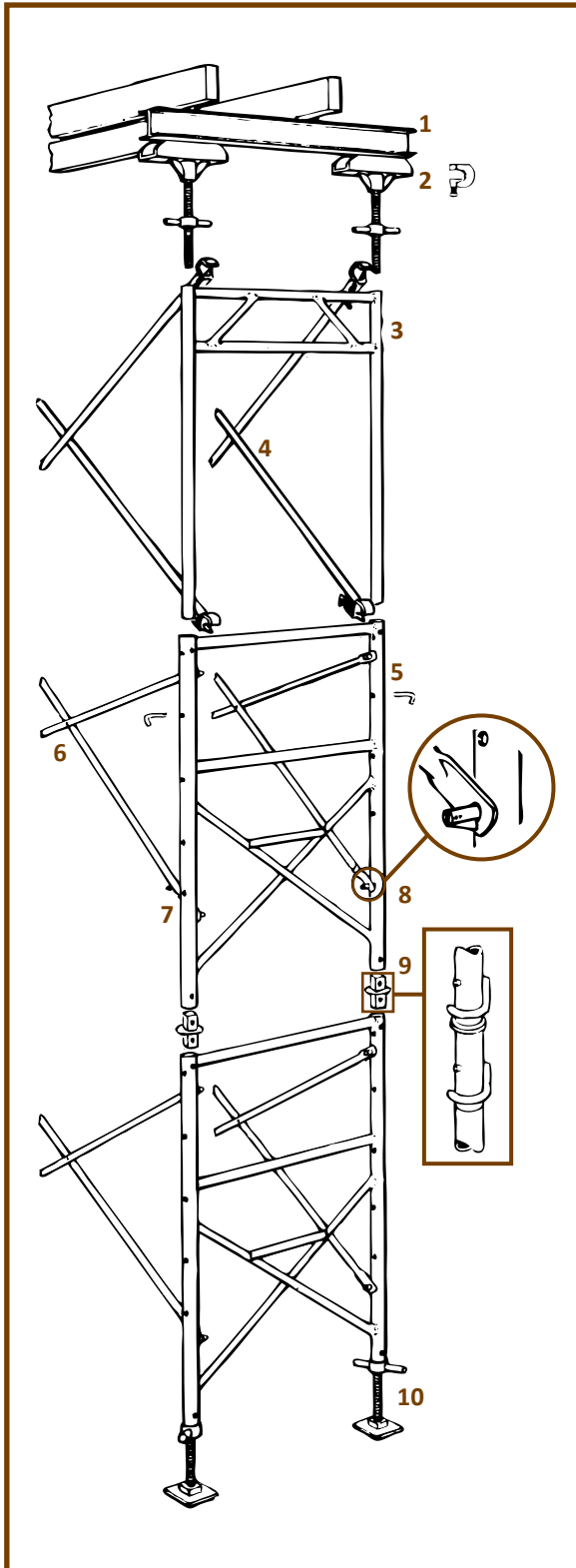


Used as either Joist or Stringer

Assembly

1. Steel beams, Safway® aluminum beams or timber may be used as stringers.
2. Screw jacks with U-Heads give easy height adjustment. Ruggedly constructed heads (4" x 8" or 8" x 8") provide convenient, heavy-duty saddles for placement of timbers or beams.
3. Extension frames (AS45 or AS24) telescope into base frames and rest on shore pins to give height adjustment (with the AS45) of 1' 3", 2', 3', 4'* or 5'*. This eliminates the need for odd-sized frames and cross braces, and in conjunction with screw jacks, provides infinite adjustability. Extension frames have no external locking devices to add bulk, create handling problems, or increase susceptibility to damage and job abuse.
4. Diagonal Braces (goosers), which are used for bracing the extension frame in its extended positions, snap onto header bars and require no tools for installation. They come in a variety of sizes to match cross brace sizes.
5. Shore pins fit into holes in legs of base frames to support extension frames at desired heights.
6. Cross braces for base frames are high-strength tubular steel. They are lightweight, easy to handle and come in a variety of sizes.
7. Base frames (AS46 or AS25). Holes at height adjustment intervals in legs receive shore pins for support of extension frames.
8. Quick Lock for attaching cross braces to base frames speeds erection and dismantling of towers.
9. Coupling pins provide alignment of base frames and can be secured using pigtail pins (SPTP) or bolts through holes in base frame legs to permit hoisting of assembled towers.
10. Screw jacks are available with flat base plates, with U-Heads for 4" and 8" lumber, and with swivel bases, allowing the contractor to choose the type of jack best suited to his job requirements. Stub Acme threads provide easy adjustment (4 turns per inch), and are highly resistant to job abuse and damage. Base plates distribute shoring loads to sills.

*On some applications, additional bracing may be required to resist lateral loads. Contact BrandSafway Engineering.



Shoring for Concrete Formwork Safety Guidelines

Shoring safety is everyone's responsibility!

Everyone's safety depends upon the proper erection and safe use of shoring. Inspect your shoring before each use to see that the assembly has not been altered and is safe for your use.

Post these shoring safety rules in a conspicuous place, and be sure that all persons who erect, use or dismantle shoring are aware of them.

Follow all state, provincial, local and federal codes, ordinances and regulations pertaining to Shoring.

Inspect all equipment before using. Never use any equipment that is damaged, severely rusted or is missing locking devices. Any component which cannot be brought into proper alignment or contact with the component into or onto which it is intended to fit shall be removed and replaced.

A **shoring layout** shall be available and used on the jobsite at all times.

Inspect erected shoring and forming for conformity with layout and safety practices prior to pour, during pour, and after pour until concrete is set.

Consult your BrandSafway representative when in doubt. Shoring is our business. **Never take chances.**

! WARNING
SERIOUS INJURY OR DEATH CAN RESULT FROM YOUR FAILURE TO FAMILIARIZE YOURSELF AND COMPLY WITH ALL APPLICABLE SAFETY REQUIREMENTS OF FEDERAL, STATE, PROVINCIAL, AND LOCAL REGULATIONS. UNDERSTAND THESE SAFETY GUIDELINES BEFORE ERECTING, USING, OR DISMANTLING THIS SHORING.

I. Prior to the Pour

A. General

1. **Use BrandSafway's Recommended Safe Working Loads and Procedures For:**
 - a. Span, spacing and types of shoring members.
 - b. Types, sizes, heights and spacing of vertical shoring supports.
2. **Use lumber equivalent to the stress,** species, grade and size specified on the layout. Use only lumber that is in good condition. Do not splice wood members between their supports.
3. **Provide proper foundation** (sills, beams or cribbing) below base plates for the distribution of leg loads to concrete slabs or ground. Existing ground shall be level and thoroughly compact prior to erection of shoring to prevent settlement. Consideration must be given to potential adverse weather

conditions throughout the pour cycle such as washouts, freezing and thawing of ground, etc. Consult a qualified soils engineer to determine the proper size foundation required for existing ground conditions.

4. **Do not make unauthorized changes or substitution of equipment;** always consult your BrandSafway supplier prior to making changes necessitated by jobsite conditions.
5. **Provide guardrail systems on all open sides and openings in formwork and slabs.**
6. **Access must be provided to all forming deck levels.** If it is not available from the structure, access ladders or stair towers must be provided. Access ladders must extend at least 3 ft. above formwork.

! WARNING
FALL ARREST EQUIPMENT ATTACHED TO SHORING MAY NOT PREVENT SERIOUS INJURY OR DEATH IF A FALL OCCURS.

7. **If motorized concrete placement equipment is to be used,** be sure that lateral loads, vibration and other forces have been considered and adequate precautions taken to assure stability.
8. **Plan concrete pouring methods and sequences** to ensure against unbalanced loading of the shoring equipment. Take all necessary precautions to avoid uplift of shoring components and formwork.
9. **Fasten all braces securely.**
10. **Check to see that all clamps, screws, pins and all other components are in a closed or engaged position.**
11. **Make certain that all base plates and shore heads are in firm contact with the foundation and forming material.**
12. **Use special precautions** when shoring to or from sloped surfaces.
13. **Avoid eccentric loads on U-Heads, and top plates** by centering stringers on these members.
14. **Avoid shock or impact loads** for which the shoring was not designed.
15. **Do not place additional temporary loads** (such as rebar bundles) on erected formwork or poured slabs, without checking the capacity of the shoring and/or structure to safely support such additional loads.
16. The completed shoring setup shall have the specified bracing to give it lateral stability.
17. The erection of shoring should be under the supervision of an experienced Competent Person.

B. Frame Shoring

1. **Follow the shoring layout drawing and do not omit required components.**
2. **Do not exceed the shore frame spacings or tower heights** as shown on the shoring layout.
3. **Shoring load must be carried on all legs.**
4. **Plumb and level all shoring frames** as the erection proceeds, and check plumb and level of shoring towers just prior to pour.
5. **Do not force** braces on frames to fit – level the shoring towers until proper fit can be made easily.
6. **Tie high towers of shoring frames together** with sufficient braces to make a rigid, solid unit (consult your BrandSafway representative for recommendations). Shoring must always be secured when the height of the shoring towers exceed four (4) times the minimum base width. See Footnote 1.
7. **Exercise caution** in erecting or dismantling free standing shoring towers to prevent tipping.
8. **Do not climb cross braces.**

C. Screw Jacks

1. **Use screw jacks** to adjust for uneven grade conditions, to level and accurately position the falsework and for easy stripping.
2. **Do not exceed BrandSafway's recommended maximum extension of screw jacks.** Keep screw jack extensions to a minimum for maximum load carrying capacity.
3. **Make certain that all screw jacks** are firmly in contact with the foundation and frame legs.

D. Post Shoring

1. **Plumb all post shores as the erection proceeds.** Check plumb of post shores just prior to pour.
2. **Post shores may require additional stability bracing.** Refer to manufacturer's instruction. Required bracing shall be installed as the shores are being erected.
3. **Devices which attach the external lateral stability bracing** shall be securely fastened to each post shore.
4. **Post shores more than one tier high shall not be used.** Where greater shore heights are required, consult your BrandSafway supplier.

E. Horizontal Shoring

1. **Special consideration must be given to the installation of horizontal shoring:**
 - a. When sloped or supported by sloping ledgers (stringers).

- b. When ledger (stringer) height/width ratio exceeds 2.5 to 1. Under no circumstances shall horizontal shoring beams bear on a single "two-by" ledger (stringer).
 - c. When eccentric loading conditions exist.
 - d. When ledger (stringer) consists of multiple members (i.e., double 2x6, 2x8, etc.)
 - e. When horizontal shores are placed other than at right angles to their supports.
2. **Assure that bearing ends of shoring beams are properly supported** and that locking devices are properly engaged before placing any load on beams.
3. **Horizontal shoring beams should not be supported other than at the bearing prongs** unless recommended by your BrandSafway supplier. Cantilever "male end" of Safway® horizontal beams only. Cantilever shall not exceed 24".
4. **Do not nail beam bearing ends to ledger.**
5. **Provide and maintain adequate support** to properly distribute shoring loads. When supporting horizontal shoring beams on:
- a. **Masonry Wall** – ensure that masonry units have adequate strength. Brace walls as necessary.
 - b. **Ledgers** – supported by walls using bolts, or other means, shall be properly designed and installed per recommendation of supplier or job architect/engineer.
 - c. **Formwork** – shoring beams shall be designed for the additional loads imposed by the formwork.
 - d. **Structural Steel Framework** – the ability of the steel to support all loading should be checked and approved by the responsible project architect/engineer.
 - e. **Steel Hangers** – be sure the bearing ends fully engage on the hangers. The hangers shall be designed to conform to the bearing end and shall have a rated strength to safely support the shoring loads imposed. Hangers must be plate saddle rather than wire type. Check with manufacturer of hangers for specific application (Follow hanger manufacturers' recommendations).

F. Final Inspection

Be sure that:

- 1. There is a sound foundation under every leg.
- 2. All base plates and screw jacks are in firm contact with foundation.
- 3. Every component (including exterior bracing) agrees with the shoring layout as to type, span, number, location and size.
- 4. All shore pins are properly installed and fully seated.
- 5. All frames are plumb and braced to form towers and/or all posts are plumb and braced as required by user instructions.
- 6. All formwork follows forming layout and horizontal beams fully bear on their supports.

- 7. All clamps, screws, pins and other fasteners (including locking devices on adjustable beams) are closed, tightened or engaged.

II. During the Pour

- 1. **Adjustment of shoring and/or Post Shores to raise formwork** shall not be made once the pour begins.
- 2. **Ensure pour sequence** will not cause an unbalanced load on shoring equipment.
- 3. Monitor possible movement of shoring components when placing concrete.

! WARNING
DO NOT POSITION WORKERS BELOW FORMWORK WHILE CONCRETE IS BEING PLACED.

III. Removal

Loaded shoring equipment shall not be released or removed, including cross braces, until the approval of a qualified engineer has been received. Premature releasing or stripping of forms can cause failure. A qualified engineer must decide when and how stripping is to proceed. Weather conditions, variations in different parts of the structure and the setting qualities of the concrete all affect the stripping process.

IV. Reshoring Definition

Reshoring means the construction operation in which shoring equipment is placed, as the original forms and shores are removed, in order to support partially cured concrete and construction loads.

- 1. Reshoring is one of the most critical operations in formwork; consequently, reshoring procedures must be designed and planned in advance by a qualified structural engineer and approved by the project architect/engineer.
- 2. Slabs or beams which are to be reshored should be allowed to take their permanent deflection before final adjustment of reshoring equipment is made.
- 3. The reshoring shall be thoroughly checked by the architect/engineer to determine that it is properly placed and that it has the allowable load capacity to support the areas that are being reshored.
- 4. Equipment to be left in position for reshoring should be checked thoroughly by a qualified engineer. Horizontal shoring should never be used as a part of reshoring system. Extreme care must be taken to release the adjustment screws to a point where the slab takes its permanent deflection. The adjustment screws should then be tightened until contact is again made with the underside of the slab. In this manner the frame reshoring below will not be carrying the load of the slab that it had previously shored.

Footnote 1: California and some other states require a height-to-minimum base width ratio of three to one (3:1). Refer to the governing codes for your job location.

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