



Housing Assistance Council

Helping Build Homes and
Communities Across Rural America



Photo: Rory Doyle/There is More Work to be Done

Benefits of Using Building Components





Photo: Rory Doyle/There is More Work to be Done

Sponsored by



Housing Assistance Council

Benefits of Using Building Components
Delivered April 26, 2023

Jess Lohse

Structural Building
Components Association
(SBCA)



**McWayne “Mac”
Williams**
Caroline County Habitat for
Humanity



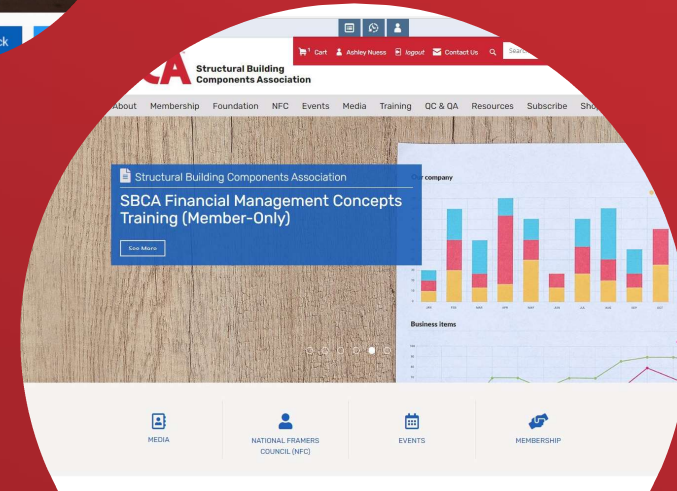
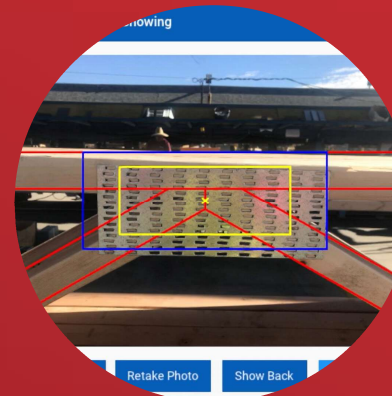
STRUCTURAL BUILDING COMPONENTS ASSOCIATION

The Benefits of Utilizing Components



WHAT IS SBCA?

Established in 1983, the Structural Building Components Association (SBCA) is the only international trade association representing manufacturers of structural building components. Its membership also includes truss plate suppliers, framers (National Framers Council), original equipment manufacturers and resellers, computer software companies, lumber suppliers, builders, and professional individuals in the fields of engineering, marketing, and management.



WHAT ARE STRUCTURAL BUILDING COMPONENTS?

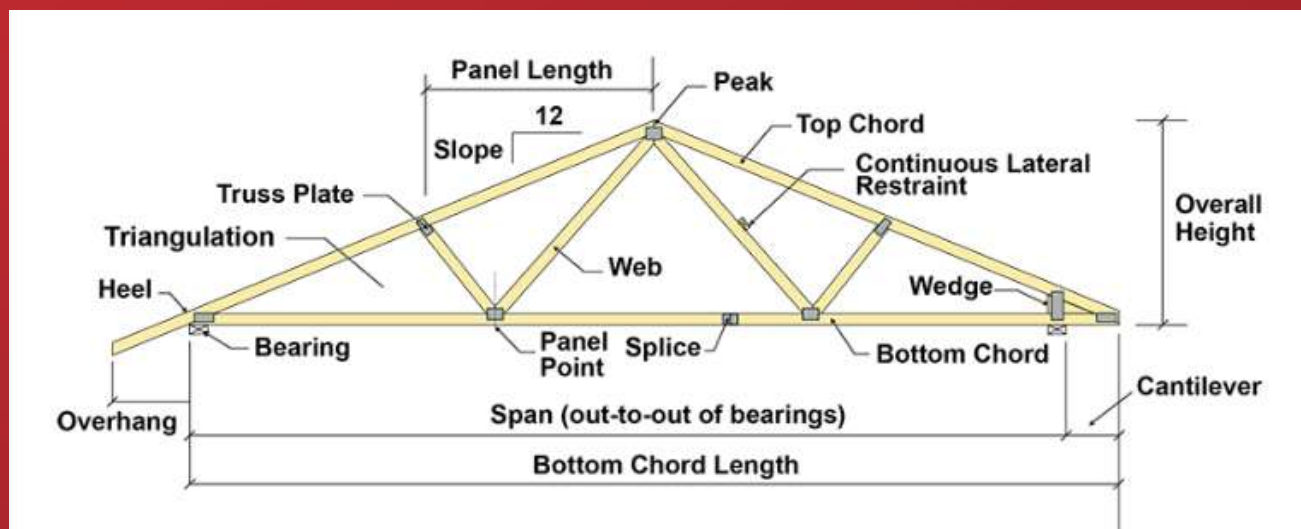
Pro Tip:

- Increase the heel height to allow for better insulation. This is called an energy heel.

Pay Extra Attention To:

- Slope
- Heel height
- Overhang

Roof Trusses



SBCA

Slide 3

ANO Make this three separate slides. Heel height, overhang, slope.

Floor trusses, on center spacing, depth, strong backs B7 - BCSI - Page 61 B7-13 and 14 - read into this. It is a recommendation, it should be a requirement. The strong backs help distribute the weight and all of that isn't put on the ply bood. 2x6

Floor trusses for headers would reduce the weight of the panel. Another thing that would help would be precut Framing packages. Everything is already cut, you just put the puzzle together and ensure it is nailed properly.

Understand how your market works. some are lumber yard, some are cms, and some go through framers. Smaller CMs might be better and the relationships.

Talk through design and how a designer can help solve issues ahead of time and engineer the product to save money.

Ashley Nuess, 2023-04-10T19:48:25.782

ANO 0 Once you have plans you can take them to your CM or lumberyard for then to get an estimate - they will also provide a rough estimate on what facia, other materials might be needed.

Ashley Nuess, 2023-04-10T19:51:06.838

BENEFITS OF ROOF TRUSSES

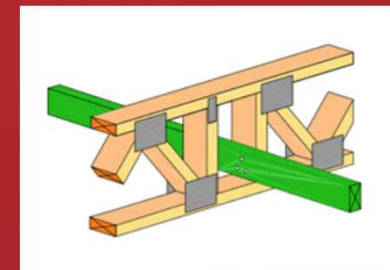
- Larger, clear spans.
- Engineered product – Work with MEPs ahead of time to reduce problems onsite.
- Time saved using roof trusses allows for structures to be enclosed more quickly. Helps to avoid weather delays.
- Allows for walls to be moved more easily due to fewer interior bearing locations.
- Eliminate interior bearing walls & save on cost of interior foundation walls, interior partition top plates and headers.
- Reduction in labor cost due to needed skill set to install trusses vs stick frame.



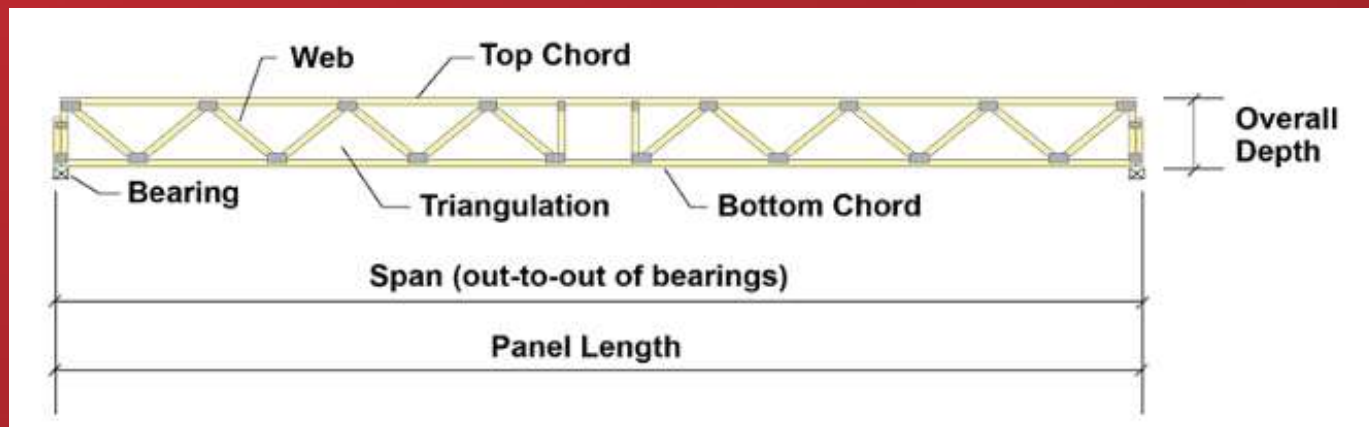
WHAT ARE STRUCTURAL BUILDING COMPONENTS?

Pro Tips:

- Replace headers with floor trusses to reduce the weight of wall panels.
- Building Component Safety Information (BCSI) recommends strongbacking for floor trusses.



Floor Trusses



BENEFITS OF FLOOR TRUSSES & CASSETTES

- Larger, clearer spans.
- Spacing allows for maximum structural efficiency & speed of installation.
- Eliminates the need for dropped ceilings. MEPs can be designed for in advance.
- Stiffness & strength can be designed in floor trusses. Great for large kitchen islands.
- Cantilever and balcony details are easily built in.



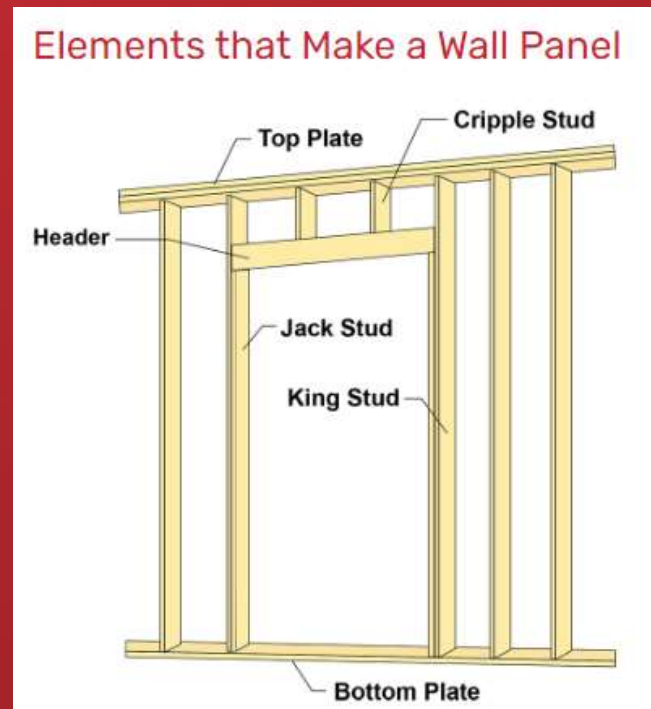
SBCA

WHAT ARE STRUCTURAL BUILDING COMPONENTS?

Pro Tips:

- Precut wall packages require no cutting on site. Perfect for unskilled laborers.

Wall Panels



SBCA

BENEFITS OF WALL PANELS

- Reduce the complexity of framing projects by minimizing variables.
- Consistency between panels.
- Nail patterns more accurate and consistent.
- Sheathing & building wrap can be applied by CM.
- Fast and efficient installation.



To learn more about components visit: [About Components - Structural Building Components Association \(sbcacomponents.com\)](https://www.sbcacomponents.com)



FRAMING THE AMERICAN DREAM

The Framing the American Dream project set up two controlled experiments. In each experiment, two identical buildings were framed, providing an apples-to-apples comparison of stick and component framing methods.

1995 - parking lot of the Houston Astro Arena



2015 - neighborhood in Jackson, Wisconsin.



SBCA

2015 BUILD

Stick-framed House



Component-framed House



SBCA



THE BEST WAY TO FRAME A HOUSE

You can build **2 ½** more houses with the same crew using Structural Building Components.

Using Components creates **30x** less waste.

Using Components uses **25%** less wood product.

Two identical homes were built side by side. One was stick-framed and the other was framed using structural building components. The benefits of using components are clear.

STICK-FRAMED VS. COMPONENT-FRAMED

375.5 HOURS	TOTAL JOBSITE HOURS TO ERECT	152.1 HOURS
15 CUBIC YARDS	TOTAL JOBSITE WASTE GENERATED	0.5 CUBIC YARD
20,643 BD FT	TOTAL BOARD FOOT LUMBER/EWP	15,052 BD FT



SAVINGS 223.4 HOURS | 14.5 CUBIC YDS | 5,591 BD FT

SBCA bestwaytoframe.com



BENEFITS OF USING COMPONENTS

- Time savings
- Money savings
- Capacity to do more



SAVINGS

223.4 HOURS

You can build 2 ½ more houses with the same crew
using Structural Building Components.

SBCA

SBCA

BENEFITS OF USING COMPONENTS

- Savings in materials
- Build greener



SAVINGS

5,591 BD FT

Using Components uses
25% less wood product.

SBCA

SBCA

BENEFITS OF USING COMPONENTS

- **Less waste = cost savings both in materials and in dumpster fees**
- **Clean jobsite**
- **Time saved by reducing or eliminating the need for cutting onsite**
- **Build greener**



SAVINGS

14.5 CUBIC YDS

Using Components creates **30x** less waste.

SBCA

SBCA

TO FIND A COMPONENT MANUFACTURER NEAR YOU...



Component Manufacturer Member Directory

View a listing of component manufacturer members of SBCA.

Use the search or the filters to narrow down your search by member type, city, or state.

Search > **Filters** > List Map

412 Building Supply
755 W Main
Hohenwald, TN 38462

4U Custom Homes
8250 Exchange Drive Suite 134
Orlando, FL 32809

5 Starr Truss Company (Co)
1425 W Texas Ave
Waskom, TX 75692

84 Lumber Company (Co)
1019 Route 519 Bldg 5

Search Near Address Use Current Location Within

A map of the United States, specifically focusing on the Midwest and Northeast regions, is displayed. Red location pins are placed on the map to indicate the locations of SBCA member manufacturers. The pins are located in Wisconsin (Waukegan), Illinois (Chicago), Michigan (Detroit), Ohio (Cleveland), Pennsylvania (Pittsburgh), and Maryland (Washington). The map also shows major cities like Toronto, Mississauga, Hamilton, and Buffalo in the Northeast, and various cities in Indiana, Ohio, and West Virginia.

Visit: [Member Directory - Structural Building Components Association](https://www.sbcacomponents.com)
([sbcacomponents.com](https://www.sbcacomponents.com))



CONTACT US!



Jess Lohse
Executive Director of SBCA & NFC

jlohse@sbcacomponents.com



Ashley Nuess
Director of Sales & Marketing SBCA & NFC

anuess@sbcacomponents.com



Visit SBCA's website for additional information on components.

[SBCACOMPONENTS.COM](https://www.sbcacomponents.com)





Habitat of Caroline

Mobile Production Off Site Wall Panelization Process

Determine if this is the correct process for your project



Are you currently in a Self-Help Program/or considering a SHP?



Are you currently framing your walls/are you purchasing your wall already prefabricated?



Do you have a properly skilled person to be able to coordinate the process?

Reasons for considering this method

It gives an alternative way for homeowners to meet their required hours.

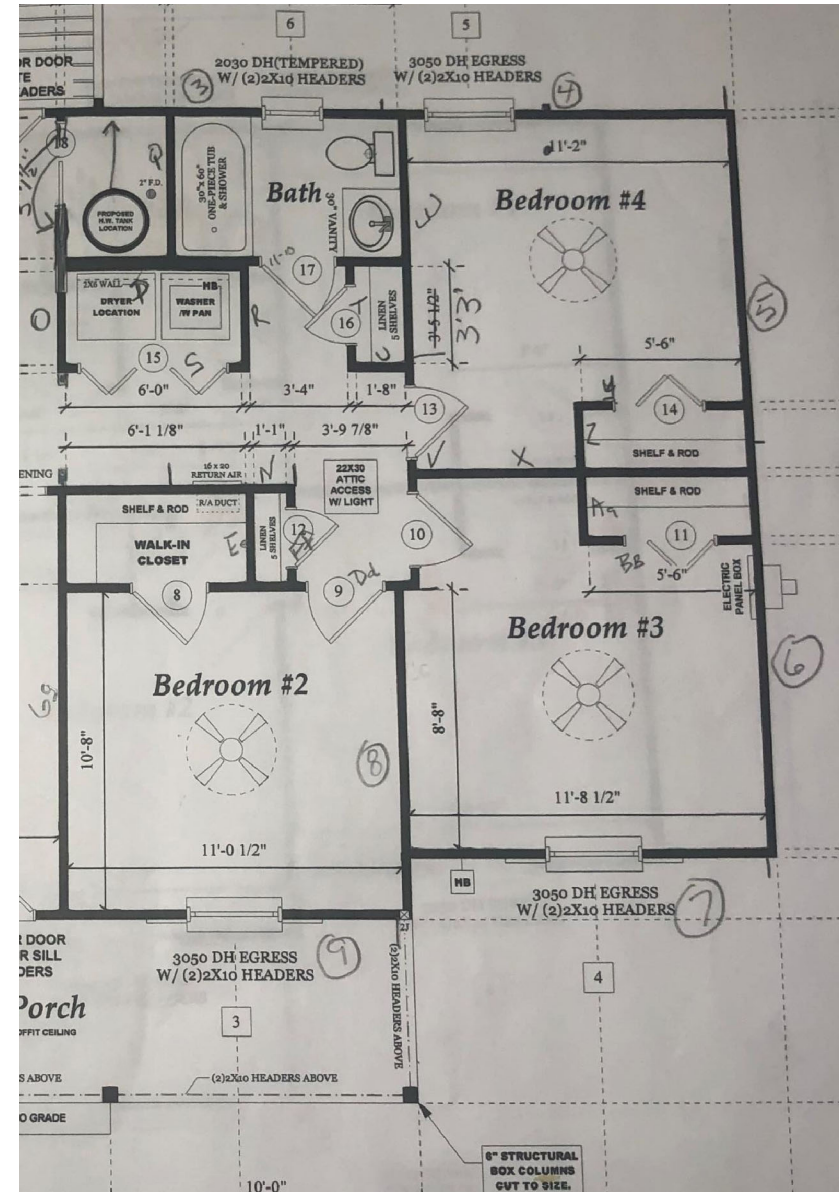
It gives you more opportunities for community involvement.

It gives you more opportunities to communicate the need for affordable homes in your community.

It gives you more opportunities people to recognize that they too can have a home.

Preparation Step 1

- Analyze your blueprints
- Determine the wall lay-out
- List wall in order that they will be set on site
- Keep in mind the order of the production process
 - Build walls-stack on pallet-deliver-set walls
 - Build walls-stack on pallet-deliver-unload walls from pallet-set walls



Preparation Step 2

1

Make a cut sheet

2

List each wall in order

3

Confirm ALL measurements for wall length

4

Confirm ALL measurements for component lengths

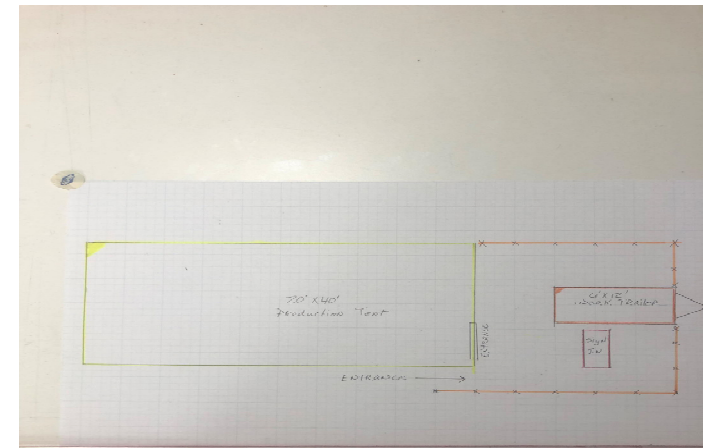
Preparation Step 3

Logistics

Site review

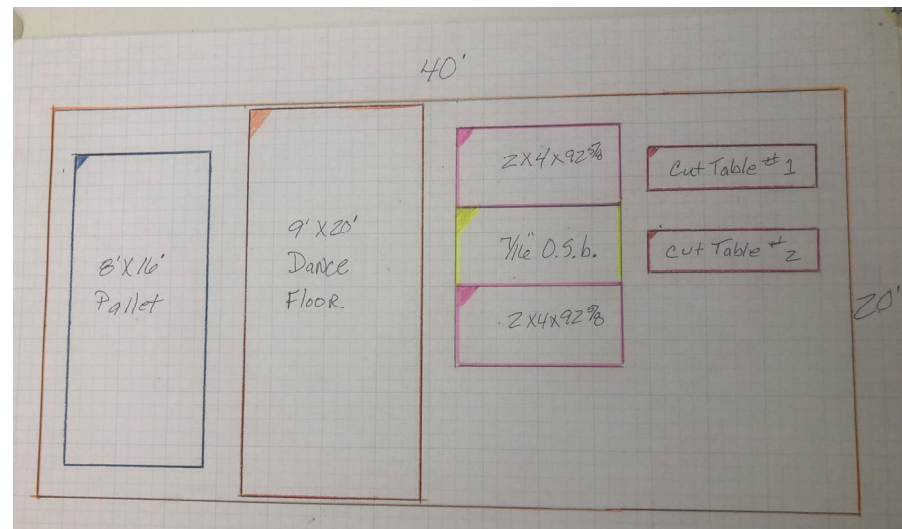
Create a plan for each site

Develop a safety plan



Preparation Step 4

- Develop a work area plan
- Determine the most efficient use for the workspace



Cutting
jacks/trimmers

Training Step 5-A

Warren	Warren 8/18	Opening	J-Post	Header Type	2x4 LP	2x6 LP	Sill	Cripples	JP-Beam
Exterior Wall	Length								
	1 7'11"					1			
	2 12'						1		
	3 12'	32"	2@ 81 7/8"	2x10x35"		1	1 32"	4@48 3/8"	
	4 11'4"						1		
	5 16'	D-38"	2@80 3/4"	2x8x41"			1		
		32"	2@ 81 7/8"	2x10x35"			32"	4@48 3/8"	
	6 16'	W-36"	2@ 81 7/8"	2x10x39"			2	4@ 20 3/8"	
	7 16'					1	2		
	8 9'11"					1			
	9 16'	W-36"	2@ 81 7/8"	2x10x39"		2	36"	4@ 20 3/8"	DJ-84 7/8"
	10 14'8 1/2"	TW-3x5'	2-DJ@81 7/8"	2x10x78"			72"	7@ 20 3/8"	
		D-38"	2@ 80 3/4"	2x8x41"				4@ 8 5/8"	
	11 12'								DJ-84 7/8"
	12 12'4"	W-36"	2@ 81 7/8"	2x10 39"			36"	4@ 20 3/8"	
Interior Walls	Length	Doors	J-Post	Headers	Wall Ts	Corners	Cripples		
A	38"					1			
B	1'11"					1			
C	70"					1			
D	7'3"	D-38"	2@ 80 1/2"	2x4x41"		1		4@ 8 5/8"	
E	61"								
F	5'10"	D-38"	2@ 80 1/2"	2x4x41"				4@ 8 5/8"	
G	12'4"	D-38"	2@ 80 1/2"	2x4x41"		2		4@ 8 5/8"	
H	8'	D38"	2@ 80 1/2"	2x4x41"		2		4@ 8 5/8"	
I	11'4"	PD-6'1 1/4"	2@ 83"	2x2x74 1/2"					
J	18"								
K	25"					1			
L	8'								
M	8'3 1/2"	C. O. 50"	2@80 1/2"	2x4x53"				1@ 8 5/8"	
N	25"					1			
O	38"								
P	38"	D-26"	2@ 80 1/2"	2x4x29"				4@ 8 5/8"	
Q	15'2"	D32"	2@ 80 1/2"	2x4x35"				10@ 8 5/8"	
		D-32"	2@ 80 1/2"	2x4x35"					
		D-32"	2@ 80 1/2"	2x4x35"		4	4		
R	10' 8"						1		
S	22"						1		
T	18"								
U	14' 1 1/2"	D-38"	2@ 80 1/2"	2x4x41"				4@ 8 5/8"	2x2 Wall
V	30"								
W	6' 3 1/2"	Bi Fold 50"	2@ 80 1/2"	2x4x53"				4@ 8 5/8"	
X	12'					1			
Y	13' 4"	C. O. 50"	2@ 80 1/2"	2x4x53"		2		4@ 8 5/8"	

Training Step 5

Making the cut





Training Step 6

Stacking the drop for
future use

Training Step 7

Placing a stud in the jig





Training Step 8

Nailing the jack/trimmer

Training Step 9

Placing the stud in the jig for a
wall “T”



Training Step 10

Nailing wall "T"



Training Step 11

The “dance floor”





Training Step 12

Stacking walls on the pallet for transport

Training Step 13

Rollback truck loaded for
delivery



Training Step 14

Walls on site being installed



Questions

THANK YOU!



Suhvqwhg# |
Housing Assistance Council
Ex lq ljj #Uxud# Frp p xqlwhv#vlfh# < : 4



Vsrqvrhg# |
Rural Capacity Building
Wkh#V#hsdwp hqw#i# rxvlbj#dqg#uedq#Ghyhosp hqw