

# STRUCTURAL BUILDING COMPONENTS MAGAZINE (FORMERLY WOODWORDS)

January/February 1999

## Knowledge is Power



### "Your Design Responsibilities" by Kirk Grundahl:

Lately, we have seen more and more architectural specifications placing more and more responsibilities on you. The pressure is on YOU to expand your design responsibilities for as little cost to the building owner as possible.

To begin with, have you considered the following questions:

- Do your truss design drawings, sealed or not, define your specific scope of work? If not, have you considered the possibility that you may be deemed the engineer if record (EOR) by default?
- Do you define that the Placement Plan is for spacing and location ONLY?
- Do you supply the "WTCA Warning Poster" and/or TPI's HIB with each job?
- Do you require a signature upon receipt?
- Do you state that supplying this information does not expand your scope of work beyond that found in your purchase agreement?
- Do you help your contractor by calling out an LVL beam?

Be mindful that specification writers are imposing additional design responsibilities on truss manufacturers and truss designers through specifications such as the following:

- "Truss Engineer is solely responsible for the safety and stability of the roof system and its components during erection."
- "Truss bracing required during the erection or in the completed structure including the bracing connections to trusses and bracing anchorage is the responsibility of the Truss Engineer and should be clearly denoted on the truss design drawings."
- "The truss manufacturer (or truss designer) must design the temporary and permanent bracing system; inspect installed trusses; design all hangers, hurricane clips and truss to truss connections; design all beams and headers; field verify all dimensions; provide a sealed placement plan."
- "Your shop drawings must contain Handling and Installation Instructions."
- "It is the subcontractor's duty to review shop drawings and submittals and to verify that all the requirements of the Contract Documents have been met prior to submission to the G.C. The review of the G.C. is only for coordination & general compliance with the information given in the contract documents."
- "The subcontractor is responsible for dimensions, technical specifications, fabrication, techniques of construction, & coordination of submitted items with the work of other trades."

- "The design responsibilities for this project will be as described herein not those suggested in the non-mandatory appendix A of ANSI/TPI 1-1995."
- "It is essential that this truss engineer (T.E.) certify conformance of the truss system to the requirements indicated on the construction documents not just the adequacy of the individual truss."
- "This approach has been taken to allow the roof truss supplier some flexibility in the arrangement of trusses and thereby an opportunity to optimize the roof framing to respond to their specific preferences. Since variations in the arrangement of trusses will affect the flow of forces in the system, connection requirements will be influenced. Therefore, in addition to the inter and intra truss connections, the T.E. will design, designate, and supply the truss-to-bearing wall connectors to accommodate both the download and upload reactions as appropriate."
- "The T.E shall apply his seal to all the truss shop drawings. The seal shall confirm that the T.E. has reviewed a complete set of contract documents (drawings and specifications) and has designed and documented a roof system which, to the best of his knowledge and belief, conforms to all the requirements indicated on the construction documents."
- "Wood truss suppliers shall submit complete design calculations and erections drawings to the architect. All design calculations and erection drawings shall be done by or under the direct supervision of, and all documents shall be sealed by a structural engineer licensed in the state where the project is located."
- "Erection drawings shall be complete with all bracing, bridging and anchorage details for all bracing temporary and permanent. All connections not otherwise shown shall be designed, detailed, and hardware specified by the fabricator. Elements shall be designed specifically for the hardware supplied."

The key questions here are:

- Do you get the specifications?
- Do you ask for the specifications?
- Do you carefully read all the specifications?
- Do you strike out items you cannot comply with?

Additionally, the government is getting involved in defining your business role and responsibilities through laws, ordinances and codes at the state or local level. Furthermore, industry available software is allowing you to easily design connections, beams and headers, building systems like integrated design of roofs, walls and floors.

Questions You Need to ask Yourself:

1. What risk are you going to take on by taking the job?
2. What compensation are you going to get for doing the extra work that is beyond our industry's defined scope of work?
3. Does the compensation cover the risk you are taking?
4. Will you lose this customer by not taking this job?
5. Given the position being taken by the customer, is the customer worth keeping?
6. Is the work being requested for you to undertake business you desire to do?
7. Are you going to structure your business to undertake this work legally? For instance, if you are doing structural engineering work, state laws may provide for a specific business structure.

8. How does the marketplace value the work you are performing?
9. Is your compensation adequate given the market value for this work?

Take some time to review this issue thoroughly and answer all the questions that have been posed to you. Even though this may seem tedious, it certainly has the potential to save you a tremendous amount of money and headaches in the future.

We encourage our chapters to discuss this topic at a chapter meeting. This is one area that we can really help each other to become better business people.

Should you have any questions or comments, please do not hesitate to call, 608/274-2345, we'd love to have your perspective.

*Overheard: "Look out for the project being built for lawyers, doctors and engineers!!!"*

---

## Reducing the Amount of Sealed Engineering Required to go to Building Departments and the Jobsite

Most state professional engineering laws allow the use of a sealed cover or title sheet in lieu of sealing each truss design drawing. The Florida State law specifically states: "A cover or index sheet for engineering specifications may be used and that sheet must be signed, sealed and dated by those professional engineers in responsible charge of the production and preparation of each section of the engineering specification with sufficient information on the cover sheet or index so that the user will be aware of each portion of the specifications for which each professional engineer is responsible." Many Florida truss manufacturers have been using the sealed title sheet to reduce the amount of sealing the engineers have to do. An example of such an approach follows.

Permit Number: \_\_\_\_\_ Lot Number: \_\_\_\_\_

Miscellaneous: \_\_\_\_\_ Address: \_\_\_\_\_

The information in this box is for administrative purposes only and is not part of the engineering review.

Truss Fabricator: XYZ Components, Inc.

Job Reference: BLDG4003

**RCBBINS  
ENGINEERING, INC.**

P.O. Box 26006  
Tampa, FL 33682-2006  
Phone (813) 972-1135

## Engineering Index Sheet


Index Page 1 of 1

Job Number  
T98082635

Specification Quantity  
89

A Professional Engineer's seal affixed to this Index Sheet indicates the acceptance of Professional Engineering responsibility for individual truss components fabricated in accordance with the listed and attached Truss Specification Sheets. Determination as to the suitability of these individual truss components for any structure is the responsibility of the Building Designer, as defined in ANSI/TPI 1-1995, Section 2.2. Permanent files of the original Truss Specification Sheets are maintained by Robbins Engineering, Inc. Questions regarding this Index Sheet and/or the attached Specification Sheets may be directed to the Truss Fabricator listed above or Robbins Engineering, Inc.

Spec. Number	Truss ID	Spec. Number	Truss ID	Spec. Number	Truss ID	Spec. Number	Truss ID	
1	xRO-180145	A	41	xRO-180785	AHTE	61	xRO-180825	PB5A
2	xRO-180146	A1	42	xRO-180786	AH85	62	xRO-180826	PB7
3	xRO-180147	A10	43	xRO-180787	AH9C	63	xRO-180827	PB7B
4	xRO-180148	A13	44	xRO-180788	AH9D	64	xRO-180828	V1
5	xRO-180149	A13A	45	xRO-180789	AH9E	65	xRO-180829	V2
6	xRO-180150	A14	46	xRO-180790	B	66	xRO-180830	V3
7	xRO-180151	A15	47	xRO-180791	B1	67	xRO-180831	V4
8	xRO-180152	A17	48	xRO-180792	BH7	68	xRO-180832	V5
9	xRO-180153	A18	49	xRO-180793	C	69	xRO-180833	V6
10	xRO-180154	A19	50	xRO-180794	C1			
11	xRO-180155	A1A	51	xRO-180795	CH7			
12	xRO-180156	A23	52	xRO-180796	CH9			
13	xRO-180157	A23A	53	xRO-180797	CJ1			
14	xRO-180158	A23B	54	xRO-180798	CJ3			
15	xRO-180159	A24	55	xRO-180799	CJ3A			
16	xRO-180160	A2A	56	xRO-180800	CJ5			
17	xRO-180161	A5	57	xRO-180801	CJ5A			
18	xRO-180162	ASA	58	xRO-180802	EJ7			
19	xRO-180163	A5FW	59	xRO-180803	EJ7E			
20	xRO-180164	A5FWA	60	xRO-180804	FLGB			
21	xRO-180165	A7	61	xRO-180805	HJ7			
22	xRO-180166	AYA	62	xRO-180806	IJJ7A			
23	xRO-180167	A8	63	xRO-180807	K			
24	xRO-180168	ABA	64	xRO-180808	K1			
25	xRO-180169	ABA	65	xRO-180809	KH7			
26	xRO-180170	A9	66	xRO-180810	MGE			
27	xRO-180171	AA	67	xRO-180811	MGR			
28	xRO-180172	AGR	68	xRO-180812	MGR A			
29	xRO-180173	ACRA	69	xRO-180813	MCRD			
30	xRO-180174	AH11B	70	xRO-180814	MONQA			
31	xRO-180175	AH11C	71	xRO-180815	MONDS			
32	xRO-180176	AH11D	72	xRO-180816	MONOD			
33	xRO-180177	AH11E	73	xRO-180817	MONOE			
34	xRO-180178	AH13B	74	xRO-180818	MONOF			
35	xRO-180179	AH13C	75	xRO-180819	MONOG			
36	xRO-180180	AH13D	76	xRO-180820	PS1			
37	xRO-180181	AH13E	77	xRO-180821	PSA			
38	xRO-180182	AH7B	78	xRO-180822	PSB			
39	xRO-180183	AH7C	79	xRO-180823	PS2			
40	xRO-180184	AH7D	80	xRO-180824	PSB			



Copyright © 1999 by Truss Publications, Inc. All rights reserved. For permission to reprint materials from SBC Magazine, call 608/310-6706 or email [editor@sbcmag.info](mailto:editor@sbcmag.info).

The mission of Structural Building Components Magazine (SBC) is to increase the knowledge of and to promote the common interests of those engaged in manufacturing and distributing of structural building components to ensure growth and continuity, and to be the information conduit by staying abreast of leading-edge issues. SBC will take a leadership role on behalf of the component industry in disseminating technical and marketplace information, and will maintain advisory committees consisting of the most knowledgeable professionals in the industry. The opinions expressed in SBC are those of the authors and those quoted solely, and are not necessarily the opinions of any of the affiliated associations (SBCC, WTCA, SCDA & STCA).