Minutes of the
Florida Board of Professional Engineers
Aluminum Structures Design Manuals Task Force Meeting
Wednesday, September 6, 2006
Beginning at 1:00 p.m.
Tallahassee, Florida

1. Call to Order, introduction of members and guests.

The meeting was called to order by David Charland, PE, Chair of the Task Force. He explained the purpose of the task force was to research issues associated with the design of aluminum structures by professional engineers.

Task Force Members Present:

David Charland, P.E., Chair, Member, FBPE
John Burke, P.E., Member and Vice Chair, FBPE
Robert Matthews, P.E., Member, FBPE
Paul Tomasino, P.E., Member, FBPE
Do Kim, P.E., Member, Florida Building Commission

Board Staff and Legal Advisor Present:

Paul J. Martin, Executive Director
Carrie A. Flynn, Assistant Executive Director
Leigh Ann Dollar, Executive Assistant
Ed Tellechea, Senior Assistant Attorney General

Also, Members of the General Public Present:

Joseph Berryman
Fred Dudley, Esq.
Rex Ware, Esq.

2. Review and Approval of Agenda

3. Review of existing use of Aluminum Structures Design Manuals, as well as Chapters 61G15-30 and 15-31, F.A.C., to determine if current board rules provide a starting point for addressing the problem at hand.

4. Review of Proposed Rule Text solutions offered by interested parties

   a. Proposed draft by Fred Dudley and related email correspondence

Fred Dudley, Esq., representing the Swimming Pool Contractors and the Aluminum Association of Florida, presented two proposed rules for consideration.

Mr. Dudley recalled that at the July Board Meeting, two categories of pictures were presented to the Board. These pictures identified projects that were not permitted and projects that were not inspected. The reason they were not inspected is unknown.

Mr. Dudley advised the committee of Florida Building Code Section 104.2.2.1 that allows contractors licensed under Chapter 489, Part I, F.S., who have completed special training, to certify wind resistance. Although the provision is in the Building Code, there is concern in the contracting community that Contractors may risk being prosecuted by the FBPE for unlicensed practice of engineering while certifying wind resistance on structural designs.

To clarify the situation regarding use of Deemed to Comply Manuals and Master Plans, Mr. Dudley developed two proposed rule drafts for the Task Force's consideration. The first draft dealt with design manuals or guides that are certified as deemed to comply with design guides that may be used by a Registered Contractor under Chapter 489, F.S. for the purpose of design and construction of aluminum structures. This draft rule does not address "Master Plans" or "Prototype Plans".

Mr. Berryman stated that the Florida Board of Professional Engineers writes rules to govern the conduct of engineers not contractors.

Mr. Dudley agreed with Mr. Berryman's comment. However, he pointed out the situation that exists regarding engineers and architects. Each of the Boards governing these two professions can prosecute persons for unlicensed activity and that is an important distinction. Unlicensed activity for the other professions housed in DBPR is prosecuted by the Department.

The contractors he represents recognize the Board's authority to regulate the practice of engineering within the state. Their current concern, however, is the possibility of being prosecuted by the Board for unlicensed activity for using manuals that are accepted under the building code as "Deemed to Comply Manuals".

Usually when a statute provides for exemptions from licensure, there would be no need for a rule. Within the current issue concerning aluminum design manuals, however, the Contractors are concerned that

without a proper rule in place, contractors would be subject to possible prosecution by the FBPE.

Mr. Berryman reiterated that FBPE regulates only engineers and engineering, not contactors.

Rex Ware, Esq., addressed the Task Force and asked why the Board would feel the need to address by rule the use of "deemed to comply" manuals that are adopted under the Florida Building Code. He questioned the title and composition of the Task Force. At its June meeting, the Board announced its decision to appoint a Task Force to study aluminum structures design and recommend a course of action to the Board. The notice in the Administrative Weekly identifies the group as an "Ad Hoc Committee" and it is comprised of persons other than Board members. He officially challenged the noticing, composition and intent of this group.

Mr. Charland stated that Mr. Berryman was not a member of the Task Force and was a consultant who worked with the Board on the matter of aluminum design manuals as late as 2003. Mr. Kim was requested to serve on the Task Force based on his position on the Florida Building Commission. As chair of the Task Force, he intended to proceed with the meeting and any legal issues would be resolved at a later date.

Mr. Dudley agreed with the points raised by Mr. Ware. He believed his draft rule #2 would address the use of Master Plans, Prototype Plans. These are documents that are signed and sealed by a Professional Engineer used by other parties in construction. His draft rule would set forth responsibilities associated with use of Master Plans.

The draft language follows the Florida Building Commission's Rule 9B-74, F.A.C. This rule sets forth a procedure for review and approval of "Prototype Plans" or "repetitious" plans which should be excluded from the definitions of both "Design Manuals" and "Master Plans". This would impose a requirement of peer review by an engineer or architect. In fact, these Master Plans would be submitted for approval by the FBPE.

Mr. Matthews was concerned with use of Design Manuals by users who are not properly trained as to applicability of the Design Manuals. Mr. Dudley agreed on the need for training on the use of the manuals. He believed the EOR was the person to provide such training. There would be a logistical problem with ensuring compliance.

Mr. Martin explained this committee's responsibility to research use of design manuals. Referencing these design manuals as master plans should

be considered an insult to master plans. Design manuals do not contain the specific engineering information that appears in master plans. These manuals are being used throughout the state simply because they were signed and sealed by an engineer and contractors take parts and pieces from them and claim to arrive at the proper design for construction of the project. In many cases, the contractors did not even follow the Florida Building Code in cobbling their designs from one of the manuals. This task force was specifically assigned to research problems with "aluminum design manuals".

Mr. Dudley confirmed to Mr. Martin that his draft rule #1 would address "Design Guides". He agreed that Master Plans should include the signature and seal of a Professional Engineer.

Mr. Dudley noted that most of the buildings that are being addressed are residences and under Chapter 489, Part I, F.S., contractors may design and construct without involvement of engineers if they have completed the specialized training addressed in Chapter 489, F.S.

Mr. Martin, having read Mr. Dudley's Rule #1, agreed that it sets out elements for design of aluminum structures. Mr. Martin believed the Board's responsibility was to set forth what is required for professional engineers to prepare, sign and sael Aluminum Structures Design Manuals. A rule addressing those requirements would address only Professional Engineers.

Jude Kieila, Certified Contractor

Mr. Kieila supported the effort of the Board in addressing problems with the content of these manuals. Aluminum Structures Design Manuals must address sufficient detail regarding spans, charts, tables, etc.

Tom Tafelski, State Certified Building Contractor, Largo, Florida

Mr. Tafelski indicated that three representatives of his association, a regional chapter of the AAF, attended the board meetings that were held in 2002 and 2003 addressing the issue of the manuals. In reading Mr. Berryman's report issued in 2003, there is no indication of problems with the concept of master file engineering. Mr. Tafelski urged Board Members to consider the basis for the failures of the structures cited. If there are problems with aluminum structures design manuals, the problems should be identified and addressed. If there needs to be interaction between the design engineer and the aluminum contractor, then requirements should be put into place to require proper interfacing. Mr. Tafelski stated that in his practice he repeats the same design many times. He did not believe site specific engineering should be required each and

every time the same design is used. If the manual is properly designed and there is interfacing between the client and design professional, then there should be no problems with the project.

Mr. Tomasino confirmed that the Board lacked jurisdiction over contractors. The responsibility for these signed and sealed design manuals rests with the engineer. If the engineer signs and seals an aluminum structures design manual and it is used by a contractor who misuses the manual, then the contractor is at fault.

Mr. Matthews explained that four out of five engineers who signed and sealed these design manuals explained to the Board three years ago what their process was for developing the manuals. The engineers had also assured the Board that they would develop a list of contractors trained to use the manuals and train those contractors themselves how to properly use the manuals. This list would be presented to the building departments so that in permitting they would issue the permit to the party who is properly trained in constructing from the design manual. These steps were not taken and the training was not maintained as these engineers said would be done.

Mr. Martin explained that Building Officials are requiring the manuals to be signed and sealed by a Professional Engineer. The design of these types of aluminum structures is the only area of engineered design of structures where a non-engineer may take the information from the manuals and create his/her own design and hold it out as an engineered design. This Board's interest and focus is on engineers who are designing manuals, signing and sealing them, selling the right to use them and are then removed from any further involvement in the design and building process.

b. Proposed rule draft by Randy Kissell, P.E., and related email correspondence

Mr. Kissell briefed the Task Force that he studied damages resulting from failures of screen enclosures on the east coast. Research concluded that aluminum is not a common material used in buildings and in building structural design. With this distinction, there appears to be a problem with training in the proper use of this material in construction.

The "Deemed to Comply" Manuals were designed for smaller use situations. They do not cover the many variables in making the product site specific. These structures should be designed to more conservative requirements. Mr. Kissell presented a proposed draft of a rule that would be included in Chapter 61G15-31, F.A.C., and entitled Design of Aluminum Screened Enclosures.

Mr. Kissell believed his rule would follow those responsibility rules already put into place for steel joist and wood trusses. He clarified two areas of responsibility. One deals with correcting the AAF guide that is accepted under the Building Code and responsibility rules that speak to aluminum structures that are required to be site specific and would require signature and seal of a Professional Engineer.

Mr. Kim disagreed with Mr. Kissell's assessment on the basis for the number of failures. As part of his research on these structure failures, he determined the cause of such failures relates to engineers designing the manuals. The engineers are not structural engineers and they have no structural background such as knowledge of lateral bracing. There is also a problem with the pay scale that is currently in place for this type of design work. Competent engineers are reluctant to take on the work because of the pay schedule. The Professional Engineers signing these manuals are paid $30 per project. Addressing what is required in an engineered design of aluminum structures is something this Board can address through rulemaking.

Rex Ware

Mr. Ware reaffirmed his challenge to the notice given for this meeting. Aside from that, he presented two items for the Board's consideration. In his opinion, someone is going to profit financially if site specific requirements are put into place. He suggested the Board read all of the material submitted in order to allow determine the best way to begin to resolve the issues. The Board is going to have to pick a starting point in resolving the issues with aluminum structures. He suggested Mr. Berryman's 2003 report as a beginning. Mr. Berryman's report was based on research of the manuals that were available. Mr. Ware referenced an eight point program that was developed by Mr. Larry Bennett after the meetings with the Board in 2002. These points were never presented to the Board.

Mr. Ware referenced two letters from Brian Sterling who could not be present for this meeting. Mr. Sterling was asked to review the AAF manual in December 2005. The report generated by this review and the latest letter from Mr. Sterling talks about problems in existence today regarding aluminum structures. The report covers site specific structural design to projects that do not require an engineer for permitting and construction. His recommendation represented a compromise to the

problems as there are many projects that are not required to be site specific.

Joe Belcher

Mr. Joe Belcher briefed the task force on his participation as Chair of the Committee responsible for development of the AAF manual. After developing the manual, deficiencies in content were noted after the storms of 2003 and 2004. The Committee has now set aside funds to update the AAF manual. He believed the development of the AAF manual should be recognized as an effort to create standards and not as a document with numerous problems.

Mr. Matthews, based on testimony presented, believed there should be parameters for the size of the enclosure. If there are parameters, then there would still be problems with determining if the structure can be supported by the house to which it is attached.

As an update to the actions of this meeting, Mr. Charland concluded the following: All parties agreed on the need to perform good work, all parties wanted guidance on use of manuals, all parties agree that many projects are not required to be site specific as they permitted and constructed based on use of the AAF manuals. Further, there are noted and acknowledged problems with the AAF manual.

Mr. Charland did not understand why there are manuals that are developed by consensus of associations, accepted under building code as Deemed to Comply Manuals, all with no requirement of those design manuals being signed and sealed by a Professional Engineer.

Mr. Martin explained that this not unique in the building code. There are numerous Deem to Comply Installation Guides. Most are developed from consensus of professional associations.

Do Kim, P.E.

Mr. Kim stated that many design sheets are signed and sealed by PE's. These are not design guides but they do include design features and are not required to be site specific. He commented on the fact that building departments receive site specific designs and they still ask for the charts to support the design.

Mr. Tomasino believed this Board must respect and honor the historical delineations which allow contractors to design some structures under some circumstances. However, once they use a manual that is signed and sealed

by an engineer, then they must make the engineer responsible and site specific requirements would then apply.

Mr. Charland reaffirmed his concern with the results of aluminum structures based on the aluminum association manual that appears to have many problems. It is hard to ignore.

Mr. Kim noted that all manuals are not error free. What has to happen is updating of the manuals as problems become apparent.

Mr. Charland believed Mr. Dudley's rules address the problems with master plans.

Mr. Martin did not believe the Task Force should be addressing problems with Master Plans. The objective as expressed at the board meeting was to address aluminum structures design manuals signed and sealed by Professional Engineers.

Jack Glenn

Mr. Glenn confirmed the AAF manual as exempted from signing and sealing by a Professional Engineer, in his opinion.

Mr. Tomasino asked Mr. Wilkes from St. John's County to restate their approval process for the record.

Mr. Wilkes restated the process used in St. Johns County. St. Johns County recognizes the right of the contractor to design aluminum structures using manuals. The design is then presented to the Engineer of Record who prepared, signed and sealed the manual. The Engineer of Record must provide final sign off to determine that the structure is properly designed site specific. It is signed and sealed and presented to the building department. If a question arises, the EOR is required to provide documentation supporting the design.

In conclusion, it was determined to withhold dissemination of any proposed rules brought before the committee in this meeting. Any proposed rule should be a product of the Board's Rules Committee. The Board would notice a workshop to begin at 1:00 p.m. November 14, 2006 and continued to November 15, if needed. Board staff would contact the engineers who are designing these aluminum manuals to request their appearance before the Board at this meeting. In this meeting, the Board will decide what rules are needed regarding engineers who prepare aluminum manuals. To satisfy concerns expressed by those in attendance, it was confirmed that rules resulting from the rules workshop would be noticed for rule development.

c. Email correspondence among various interested parties concerning the deficiencies in existing and planned aluminum structures

6. Adjourn

The meeting was adjourned at 4:00 P.M.