



DAPE

NEWS

News from Delaware's Licensing Council for Professional Engineers

Winter 2004

President's Message

By J. Ross Harris, Jr., P.E.



The Prostituting of Pole Buildings in Delaware "Owners and Permitting Agencies Beware"

Webster defines "prostituting" as the act of offering indiscriminate services in exchange for money. Unfortunately, that's what's inadvertently happening to the permitting process for many of the pole building designs in Delaware.

Formal complaints have been received by DAPE involving the questionable design of pole buildings bearing the professional seal of Delaware PE's. The DAPE's Law Enforcement and Ethics Committee's investigation of such cases revealed that the pole building designs failed to comply with code-mandated requirements for resisting lateral wind loads and uplift reactions. Furthermore, plans appear to have been sealed without undergoing the benefit of being subjected to a structural analysis.

For the benefit of the uninformed, pole buildings are structures that are initially intended to depend on the bending moment resisting characteristics of poles that are big enough in diameter and embedded into the ground deep enough to resist the lateral and up-lift forces that act on the structure involved. If the poles are too small, too far apart and/or not embedded deep enough into the ground, and the building lacks bracing, the ground surrounding the poles will elongate due to excessive lateral pressure, the building will rack and the poles will be over-stressed. Additionally, there may not be adequate pole circumferential surface friction resistance to overcome uplift forces acting on the building.

I keep making reference to poles. However, over the recent years and with the proliferation of pole building suppliers, the poles that once ranged in the order of 8 to 12-

inches in diameter and embedded some 8 to 12-feet, have succumbed to treated 4x4 or 6x6 posts. They're arbitrarily spaced 6 to 8 feet apart, are embedded 3 to 4-feet into the ground and stick up above the ground to form building eave heights of 16 to 18-feet. When subjected to code mandated snow and wind loads, their critical building connections don't hold up, the building is too light to

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A NEW IMPROVED WEBSITE IS JUST AROUND THE CORNER!

During the last several months, the Facilities Committee of DAPE, chaired by David Athey, P.E., has been busy sending out requests for proposals, reviewing proposals and interviewing firms for information technology services.

Four firms provided presentations to support their recommendations, and Futurtech Consulting was selected as the firm to provide services.

The DAPE website will be redesigned to permit access to our roster of licensed individuals and firms. Licensees will have the opportunity to change address information and renew licenses electronically. Applicants will be able to apply online, streamlining the process for both applicants and office staff.

Look for our new improved website in the near future!

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Visit our Website at: www.dape.org

overcome overturning uplift forces without added forms of restraint, the columns become overstressed and/or the ground surrounding the columns yields under the excessive lateral pressure induced thereon.

When charges are brought against the individuals that seal the related drawings, some simply acknowledge that they sealed what was given to them by the pole-building supplier without further analysis. Others attempt to defend doing so by relying on the premises that the building supplier involved has been successfully obtaining building permits and erecting similar buildings for years; therefore, they must be okay. Others provide DAPE with copies of the calculations they performed for the project. Unfortunately, the calculations are mostly limited to the building's gravity load reactions and fail to include the effects of lateral wind loads.

DAPE considers such actions by Delaware PE's as being serious violations of our Code of Ethics. Under 1.B. of our code, it states that "the engineer shall approve and seal only those design documents which in his considered opinion do not endanger the life, health, property and the public welfare in conformity with accepted engineering standards". Furthermore, under 1.C., our code goes on to state that "the engineer shall not permit the use of his own, firm's, or associates' name in business ventures with any person or firm which upon investigation he believes is engaging in fraudulent or dishonest business or professional practices". Last, but not least, provision 2.A. states that "the engineer shall not affix his seal to any such document not prepared under his supervisory control and review".

Building codes do define the terms under which a building or structure can legally be classified as being safe. In IBC 2000, it appears under Section 1604.1, wherein; "buildings and other structures, and parts thereof, shall be designed and constructed to support safely the factored loads in combinations defined in this code without exceeding the appropriate strength limit stated for the materials of construction".

If you are asked to seal a set of plans,

Do not simply take the client's word that the design documented therein is safe because building permits have been issued based on what's delineated on several past occasions.

Do not assume that because what's being done is the currently accepted state-of-the-art construction practice, that it does not impact the life, health, property and the public welfare.

Do not seal any documents that you cannot provide evidence proving that what's delineated thereon is in compliance with the governing codes and regulations.

Do not start any assignment without first verifying what codes and regulations govern by consulting with the regulatory agencies involved.

Do not depend on the regulatory officials involved to guide you on what's needed for code compliance. If you're not experienced enough to know, you either shouldn't be taking the assignment or you need the support of a qualified design professional with specific expertise in the area needed.

Do not overlook the fact that placing your seal on a set of documents may make you legally accountable for the financial liability involved for that project.

Do not ignore your legal obligation under our Code of Ethics, 1.D., which states; "the engineer having knowledge of any alleged violation of the Code of Ethics shall be forthright and candid in cooperating with the (DAPE) Council in furnishing such information or assistance as may be required".

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2004 LAW REVISIONS STATUS REPORT/UPDATE!

By J. Paul Jones, P.E.

The President's message in the Fall 2003 issue of the "DAPE News" provided a summary of the Council's October 3-5 Law Revision Workshop. This article is intended to serve two purposes. First, it provides an update on the law revision issues discussed in President Harris' message. Second, it solicits your input and support as legislation is drafted, introduced during the current legislative session, adopted by both houses and ultimately signed by the Governor.

There were more than 40 different issues for which specific or conceptual law revisions were discussed during the workshop. At the workshop the proposed conceptual and/or specific changes were either accepted or dropped from further consideration. The accepted specific changes are referred to herein as the Omnibus Provisions. Three conceptual potential revisions were retained for further consideration.

These are:

- 1) Alternate Path to Licensure
- 2) Expanded Enforcement Authority, and
- 3) Use of the Term "Engineer"

Separate Ad Hoc committees have been created to address the first two of the retained concepts. The third was sent back to the Ad Hoc Law Revision Committee for additional consideration. This report addresses below the Omnibus Provisions and Use of the Term "Engineer."

Omnibus Provisions:

The Omnibus Provisions of the proposed 2004 Law Revisions are those changes necessary to modernize our law. These include most of the more than 40 issues referred to above. A non-exhaustive list of this type of revision would include:

- 1) Changes to be consistent with NCEES Model Law;
- 2) Clarification of an existing condition or practice; and
- 3) Removing age requirements to eliminate potential age discrimination.

Examples of changes for consistency with model law include changing the terms "Registered", "Registration" and "Registrant" to "Licensed", "Licensure" and "Licensee"; "Curriculum" to "Educational Program"; and "ABET" to "EAC of ABET". Examples of existing condition or practice clarifications include removal of the reference in the law to "annual" with respect to fee and changing "year" to "period".

In total, the Omnibus Provisions represent the majority of the changes reflected in the proposed 2004 Law Revisions. When adopted, these changes will improve DAPE's ability to administer and enforce the current law, without substantial revision to its intent in any one area. As a result of this improved ability, the interests of the citizens of Delaware will be better served.

Use of the Term "Engineer":

At the workshop, Council reviewed proposed revisions intended to allow individuals meeting the minimum level of education required to enter the engineering profession to use the term "engineer," provided those individuals joined DAPE and subscribed to the Code of Ethics. After substantial discussion, Council approved the concept, but had reservations that the proposed changes may not reflect all those appropriate to implement the concept. The Ad Hoc Law Revision Committee was tasked with working out the details, if possible, while being mindful of the potential for including these changes in the 2004 Law Revisions.

After much discussion, and review of several versions, I am pleased to report the Ad Hoc Law Revision Committee has reached unanimous agreement on language that appropriately implements the approved concept. The agreed upon language will now be reviewed by appropriate committees, including the Law Enforcement and Ethics Committee and the Examining Committee, and discussed again at Council before being included in the 2004 Law Revisions.

The proposed changes create a new non-voting membership category of DAPE called "adjunct member". Adjunct members will be those individuals who live and/or work in Delaware, make application to DAPE, are qualified to begin the path to licensure, and subscribe to the Code of Ethics. Qualification to begin the path to licensure is based upon successful completion of a Council-approved 4-year educational program, the same education required to obtain licensure. Individuals in either the new adjunct member category or the existing affiliate member category (E.I.s) would be authorized to use the term engineer. However, neither adjunct nor affiliate members are, or will be, authorized to offer engineering services directly to the general public. In addition to subscribing to the Code of Ethics, like all members of DAPE, adjunct members will also be subject to the disciplinary powers of Council.

We expect these changes to result in an increase in the number of individuals becoming members of DAPE thereby increasing the number of individuals subscribing to our Code of Ethics. Additionally, individuals will become DAPE members earlier in their engineering careers. These factors lead to the conclusion that the proposed changes will result in increased protection of the general public, which after all is why DAPE exists in the first place.

The text of the existing law is available at www.dape.org. Any member interested in more details on the proposed 2004 law revisions should feel free to contact me. You are strongly encouraged to understand what is being proposed. Your support of the proposed legislation, once introduced (most likely upon the legislature returning to session in March), will be greatly appreciated.

NEW ENGINEER INTERNS ADDED TO THE RANKS

The following individuals successfully passed the October 25, 2003 Fundamentals of Engineering examination, and have now earned the title of Engineer Intern:

Ahmed, Firoz	Hagon, Matthew	Meyer, Gregory	Schreppler, Michael
Anderson, David C.	Hahn, Elizabeth	Miano, Laban	Schreppler, Nathan
Andrews, Elizabeth	Hauser, Andrew	Millhouse, Scott	Schwaute, David
Angelo, Michael	Haynes, Christopher	Moore, James	Shwed, Paul
Bauernfeind, Christopher	Heckman, Nathan	Morders, John	Siddiqui, Salman
Bichsel, Todd	Heinrich, Krista	Morell, Adrienne	Singh, Manvir
Birmingham, Andrew M.	Henderson, Evan	Morgan, Joy	Sisson, Stephen M.
Book, Jasen	Hilley, David	Mullen, Mark	Slack, Richard
Brandt, Michael S.	Hilt, John	Napier, Sarah	Smith, Adam
Brehm Gregory	Hochberger, Jill	Nasrallah, Bassam	Soliman, Ashraf
Cadmus, Andrew	Jovanelly, Nathan	Nolan, Mike	Spencer, Christopher
Cannizzaro, Joseph S.	Kaplan, Dana	Norella, Louis A.	Spiers-Bach, Georgieanna
Carroll, James	Katala, Tshiamala	Oustrich, Jody	Spivey, Kelly
Cassel, Jeffrey	Kestel, Steven	Palermo, James	Sullivan, James
Castorani, Sean	Knudsen, Kenneth	Parvizi, Sahamaldyn	Szumski, Brenda
Coleman, Thomas	LaGrand, Sonya	Patel, Dinesh	Tetteh, Naa Atswei
Damodaran, Mahesh	Lang, Joseph	Pellegrini, Mark	Thorson, Gwen
Darling, Kathleen M.	Lee, Michael	Perman, Robert E.	Trouts, Christopher
DeCrescente, Mark	Li, Haigang	Piscopo, James	Truitt, Peter
Dellose, John J.	Lichtenstein, Matthew	Pitoniak, Andrew	Ulmes, Kevin
Desai, Vishnubhai	Lombardo, Thomas	Ponsi, Adam R.	Van Horn, Matthew
Deutsch, Nathan	Long, Amanda	Powell, Danielle Rene	Veenema, Dirk
Drake, Kathryn	Luchkiw, Adam	Pulgini, Ralph	Vlahos, Evdokia
Everett, Michelle	Lutes, Brian	Pysher, Melissa	Voltaggio, Vincent
Fazekas, Janka	Lynch, Mary	Raad, Ben	Wang, Michael
Figueiredo, Guilherme	Mashkoor, Amir Ali	Reber, Matthew	Watts, Jonathan
Fitzgerald, Todd	McClure, Tiffany	Reidineer, Keith	Webster, Robert
Fitzgibbons, John	McDonald, Michael	Ritter, John	Welschenbach, Adam
Frasch, Steven	McEwen, Jason	Rizui, Mohsin	Wilmot, David
Furman, Timothy	McFadden, John	Robinson, Joseph	
Galipo, Mark	McIlwain, Lauren	Rukowicz, Stefan	
Guerra, Sean	Mei, Gang	Saintil, Max	

Our congratulations to these 125 Engineer Interns who are now on the path towards licensure!

ON-LINE RENEWALS ARE COMING!

Instead of writing that check; stamping, sealing and mailing that envelope, you will be able to go to your computer and renew your engineering license online, at your convenience.

Renewals for the 7/1/04-6/30/06 licensure period will be available online in the very near future. Visit our website at www.dape.org and save a little time and energy and automatically update the status of your license!



39 NEW PROFESSIONAL ENGINEERS IN DELAWARE!

At its January 14, 2004 meeting, the DAPE Council approved licensure for the following 39 successful candidates of the October 24, 2003 Principles & Practice of Engineering examination:

Basim, Swamy	#12985	George, Eldo	#13234	Morton, Wayne C.	#12907
Blomquist, Robert	#12714	Gray, Keith	#13200	Murphy, Jennifer	#13163
Brabson, Joseph	#12758	Gu, Song	#12950	Nolan, Kevin	#13185
Bukenya, Julian	#13205	Hood, Elizabeth A.	#12919	Olenick, Stephen	#13131
Casarino III, Dominic	#13195	Horton, Patrick	#12884	Parvizi, Sahamaldyn	#12936
Crozier, Jeffrey	#13164	Howard, Michael P.	#12903	Sabol, Edward A.	#13207
Cwiertnie, Victoria	#11876	Jones, Darryl C.	#13184	Santos, Rosario	#12933
Doherty, Thomas S.	#12902	Koffke, Jason	#12918	Starke, Jeffrey	#12877
Dougherty, William J.	#13174	Kohli, Narinder S.	#12976	Thalwitzer, Brad	#13161
Ewald, Todd	#13222	Kriebel, David	#12729	Whitaker, Douglas W.	#13225
Ferguson, Douglas	#13188	LaBranche, David	#12934	Wrazen, Robert	#13216
Ferrino, Jamie	#13162	Li, Haigang	#13181	Wyatt, Robert	#13228
Foester, Terry K.	#12772	Lyssikatos, John	#12150	Yurick, John	#12755

CONGRATULATIONS!

WHO NEEDS A LICENSE?

By Peggy Abshagen, Executive Director

Any individual or firm interested in practicing, or offering to practice, engineering in the State of Delaware is required to obtain and maintain a current license or a Certificate of Authorization.

Obtaining a license seems to be perfectly understandable. The maintenance of that license appears to be another matter.

Unfortunately, all states are not on the same renewal cycle. Some renew annually, others (like Delaware) renew biennially. Some renew on the anniversary date of your license; others have calendar year renewals; still, others have mid-year renewals.

Regardless, it is your responsibility to track the renewal dates of all your licenses and renew accordingly. Licensing boards will issue renewal notices, but it's up to you to follow through on a timely basis so as not to incur additional fees, or worse yet, to practice in a state with a lapsed license. This is the unlicensed practice of engineering!

What about firms? And, what is a Certificate of Authorization? A Certificate of Authorization (C/A) is a firm's license to practice engineering in Delaware. Not all states require firms to obtain such a license. Delaware does!

Firms are legally required to obtain and renew annually their Certificate of Authorization. The only exception to this is those firms that are sole proprietorships, practicing under the licensee's name.

For example: licensee Robert Smith's firm is a sole proprietorship legally registered as Robert Smith Engineering Associates.

A Certificate of Authorization is not required. All other firms are required to obtain and maintain a Certificate of Authorization.

All licenses of firms and individuals in Delaware will expire June 30, 2004. For the first time you will be able to renew these licenses online, or, if you prefer, by mail. Delinquency fees will be applied after that date, as follows:

Individual licenses - \$50/month (maximum of \$300)

Firm licenses - \$100/month (maximum of \$600)

Help us to help you. Keep this office advised of any address changes. In the near future, you will be able to update this information online also; but until then just keep us advised of your current address via e-mail, fax, or mail.

And, look for our redesigned website at www.dape.org!

EXAM CALCULATOR POLICY

Communicating devices have always been prohibited in exam sites. Clearly, this prohibits cell phones, pagers, etc. in the exam room. What about calculators?

Calculators now have the capability to communicate with other calculators, sometimes within a range of 100 feet. Some calculator models also have the capability of editing text.

Each of these features presents an exam security issue and one that is being dealt with by eliminating the potential breach.

Effective with the April, 2004 exam administration, the following calculators are banned from the exam site:

Casio, CFX9850+
Hewlett Packard HP 41 series
Hewlett Packard HP 42S
Hewlett Packard HP 48 series
Hewlett Packard HP 49G
Texas Instruments TI-83
Texas Instruments TI-83 Plus
Texas Instruments TI-83 Plus Silver Edition
Texas Instruments TI-85
Texas Instruments TI-86
Texas Instruments TI-89
Texas Instruments TI-92
Voyage 200

Unfortunately, cheating on NCEES exams does occur. Software programs, available for downloading and designed especially for large memory calculators are easily accessible on the Internet. For example, a text-editing program facilitated the entry of data into an alphanumeric keypad, implementing functions similar to Microsoft Word like cut and paste, text wrap, etc.

The need for examinees to familiarize themselves with a different calculator to take an examination can be frustrating; however, this is deemed to be a small sacrifice when assessing the minimum competency of a candidate's engineering skills.

The protection of the public continues to be the responsibility of not only licensing boards, but the entire engineering profession. Maintaining the integrity of the licensing examinations is a challenge, but one we will vigorously pursue!

2004 Council Seat Vacancies

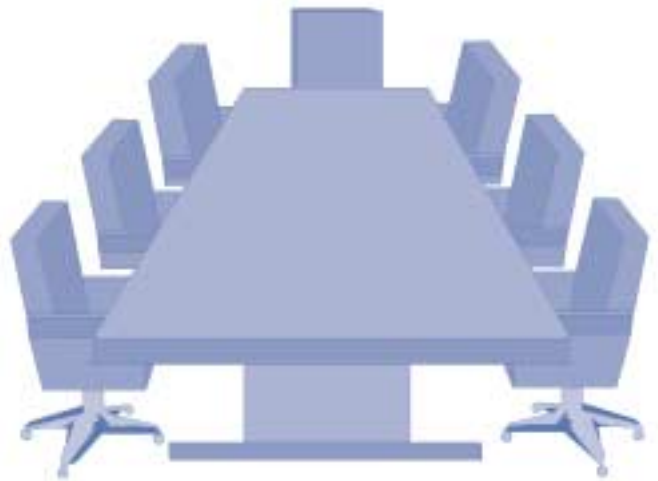
Council seat vacancies for the 2004 Council year are as follows:

Education
Mechanical Engineering
Sussex County

Interested candidates must be a citizen of the United States, a resident of Delaware, a member of the Association, and be qualified to represent the constituency from which the person is elected. (A candidate's discipline shall be that shown on the official roster at the time of nomination or petition, as well as at the time of election.)

Successful candidates will serve a four-year term, expiring on August 31, 2008.

Any member of the Association interested in seeking Council membership must submit a nominating petition to the Secretary of Council by May 1st to be eligible for placement on the ballot. Interested members should contact the DAPE office for a petition.



2004 ENGINEER OF THE YEAR

The Delaware Engineering Society (DES) has selected James T. Johnson, Jr., P.E., as the 2004 Engineer of the Year. In March 2002, Jim was appointed as the third Executive Director in the Delaware River and Bay Authority's (DRBA) 40-year history. Created in 1962 as a bi-state entity between the states of Delaware and New Jersey, the DRBA employs a workforce of approximately 500 with an annual operating budget over \$60 million.

Johnson's professional engineering career spans more than 25 years in both the public and private sectors. Prior to accepting DRBA's leadership post, Jim served as the Delaware Department of Transportation's (DelDOT) Chief Engineer.

From 1987-2001, Johnson worked for Century Engineering, Inc. in a number of management and technical positions. While at Century, he worked with DelDOT on the design and construction of the state's largest public works project, SR1 - the Relief Route.

As the Program Manager for the U.S. Army Toxic and Hazardous Materials Agency from 1983 to 1987, Johnson was responsible for the program execution of SUPERFUND investigations and remediation efforts at various army installations throughout the country.

Throughout his career, Johnson has delivered high-profile presentations and produced a number of publications on topics, including the US 13 Modified Design-Build presentation to the Delaware and Maryland section of the American Society of Highway Engineers (ASHE); Highway Right-of-Way Considerations near SUPERFUND sites in Delaware co-authored for the SUPERFUND conference in Washington, DC; and Hazardous Waste Impacts on the Highway Planning and Property Acquisition Process for the Environmental Engineering Proceedings of the American Society of Civil Engineers (ASCE) Specialty Conference.

Jim is an active member in a number of organizations and societies that support the engineering profession, serving as past president of both DES and ASCE of Delaware.

Raised in Baltimore, Maryland, Jim resides in Lewes, Delaware, with his wife, Maureen, and their three children.

The Delaware Council of Engineering Societies will be presenting The Engineer of the Year award at the 2004 Engineers' Week Banquet on Thursday, February 26, 2004, at the Dupont Country Club.

YOUNG ENGINEER OF THE YEAR 2004

Stacy B. Ziegler, P.E. graduated from the University of Delaware in 1994 with a Bachelor of Civil Engineering, magna cum laude, and a minor in piano performance. In 1996, she received her Master of Civil Engineering degree, with a concentration in geotechnical engineering, from the University of Delaware.

Stacy began her engineering career at Duffield Associates as an intern during her graduate studies, and joined the firm as a geotechnical engineer in 1996. She became a shareholder in the firm in 2000. Her primary project involvement is with geotechnical projects, including specialized work in geosynthetic reinforced structures and pavement maintenance. Stacy received her PE license in Delaware in 1999.

An active member of DES since 1998, Stacy has served on the Scholarship Committee, serving as Chair since 2000.

Currently, she also serves as Treasurer of DES. Stacy is a member of the International Facility Management Association (IFMA) and the American Concrete Institute, and has served with DAPE as a proctor for the FE exams over the past several years.

Stacy resides in Perryville, Maryland, with her husband, Warren, and their two children.

Join the local engineering community in recognizing Stacy's accomplishments at the 2004 Engineers' Week Banquet.



Are Pre-Engineered Metal Buildings Under-Engineered? What About Houses?

By Robert A. Chagnon, P.E.



Everyone knows about the snow and ice storms that Delaware experienced last winter. What they may not know is that, during these events, there were several roof failures as a result in addition to several complete building collapses. More so, many of the failures that occurred involved pre-engineered metal buildings.

The forensic investigations that followed attributed most of the failures to several building characteristics that are particularly common to pre-engineered metal buildings. These include:

Low Roof Pitch: The common roof pitch for metal buildings is $\frac{1}{4}$ " in 12" (1.2 degrees), as compared to a minimum of 3" in 12" for conventional buildings. The low pitch prevented melting snow from running off of the roofs which subsequently froze at night and simply added to the live load bearing thereon.

Unbalanced Snow Loads: Roof pitch slopes less than 2.5 degrees are not required to be analyzed for unbalanced snow loads. Last winter's snow storms were accompanied by high winds that subsequently caused the leeward side of a gable pitched roof to accumulate more snow than the windward side. As a result, many roofs that were not designed for unbalanced loads failed.

Live Load Reduction: The minimum required design live load for framing members having an influence area of 400 square feet or more can be reduced by code, if desired. Pre-engineered metal building manufacturers take advantage of this unless the design professional involved in specifying the building takes exception to it. Under earlier code editions, when the ground snow load for New Castle County was 20 pounds per square foot (it's now 25 psf), taking advantage of the code's live load reduction provisions resulted in many roofs to be designed for a live load of around 15 psf.

Shadow & Drift Loads: The vacuum effect created on the leeward side of a roof projection by the wind blowing over such causes snow to accumulate to greater depths. The same occurs on the windward side due to drifting. These live load increases are rarely accounted for in the initial design of a building because the eventual presence of such projections as air handling units, fans, condensers and etc., are unknown when the building's being initially designed. The prospect of their eventual existence can be addressed to some degree by introducing what the pre-engineered building industry refers to as a collateral load. However, a collateral load is uniformly distributed which does not always compensate for the aforementioned concentrated type of loads that develop. Remember the Borders' roof collapse?????????

Building Stiffness: Pre-engineered metal buildings have the built-in ability of drift laterally and deflect more than conventional buildings. Their roof elements can deflect to a ratio of L/180 or less, compared to L/240 and L/360 for conventional buildings. On a low-pitched roof, this can result in more roof sag than its overall pitch produces. Under lateral wind loads, metal buildings can drift to a displacement to height ratio that's as low as H/75. Conventional buildings are designed for H/400 or more. Your typical pre-engineered metal building can accommodate these types of movement magnitudes because their roof and wall panel systems are specifically developed to handle it. That's why they're so economical. The problem comes when an owner (or unknowledgeable design professional) wants to retain a metal building's economical advantages, but skin the building with materials that are not intended to move (such as brick or concrete masonry) or marry the metal building onto a conventionally structured building.

The pre-engineered building industry is not always at fault here. They will design to whatever building specifications are being called for. Unfortunately, many are being specified by owners or contractors who are driven by the bottom line cost advantages of under-specifying a building. You end up with a building that's great, until you go and move one of the light fixtures. Design professionals can be at fault also. Many do not realize the ramifications of the industry's liberal design criteria. They're too dependent on the philosophy that "if it meets code, then it must be okay." Remember, building codes only represent the minimum requirements needed to protect the public. Good judgment by design professionals must still prevail.

Houses are another area where design deficiencies have become rampant over the last several years. That's due mostly to the advent and popularity of engineering lumber. The latter includes wood I-beams, laminated veneer lumber, parallel strand lumber and etc. They have opened the door to longer spans that were previously limited by the 18 to 22 foot limited lengths of milled lumber. The market desire for larger homes has been answered by what are classified as "executive homes" that are adorned with larger and more open living spaces, including cathedral and/or vaulted ceilings and two-story high clerestories. Needless to say, the quality of the finish materials involved for such prestigious adobes have also been factored in. Ceramic tile and marble floors are now preferred over hardwood flooring, and rarely does the exterior of such a house not include some stone veneers. Window walls are also the rage.

There's no doubt
that many contractors
(and design professionals)
will argue with the above
and state how long
they've been building
houses the way they have
without any serious
incidents. Some design
professionals fall into that
same category.

The critical question is
however, does it meet
code?

Unfortunately, most houses are not designed, or as a professor of mine once termed, they're designed by "method of successive approximation." They're simply rebuilt differently until they stand up. Or in many unfortunate cases, until the building officials are satisfied enough to issue a "certificate of occupancy." That's the contractor's ace-in-the-hole when they end up in court over such related deficiency matters. Unfortunately, it doesn't work.

The home building construction industry has failed to adjust their "state-of-the-art industry standards" to accommodate the unique problems that these larger homes tend to create. This is particularly true in the following areas:

Roof Framing: Most roofs in the past had attic floors that kept the sidewalls from being pushed out from the lateral thrust of the roof rafters. With cathedral ceilings, there are no attics and no attic floor joists to stabilize the sidewalls. Builders rely on collar ties that join the rafters together, except higher up above what would have been the attic floor level. Analytically, it rarely ever works. The concentrated reaction imposed on the rafters causes them to become overstressed and over deflected.

Wall Framing: Your usual 8-foot high walls have been replaced with 9 to 11-foot high walls and much higher for two-story clerestories. That's not all that much of a problem for 2x6 studs that have replaced 2x4's for accommodating more insulation, but not with more and larger window areas involved. The old rule-of-thumb of doubling up on the studs at opening jambs no longer applies.

Lateral Stability: With larger rooms and more open spaces within a home, wind load has a greater effect on the lateral stability of the house. More attention has to be placed on shear walls and floor lateral shear diaphragm construction that many builders know little about.

Floor Framing: Another old rule-of-thumb was to double up on floor joists that are directly under partitions. However, the partitions are now heavier and floor spans longer, so that doesn't apply either. The sagging of such partitions because they're simply held up by plywood or OSB floor sheathing that spans between the floor joists is also very common. The use of ceramic tile and/or marble on larger floor areas has been the subject of many legal actions. Their construction standards are governed by tile industry standards that most builders and design professionals know little about.

Basement Foundation Walls: They're no longer 7+ feet high. They've been replaced by 9-foot or higher walls with finish grade backfilling going up almost as high. Twelve-inch hollow core concrete block no longer cuts it and even poured concrete walls may not without being reinforced.

There's no doubt that many contractors (and design professionals) will argue with the above and state how long they've been building houses the way they have without any serious incidents. Some design professionals fall into that same category. The critical question is however, does it meet code?

COUNCIL MEMBER SPOTLIGHT



License #2263 was issued some 40+ years ago to J.G.S. Billingsley, P.E. He has served on Council for a total of 21 years, representing New Castle County, and currently seated in the Mechanical Engineering seat.

Serving as President of DAPE in 1985-1986, Jack was also selected the Delaware Engineer of the Year in 1986.

Retired as the Director of Engineering from a privately held manufacturing company in 1998, Jack was previously a senior consultant with Dupont's Engineering Department; an adjunct Mechanical Engineering Professor at the University of Delaware; and State Representative, responsible for sponsoring the Delaware Professional Engineers' Act in 1972.

Active on both the state and national level, Jack has served on just about all of DAPE's committees; currently serves on the NCEES Uniform Procedures and Legislative Guidelines Committee, having previously served on the NCEES Constitution & Bylaws and Professionalism & Ethics and International Relations Committees.

Interested in developing process machinery, and holder of 15 U.S. patents, Jack recognizes one of the challenges of the profession to be improved interstate and international mobility, as well as successfully encouraging more young engineering graduates to become licensed.

As for challenges for Council, Jack foresees continuing under Delaware's unique self-regulatory law, regulating the practice of engineering in the best interests of the people. "I believe the high public esteem enjoyed by the engineering profession in Delaware directly relates to DAPE's public outreach and subsequent public perception of open and responsible regulatory practice," states Billingsley.

Jack and his wife, Doris, reside in Newark, Delaware.

WE ARE GROWING!

The existing DAPE office space is under renovation to provide additional conference room space and larger work and storage areas. The current conference room does not afford ample room to hold disciplinary hearings, and other larger functions in our facility.

Increased enforcement efforts have resulted in the DAPE Council scheduling more disciplinary hearings. Currently, arrangements must be made to procure an adequate site to conduct these hearings. The existing conference/ board room of the DAPE office will not accommodate the 15-member Council, plus staff, attorneys, complainants, plaintiffs, court reporter, etc. Office space became available and DAPE took advantage of the opportunity to increase its size.

Renovation should be completed in about 30 days. We are looking forward to our newly expanded office space! Please feel free to visit our office when you are in the neighborhood.



ROSTER REQUEST

If you are interested in obtaining a copy of the 2003 Membership Roster, please complete the form below and return it to our office by March 30, 2004. This roster is available free of charge to our membership, but only upon request.

Name: _____

Address: _____

License #: _____

THANK YOU
FOR YOUR PROMPT RESPONSE!

The Complaint Process in Delaware

The DAPE Council is responsible for investigating complaints based upon substantial facts relating to specific violations of Delaware's licensing law and engineering Code of Ethics. The Council has the authority to discipline its licensees, and to investigate any unlicensed practice or offer to practice engineering or using a name, title, description or designation that leads to the belief that a person or company is entitled to practice engineering.

To file a complaint with the Council, please contact the DAPE office. A complaint form may be downloaded from DAPE's website to facilitate the investigation. Anonymous complaints are not accepted.

The form requests specific information about work performed, project location, problems encountered, any resolution attempts and dated facts. It's important to include as much data as possible, e.g., plans, pictures, maps, etc. - anything that you believe will assist with the investigation. Always submit copies - not originals, of any attached documents. The more specific, the better.

To File a Complaint (302) 368-6708

A complaint form is available on DAPE's website:

www.dape.org

For more information, see Delaware's licensing law, Section 2824.

Mission Statement

The mission of the Delaware Association of Professional Engineers (DAPE) is to safeguard life, health, property, and public welfare by regulating the practice of professional engineering in the State of Delaware.

We:

Qualify and license individuals;

Qualify firms that offer engineering services;

Establish and enforce laws;

Provide information for the public to make informed decisions.

Vision Statement

The DAPE Council, elected by its members with public representatives appointed by the Governor, assures that: Qualified applicants are licensed; Qualified firms are issued Certificates of Authorization; Disputes are resolved for consumers and licensees promptly and impartially; Violations of the law are discouraged before they occur, and are investigated and adjudicated promptly when committed; The professional engineering laws are clear, relevant, unambiguous, and functional; Legislative changes are approached proactively; Its performance is measured against defined standards and it periodically evaluates its programs and practices in light of emerging trends, and technologies; DAPE members will be kept informed of pertinent Council actions and requests for information from members and the general public will be addressed promptly and efficiently; It will attract competent staff who contribute to the integral success of the DAPE Council and will maintain a work environment where employees are satisfied because they feel valued and challenged.

Council Executive Committee

J. Ross Harris, Jr., P.E.
President

J. Paul Jones, P.E.
Vice-President

Carmine C. Balascio, P.E.
Secretary

Robert Cannon, P.E.
Secretary

Council Members

David J. Athey, P.E., Civil Eng.	8/31/06
Carmine C. Balascio, P.E., Education	8/31/04
J.G.S. Billingsley, P.E., Mechanical Eng.	8/31/04
Robert Cannon, P.E., Electrical Eng.	8/31/07
Pasquale S. Canzano, P.E., Government Emp.	8/31/05
Guy F. Marcozzi, P.E., Private Consulting	8/31/07
J. Paul Jones, P.E., Other	8/31/05
Walter L. Frank, P.E., Chemical Eng.	8/31/05
Robert W. McClure, P.E., New Castle County	8/31/06
J. Ross Harris, Jr., P.E., Sussex County	8/31/04
John F. Mayan, P.E., Kent County	8/31/07
Karen Maxson, P.E., Industry	8/31/06
Paul E. Crawford, Esq., Apptd. New Castle Co.	8/31/07

Council Staff

Peggy Abshagen
Executive Director

Donna Weaver
Administrative Assistant

Council Office

56 W. Main St., Suite 208
Christiana, DE 19702

(302) 368-6708
(302) 368-6710 Fax

e-mail
peggy@dape.org

Website
www.dape.org

Moving?

Be sure to notify the Council office

The Delaware Association of Professional Engineers requests that you notify our office immediately of any change of address. Reporting a change of address is vital to ensure that you receive necessary renewal information and other correspondence important to your continued licensure. If you have changed your address, please complete the following form and mail it to the council office in order that our records may be updated accordingly.

The Delaware Association of Professional Engineers (DAPE) is the contact agency for licensing, regulations and complaints for the engineering profession.



Change of Address Notice

(Please print or type all information)

License Number: _____

Date: _____

Name: _____

Old Address: _____

New Address: _____



Delaware Association of Professional Engineers
56 W. Main Street, Suite 208
Christiana, Delaware 19702

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