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LAURA CIRIELLO-BENEDICT,
William J. Cirillo Plumbing Co. Inc.,
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The Virginia Plumbing and Mechanical Inspectors Association welcomes you to its

50th Annual School of Instruction

April 3–5, 2013
Richmond, Virginia

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Patrick Henry delivered his “Give me liberty or give me death” speech on March 23, 1775 in Richmond, Virginia, at the old St. John’s Church. It helped convince the Virginia House of Burgesses to pass a resolution delivering Virginia troops to the Revolutionary War. Peter F. Rothermel depicted Patrick Henry speaking before the House of Burgesses in his 1851 painting.
Today I express my thanks to all of you for the opportunity to serve VPMIA as its President and my everlasting gratitude to my fellow Officers and other members of the Board of Directors for making this 50th year one that will move VPMIA forward in accordance with its Missions, Code of Ethics and Strategic Goals. Accepting the President’s gavel last April was a humbling experience and will always remain a highlight in my career. Just as those who have preceded me, I’ve been honored to serve VPMIA in this role and have striven to be a worthy representative.

As we enter the “next” fifty years, an active, involved membership is vital to our future success. At our last SOI, the value of providing scholarship funding to encourage member involvement in the Code process was emphasized. Available scholarship funds made it possible for me to participate at the ICC Action Hearings in Dallas, Texas, and the ICC Annual Conference and Committee Hearings in Portland, Oregon. Speaking for myself, hearing about the ICC conferences is one thing, but witnessing what really goes on is truly an experience, including endless opportunities to meet and network with those that share the same interests about the code process. I strongly recommend that everyone, especially those who now serve or aspire to serve as a VPMIA Officer or Board Member, make an effort to attend one of these ICC events. Keep in mind, the 2013 ICC Annual Conference is being held in Atlantic City, New Jersey, this year.

Speaking of scholarships – DHCD, one of our greatest partners, continues to support our training and educational efforts through generous donations. Those donations have made it possible for many of our members to attend the ICC meetings over the years. At this SOI, Bill Shelton, the Director of DHCD, will take time from his busy schedule to join us on Banquet night. Five other DHCD staff will also be in attendance. Please introduce yourself and say thanks for all they do for our Association.

VPMIA continues to have great success at the Code hearings thanks to the hard work and dedication of the Plumbing, Mechanical and Fuel Gas Committee members. They are the nerve center of what we do. It is a daunting task to analyze the enormous volume of data involved in the Code process and these members are to be commended for their perseverance and commitment. The work performed by the Committee members is well respected throughout the Code community, bringing credibility to themselves and their efforts, and therefore in the process, sheds a favorable light on our Association.

While the PMG Committee is out front, there are many other standing and ad hoc Committees that are dealing with the everyday and special needs of VPMIA. Each committee is important and continues to need active members that are determined to see us function as a well-oiled machine. Committee descriptions are in our By-Laws; a quick read will give you an idea of how much each one accomplishes for each of us. Without these Committees doing their jobs, VPMIA would not function at the high standard it has set. I salute them all.

Ladies and gentlemen, it has been a privilege, and I am grateful to you for allowing me to serve as your President.

Respectfully,

[Signature]

President
Virginia Plumbing and Mechanical Inspectors Association
2012-2013
WEDNESDAY, APRIL 3
7:00 a.m. - 8:15 a.m. REGISTRATION
8:30 - 10:00 a.m. Viega LLC-Fuel Gas Press Fittings • Ed Warwick
10:00 - 10:30 a.m. BREAK
10:30 - 12:00 p.m. CaptiveAire CORE Fire Suppression • Brian Liles
12:00 - 1:00 p.m. LUNCH (included with registration)
1:00 - 2:30 p.m. SimplexGrinnell/NFPA 72-2007 Edition Code Changes • Doug Ridgeway
2:30 - 3:00 p.m. BREAK
3:00 - 4:30 p.m. Orion Pipe-Polystar Polypropylene Piping System • Clint Davison
5:00 - 6:00 p.m. PRESIDENT’S WELCOME
6:00 - 7:30 p.m. BUFFET DINNER* Served at The Hilton Garden Inn (included with registration)
7:00 - 11:00 p.m. Casino Night!

THURSDAY, APRIL 4
8:30 a.m. - 10:00 a.m. Highland Tank-Rainwater Storage • Michael Gauthier
10:00 - 10:30 a.m. BREAK
10:30 - 12:00 p.m. Hilti Fire Stop Systems • Adam Reinhold
12:00 - 12:15 p.m. VPMIA GENERAL MEMBERSHIP MEETING - PART 1
12:00 - 1:00 p.m. LUNCH (included with registration)
1:00 - 2:30 p.m. Commercial HVAC Variable Refrigerant Flow Zoning Systems • Ryan Anderson
2:30 - 3:00 p.m. BREAK
3:00 - 4:30 p.m. Watts Water Filtration Systems • Stephen Callahan
6:30 - 10:00 p.m. BANQUET* with Guest Speakers, Installations & Awards (included with registration) Served at The Hilton Garden Inn

FRIDAY, APRIL 5
8:00 a.m. - 9:00 a.m. BREAKFAST BUFFET (included with registration)
9:00 - 12:00 p.m. GENERAL MEMBERSHIP MEETING - PART 2

*Wednesday dinner and Thursday night Banquet will be at The Hilton Garden Inn, 441 International Center Drive, Sandston, Virginia, 23150

Thank You to those whose efforts have made this VPMIA Yearbook possible.

John Seay, Awards Chairman, Jesse Hurt, Lifetime Active Member,
Don Bladen, Doyle Printing & Offset, Jane Fitzgerald, Fitzgerald Art & Design LLC,
Our Advertisers, (individually listed on p. 5), Our Exhibitors, (individually listed on p. 35)
with special thanks to our contributing authors, Lee Clifton, ICC, and Luis Escobar, ACCA

—Ron Bladen, Chairman, VPMIA Advertising/Yearbook Committee
The Virginia Plumbing and Mechanical Inspectors Association

Code of Ethics

We the members of Virginia Plumbing and Mechanical Inspectors Association recognize that our work has a direct and vital impact on the quality of life for all people in the Commonwealth of Virginia, and we are dedicated to the highest standards of professionalism, integrity and competence. We therefore pledge to maintain and advance these ethical principles:

- Place the public safety and health above all other interests and recognize that the primary function of government is to service the best interests of all people.
- Consider my profession a distinct opportunity to serve society.
- Demonstrate integrity, honesty and fairness in the discharge of my duties by striving to achieve excellence in all matters of ethical conduct.
- Treat all persons courteously, equally and fairly.
- Conduct myself at all times in such a manner as to create and maintain respect for the Virginia Plumbing and Mechanical Inspectors Association and the industry it represents.

- Refuse to leverage my position to secure advantage of favor for myself, my family or my friends.
- Neither accept nor offer, any gift, favor or service that might tend to influence me in the discharge of my professional duties.
- Refrain from representing private interests in any business or technical affairs of this Association.
- Use every opportunity to improve public understanding of the Virginia Plumbing and Mechanical Inspectors Association and its important contribution to the Commonwealth of Virginia.
- Maintain loyalty to the Virginia Plumbing and Mechanical Inspectors Association, and pursue its objectives in ways that are consistent with the public interest.

VPMIA members are committed to providing code development leadership and continuous training that results in uniform application of the codes. We look for opportunities to partner with all who are impacted and strive to develop and deliver codes and standards that result in health, safety, and welfare protection for the public.

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VPMIA's Foundation

**Vision Statement**

VPMIA members are committed to providing code development leadership and continuous training that results in uniform application of the codes. We look for opportunities to partner with all who are impacted and strive to develop and deliver codes and standards that result in health, safety, and welfare protection for the public.

**Mission**

VPMIA is an association of code professionals dedicated to promotion of uniform enforcement and development of the codes throughout the Commonwealth to assure the health, safety, and welfare of its citizens and any one who may live, work, or visit the state of Virginia. The pursuit of this endeavor is achieved through close, open, and equal working relationships with design professionals, builders, contractors, material manufacturer’s and others involved in the construction industry. VPMIA supports the ICC, its goals and mission.

**Strategic Plan Mission**

VPMIA's strategic plan is to advance our mission through training in order to promote better understanding of the benefits and efficiency of using model codes. The association promotes teamwork, while embracing fairness and respect to all involved parties, always maintaining open communications in every aspect to those who participate in the process.
The Virginia Plumbing and Mechanical Inspectors Association

Strategic Plan

GOAL # 1 Enhance and increase communications of VPMIA with the public (Communications)

Initiative action:
• Actively promote a positive image of code enforcement’s role in the community.
• Advertisements in trade, industry, state DHCD, and community publications.
• Commitment to code development to achieve the superior level of health, safety, and welfare for our citizens.

GOAL # 2 Increase and expand education (Training –Communications)

Initiative action:
• Encourage increased participation from all interested parties who interact with any and all aspects of code enforcement.
• Increase awareness of the educational benefits of the association.
• Promote credentialing programs provided by the state DHCD.

GOAL # 3 Uphold the highest levels of professionalism (Leadership – Professionalism)

Initiative action:
• Instill and promote leadership values.
• Always display integrity.
• Adherence to code of ethics.
• Share knowledge at all levels.
• Maintain and promote certifications.
• Respect others.

GOAL # 4 Promote relationships with industry and related professional organizations (Cooperation)

Initiative action:
• Participate in the code development process.
• Encourage cooperative working relationships with construction-industry professionals.
• Become involved as active or associate members to other professional organizations such as VBCOA, ICC, IAEI, and PMPV.

GOAL # 5 Broaden and expand VPMIA Membership (Membership)

Initiative action:
• Develop information package of the organization benefits.
• Provide more member services.
• Develop a more wide spread advertisement program for membership, including associate members.

GOAL # 6 Continue leadership and participation in code development process (Leadership – Code Development)

Initiative action:
• Enhance and develop strategies for participation in International Code Council Code developmental process.
• Encourage participation on state and national committees.
• Provide financial support towards member participation in these activities.

GOAL # 7 Promote the adoption of the International Code Council family of model codes (Communications – Training)

Initiative action:
• Provide analysis and impact of benefits for industry, where necessary.
• Provide training for code enforcement officials and industry.
• Interact with DHCD to provide uniform enforcement of model codes.

GOAL # 8 Ensuring financial viability of VPMIA

Initiative action:
• Align financial resources to organizational outcomes.
• Achieve goal objectives.
• Operate within budgeted plan.
Constitution and By-Laws

ARTICLE I — The Name, Seal, and Address of this Association

Section 1. The name shall be the Virginia Plumbing and Mechanical Inspectors Association; herein and hereafter referred to as the Association.

Section 2. The seal shall be as indicated below:

Section 3. The address shall be that of the Executive Secretary or as otherwise designated by the Board of Directors.

ARTICLE II — Objectives

Section 1. The objectives of the Association are:
   A. To participate in the formulation of Virginia Plumbing and Mechanical Code provisions.
   B. To promote uniform understanding and application of the Virginia Uniform Statewide Building Code.
   C. To promote and secure uniform inspection methods throughout the Commonwealth of Virginia.
   D. To promote closer industry unity between code officials, governing agencies and the private sector.
   E. To promote and improve the standard of professional plumbing and mechanical inspectors.
   F. To provide professional development through an annual education and training seminar which shall be known as the School of Instruction.
   G. To encourage growth of the Association by providing enhanced services to its members and by promoting strong leadership values, respect and the pursuit of common goals.

ARTICLE III — Membership

Section 1. Active membership shall be open to code officials actively engaged in plumbing and/or mechanical code enforcement. Application for membership shall be in writing and submitted to the Executive Secretary.

Section 2. Associate and student memberships shall be open to those persons interested in the design, manufacture, installation or sale of plumbing and/or mechanical systems/products.

Section 3. Retired membership shall be open to those members submitting written application for retired status to the Executive Secretary.

Section 4. Life membership may be extended only to Active and Associate members who have significantly contributed to promoting the objectives of the Association. Life members may be nominated and approved by the general membership at the third general membership meeting. Life membership shall be limited to one Active member and one Associate member per calendar year.

Section 5. Charter members are those who founded the Association.

Section 6. Honorary membership shall be open to those persons who are not members of the Association but have made a significant contribution in promoting the objectives of the Association.

Section 7. Application for associate, student and honorary memberships shall be in writing, submitted to the Executive Secretary and reviewed by the Board of Directors for approval.

Section 8. All members shall conduct themselves in accordance with the Association’s Code of Ethics and shall be willing to promote the objectives of the association.

ARTICLE IV — Board of Directors

Section 1. The Association shall be governed by a Board of Directors, herein and hereafter referred to as the Board, which shall consist of the elected officers, District Directors, the Director-at-Large and the Chairperson of each standing committee.

Section 2. The Board shall manage the policies, business, property and affairs of the Association.

Section 3. Officers
   A. The officers of the Association shall consist of a President, Vice President, Secretary and Treasurer. The officers shall be Active members and shall be elected and installed during the annual School of Instruction.
   B. The officers shall hold office from the close of the annual School of Instruction through the close of the annual School of Instruction of the following year. Officers shall serve no more than two consecutive terms in the same office.

Section 4. Directors
   A. A total of four active members may be elected as District Directors. The Directors shall be Active members and shall be elected and installed during the annual School of Instruction.
   B. The Directors shall hold office from the close of the annual School of Instruction through the close of the annual School of Instruction of the following year.
   C. Each District shall consist of all cities, towns and counties as outlined in Appendix A.
   D. The Director-at-Large shall be the immediate Past President.
   E. Non-voting Ex-officio members on the Board of Directors shall include the President, or his or her duly appointed representative, of the Virginia Chapter of the International Association of Electrical Inspectors, The Virginia Fire Prevention Association, and The Virginia Building Code Officials Association.

Section 5. In the event that an Officer or Director resigns, the Board shall appoint, as soon as possible, an Active member to fill the unexpired term.

Section 6. Appointments
   A. An Executive Secretary shall be appointed by the Board for a maximum term of five years or as determined by the Board. Compensation of services rendered shall be as approved by the Board.
   B. A Director of Finance shall be appointed by the Board for a maximum term of five years or as determined by the Board. Compensation of services rendered shall be as approved by the Board.

Section 7. General duties
   A. Board members shall review the draft General Membership or Board of Director meeting minutes and return
ARTICLE V — Duties of the Officers, Directors, Executive Secretary and Finance Director

Section 1. The President
A. To preside over all meetings.
B. To select all committee chairpersons except the finance and the nominating committees.
C. The President may appoint members to represent the Association on local, state or national committees, boards and similar entities when such representation is requested or provided for by regulation or statute. Appointments shall not conflict with the Association’s by-laws or code of ethics.
D. To be an ex-officio member of all committees except the nominating committee.
E. To perform such other duties applicable to the office as prescribed by the parliamentary authority adopted by the Association.

Section 2. The Vice President
A. To assist the President at all meetings.
B. To preside over all meetings in the absence of the President.
C. To perform such other duties as applicable to the office as prescribed by the parliamentary authority adopted by the Association.

Section 3. The Secretary
A. To assist the presiding officer with the orders of business and to distribute correspondences to all members present.
B. Notification of meetings.
   1. To send to all Board members a notice of every Board meeting at least twenty days in advance of such meeting.
      a. Ten days notice, including an agenda, shall be given for all special meetings.
   2. To send all members a notice of every General Membership meeting at least thirty days in advance of such meeting.
C. The Secretary shall, electronically or by mail, send the draft Board of Director or General Membership meeting minutes to the Board of Directors for comments and revisions within seven business days after the conclusion of the meeting.
D. To maintain and have available at all meetings the official minute book.
E. To record the voting at all meetings.
F. To send letter ballots to all Board members not present at meetings for which there is no quorum.
G. To perform such other duties as applicable to the office as prescribed by the parliamentary authority adopted by the Association.

Section 4. The Treasurer
A. To accurately record and post all funds received and disbursed.
B. To pay all bills that have been approved as per the budget or by the Board.
C. To submit a quarterly report of the Association’s finances to the Finance Committee.
D. To submit a report of the Association’s finances at all meetings, except special meetings unless included in the special meeting agenda.
E. To maintain the financial records of the Association on a fiscal year from May 1 through April 30, unless otherwise approved by the Board.
F. To be a standing member of the Finance Committee.
G. To perform such other duties as applicable to the office as prescribed by the parliamentary authority adopted by the Association.
H. The Board of Directors has the authority to require the Treasurer be bonded as deemed necessary. If the Board of Directors determines that a bond is required, the value, timeframe and terms of the bond shall be established in a board-adopted policy. The Association shall pay the bond premium and any other costs associated with the bond.

Section 5. The District Director
A. To attend the Board and General Membership Meetings per term of office.
B. To assist in the management of the Association.
C. To report any concerns of the members within their district to the Board.

Section 6. The Executive Secretary
A. To prepare for the Board all business that has not been assigned to others.
B. To present or have presented at all meetings all reports received from committee chairpersons.
C. To recommend plans of work and conduct the general business of the Association under the direction of the Board and the General Membership.
D. To be a standing member of the School of Instruction Committee.
E. To authorize both active and/or retired membership status.
F. To maintain all membership applications.
G. To receive the letter of resignation of an Officer or Director and present it at the next Board meeting.
H. To send to each Director a current roster of all members within their respective districts no more than thirty days after the third General Membership meeting.
I. To maintain and have available at all meetings a current roster which lists only members in good standing by district affiliation.
J. To send all membership renewals by December 1 of each year.

Section 7. The Director of Finance
A. To coordinate the finances of the Association.
B. To serve as the chairperson of the Finance Committee.
ARTICLE VI — Committees

Section 1. The number of committee members, mentioned below, includes the chairperson. Standing Committee chairpersons are appointed by the President, see previously in the text, Article V, Section 1.B. Standing Committee members are selected by the committee chairperson as stated hereinafter in this Article or are established within the description of the committee. Standing Committee members that are established by the text are in addition to those members appointed and selected. Standing Committees may include, but are not limited to the following:

A. An Advertising and Yearbook Committee, composed of five members, shall be appointed within thirty days after the third General Membership meeting. It shall be the duty of this committee to manage an advertising campaign and publish the yearbook for the Association's School of Instruction.

B. An Auditing Committee, comprised of three members, shall be appointed within thirty days after the third General Membership meeting. It shall be the duty of this committee to audit the Treasurer’s account(s) at the close of the calendar year and report at the fourth regular Board meeting. The Treasurer shall not be a member of this committee.

C. An Awards Committee, comprised of five members, shall be appointed within thirty days after the third General Membership meeting. It shall be the duty of this committee to select and present, the awards for Outstanding Service to the Plumbing and Mechanical Apprentice of the year.

D. A By-laws Committee, comprised of five members, shall be appointed within thirty days after the third General Membership meeting. It shall be the duty of this committee to review, discuss, prepare and recommend, to the Association, any necessary changes to the Association’s By-laws in order to maintain current directives for the administration of the Association.

E. A Certification, Education, and Training Committee, comprised of five members, shall be appointed within thirty days after the third General Membership meeting. It shall be the duty of this committee to organize educational classes for the School of Instruction.

F. A Finance Committee, comprised of three members, the Treasurer and the Finance Director, shall be appointed within thirty days after the third General membership meeting. It shall be the duty of this committee to prepare a budget for the fiscal year and submit it to the Board for approval at its last scheduled meeting prior to the third General Membership meeting. The committee may submit amendments to the current budget at any regular meeting. The committee shall prepare and submit any other reports as directed by the Board.

G. A Legislative Committee composed of three members, shall be appointed within thirty days after the third General Membership meeting. It shall be the duty of this committee to attend as many Virginia General Assembly meetings as possible and to be observant of new regulations. This committee will review, discuss and report to the Board of Directors and the General Membership, any legislature or regulations that will directly or indirectly effect the Association or its members.

H. A Membership and Website Committee, comprised of five members, shall be appointed within thirty days after the third General Membership meeting. It shall be the duty of this committee to keep the website current and updated. The website shall be the source of Association meetings, dates, membership and advertisement applications, Association and public information and other Association information.

I. A Nominating Committee shall be comprised of the five most immediate past presidents of the Association willing to serve in this capacity. The most immediate past president on the committee shall serve as the chairperson. It shall be the duty of this committee to nominate, at the third General Membership meeting, candidates for the offices to be filled. Before the election, additional nominations from the floor shall be permitted.

J. A Plumbing, Mechanical and Fuel Gas Code Committee, composed of all Association members willing to participate, the chairperson shall be appointed within thirty days after the third General Membership meeting. It shall be the duty of this committee to review, discuss and recommend necessary changes that apply to the Commercial and Residential Plumbing, Mechanical and Fuel Gas Codes.

K. A School of Instruction Committee, comprised of the Executive Secretary, the chairperson shall be appointed within thirty days after the third General Membership meeting. It shall be the duty of this committee to plan the program for the next Annual School of Instruction.

L. A Time and Place Committee, comprised of five members, shall be appointed within thirty days after the third General Membership meeting. It shall be the duty of this committee to review the date and location of all General Membership meetings and submit a report and recommendation to the General membership for approval at least twelve months prior to such meeting.

Section 2. Duties of the Committee Chairperson

A. To submit, in writing, all committee findings and recommendations to the Executive Secretary at least ten days prior to any meeting, except special meetings, unless specified on the agenda. If the chairperson or members of the committee is in attendance at the meeting, such written report shall not be required.

B. To select all committee members not specifically provided for in other sections of these by-laws and report their names to the Executive Secretary within thirty days of their appointment.

Section 3. A Special Ad Hoc Committee shall be appointed for a specific purpose when necessary.

A. The committee shall be under the authority and direction of the Board, unless specifically provided herein.

B. The committee shall be comprised of at least five members.

C. It shall be the duty of this committee to carry out a specified task and present it to the Board.

D. The committee chairperson shall not be granted the voting privileges as a Standing Committee Chairperson.

ARTICLE VII — Voting

Section 1. Only Active, Charter and Lifetime Active members who are in good standing shall have the right to vote.

Section 2. All members shall have the right to make and second motions.

ARTICLE VIII — Meetings

Section 1. Three General Membership meetings shall be held each year. The first shall take place approximately fourteen days prior to or fourteen days after August 1. The second shall take place approximately thirty days prior to or thirty days after November 15. The third shall take place approximately fourteen days prior to or fourteen days after April 1, during the Annual School of Instruction.

Section 2. Four Board meetings shall be held each year at a time and
location determined by the President. The first shall be held at least sixty days prior to the first General Membership meeting. The second shall be held at least sixty days prior to the second General Membership meeting. The third on the day of the second General Membership meeting and the fourth at least thirty days prior to the third General Membership meeting. A quorum shall consist of at least seven Board members. Action taken by less than seven Board members shall be null and void unless confirmed by a letter ballot from those members who were absent.

Section 3. Special Board meetings may be called by the President. Such meetings may also be called by the Board with the written request of at least seven members. The purpose of the meeting shall be stated in the call. The location of the meeting shall be determined by the President. At least ten days notice shall be given. A quorum shall consist of at least seven Board members. Action taken by less than seven Board members shall be null and void unless confirmed by a letter ballot from those members who were absent.

ARTICLE IX — Dues

Section 1. Annual Dues
A. Active membership shall be thirty dollars per calendar year.
   B. Associate membership shall be thirty-five dollars per calendar year except those who have paid for five consecutive years shall only be required to pay thirty dollars per consecutive calendar year thereafter.
   C. Retired membership shall be ten dollars per calendar year.
   D. Charter and Life membership shall be absorbed by the Association.

Section 2. No members shall be in good standing whose dues are not paid by March 1 of each year and shall not be maintained on the membership roster if not paid by December 31.

Section 3. Dues may only be revised at General Membership meetings.

ARTICLE X — Amendments

Section 1. The Constitution and By-Laws may be amended by two-thirds vote at any General Membership meeting, provided that the proposed amendment has been submitted in writing at a previous General Membership meeting.

ARTICLE XI — Parliamentary Authority

Section 1. The current edition of Robert’s Rules of Order Newly Revised shall be the Association’s final authority on all questions of procedure and parliamentary law not covered by the Constitution and By-Laws nor any special rules of order the Association may adopt.

APPENDIX A — Districts of The Virginia Plumbing and Mechanical Inspectors Association

District I Shall be the area, including all cities and towns that lie therein, created by the counties of Augusta, Arlington, Clark, Culpeper, Fairfax, Fauquier, Frederick, Greene, Highland, Loudoun, Madison, Orange, Page, Prince William, Rappahannock, Rockingham, Shenandoah, Spotsylvania, Stafford and Warren.

District II Shall be the area, including all cities and towns that lie therein, created by the counties of Alleghany, Amherst, Appomattox, Bath, Bedford, Bland, Botetourt, Buchanan, Campbell, Carroll, Craig, Dickenson, Floyd, Franklin, Giles, Grayson, Henry, Lee, Montgomery, Patrick, Pittsylvania, Pulaski, Roanoke, Rockbridge, Russell, Scott, Smyth, Tazewell, Washington, Wise and Wythe.

District III Shall be the area, including all cities and towns that lie therein, created by the counties of Albemarle, Amelia, Brunswick, Buckingham, Caroline, Charlotte, Chesterfield, Cumberland, Dinwiddie, Fluvanna, Goochland, Greensville, Halifax, Hanover, Henrico, King George, Louisa, Lunenburg, Mecklenburg, Nelson, Nottoway, Powhatan, Prince Edward, Prince George, Surry and Sussex.

District IV Shall be the area, including all cities and towns that lie therein, created by the counties of Accomack, Charles City, Essex, Gloucester, Isle of Wight, James City, King and Queen, King William, Lancaster, Mathews, Middlesex, New Kent, Northampton, Northumberland, Richmond, Southampton, Suffolk, Westmoreland and York.

Resolution of Respect in Memory of
Robert Eugene Burns

Whereas, Before his death on March 2, 2012 at the age of 59, Robert Eugene Burns was an Active Member of the Virginia Plumbing and Mechanical Inspectors Association; and

Whereas, Robert Eugene Burns joined the Plumbers and Steamfitters Local Union 540 in 1976; and

Whereas, Robert Eugene Burns was employed by the City of Hampton for many years as a Plumbing and Mechanical Inspector; and

Whereas, Robert Eugene Burns was later employed by the York County Building Inspections Department; and

Whereas, Robert was known by his family and friends to be a patient man who possessed a wonderful sense of humor; and

Whereas, Mr. Burns offered his assistance by instructing classes on behalf of VPMIA; and

Whereas, The Virginia Plumbing and Mechanical Inspectors Association notes with great sadness the passing of Robert Eugene Burns; now, therefore, be it

Resolved, That the Officers, Board of Directors, and the entire membership of the Virginia Plumbing and Mechanical Inspectors Association join the family of Robert Eugene Burns in celebration of his life and do also offer their most heartfelt sympathy at the loss of this cherished family member; and

Resolved further, That the Virginia Plumbing and Mechanical Inspectors Association stands in readiness to assist the family of Robert Eugene Burns in any manner desired or requested; and

Resolved further, That this resolution shall be respectfully submitted to the family of Robert Eugene Burns; and

Resolved further, That this resolution shall be published in the annual yearbook of the Virginia Plumbing and Mechanical Inspectors Association as a permanent memorial in honor of Robert Eugene Burns.

Adopted this Second day of March, 2012.

ATTEST:

Bane Compton, President

Ron Bladen, Vice President
Resolution of Respect for
Wilma “Jean” Stanley

Whereas, Before her death on June 25th, 2012, Jean was a member of Virginia Plumbing and Mechanical Inspectors Association; and

Whereas, Jean spent her career in code enforcement insuring the protection of the citizens, as well as all who visited The Commonwealth of Virginia; and

Whereas, Jean served as President of The International Association of Electrical Inspectors Virginia Chapter, served on The Virginia Building Code Officials Board of Directors, as well as organizations at the national level; and

Whereas, The Virginia Plumbing and Mechanical Inspectors Association notes with great sadness the passing of Wilma “Jean” Stanley; now, therefore, be it

Resolved, That the Officers, Board of Directors, and the entire membership of the Virginia Plumbing and Mechanical Inspectors Association join the family of Wilma “Jean” Stanley in celebration of her life and do also offer their most heartfelt sympathy at the loss of this cherished family member; and

Resolved further, That the Virginia Plumbing and Mechanical Inspectors Association stands in readiness to assist the family of Wilma “Jean” Stanley in any manner desired or requested; and

Resolved further, That this resolution be respectfully submitted to Ms. Stanleys family as a permanent memorial to the memory of Wilma “Jean” Stanley.

Adopted this Second Day of July, 2012

Curt Campbell, Treasurer
Virginia Plumbing and Mechanical Inspectors Association,
Chesterfield County Residential Inspection Supervisor
Whereas, Before his death on June 3rd, 2012, Richard "Dick" Maher was a long-time associate member of Virginia Plumbing and Mechanical Inspectors Association; and

Whereas, Richard "Dick" Maher was a 1948 graduate of Arlington High School in Poughkeepsie, NY; and

Whereas, Mr. Maher spent over 40 years in the plumbing and heating industry; and

Whereas, Mr. Maher received Virginia Plumbing and Mechanical Inspectors Associations Lifetime Associate Members Award in 1989/1990, Virginia Plumbing and Mechanical Inspectors Associations Outstanding Service Award in 2009/2010, was a member of Virginia Plumbing and Mechanical Inspectors Associations 50th Anniversary Committee; and

Whereas, The Virginia Plumbing and Mechanical Inspectors Association notes with great sadness the passing of Richard "Dick" Maher; now, therefore, be it

Resolved, That the Officers, Board of Directors, and the entire membership of the Virginia Plumbing and Mechanical Inspectors Association join the family of Richard "Dick" Maher in celebration of his life and do also offer their most heartfelt sympathy at the loss of this cherished family member; and

Resolved further, That the Virginia Plumbing and Mechanical Inspectors Association stands in readiness to assist the family of Richard "Dick" Maher in any manner desired or requested; and

Resolved further, That this resolution be respectfully submitted to Mr. Maher's family as a permanent memorial to the memory of Richard "Dick" Maher.

Adopted this Eight Day of June, 2012

Roger "Skip" Harper, Secretary
Virginia Plumbing and Mechanical Inspectors Association
Resolution of Respect for
Gladys Martinelli

Whereas, Gladys Martinelli is the mother of Dennis Martinelli, a Lifetime Member of the Virginia Plumbing and Mechanical Inspectors Association; and

Whereas, Gladys Martinelli is survived by three sons and one daughter; and

Whereas, Gladys Martinelli was a longtime member of Wright’s United Methodist Church; and

Whereas, Gladys Martinelli served on committees for Venetta Heritage Society and Washington City Mission and was a member of the former Business & Professional Women of Finleyville; and

Whereas, The Virginia Plumbing and Mechanical Inspectors Association notes with great sadness the passing of Gladys Martinelli; now, therefore, be it

Resolved, That the Officers, Board of Directors, and the entire membership of the Virginia Plumbing and Mechanical Inspectors Association join the family of Gladys Martinelli in celebration of her life and do also offer their most heartfelt sympathy at the loss of this cherished family member; and

Resolved further, That the Virginia Plumbing and Mechanical Inspectors Association stands in readiness to assist the family of Gladys Martinelli in any manner desired or requested; and

Resolved further, That this resolution be respectfully submitted to the family of Gladys Martinelli as a permanent memorial to the memory of Gladys Martinelli.

Adopted this Second Day of February, 2013.

ATTEST: Ron Bladen, President                Paul Rimel, III Vice President
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Awards

OUTSTANDING SERVICE

Gordon I. Dameron Active Award

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OUTSTANDING SERVICE

David L. Carr Associate Award

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<td>J. C. Nuckols</td>
<td>2011-2012</td>
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LIFETIME MEMBERSHIP

D. Paul Jack Active Award

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<td>George H. Williams, Jr.</td>
<td>2001-2002</td>
<td>Larry Dehaven</td>
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<td>Kenneth R. Snyder, Sr.</td>
<td>2002-2003</td>
<td>Lawrence Nuckols</td>
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<td>Hassel E. DeShazo</td>
<td>2009-2010</td>
<td>Dennis Martinelli</td>
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LIFETIME MEMBERSHIP

John A. Otto Associate Award

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<td>James S. Steinle</td>
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<td>1999-2000</td>
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CODE DEVELOPMENT LEADERSHIP

Jack A. Proctor Sr. Active Award

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<td>2011-2012</td>
<td>Guy Tomerlin</td>
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The International Fuel Gas Code (IFGC) addresses the safety of occupants in buildings, and provides for protection for service and inspection personnel. Where equipment requiring access and appliances are installed on roofs and elevated structures, safety for workers performing maintenance is a top concern. Let’s take a look at Section 306.5. The code requirement permits portable ladders for access to equipment located on a roof of buildings or elevated structures when the equipment is located not more than 16 feet above grade or floor level to the equipment or appliances level service space. For equipment and appliances located over 16 feet in height, a permanent fixed ladder attached to the building or some other approved permanent means of access is required. The height of a parapet is always included in the measurement. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) high or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33 percent slope).

A permanent approved means of access, such as a fixed permanent ladder, is not required for installations of Group R-3 occupancies, which include buildings with one or two dwelling units, congregate living facilities with 16 or fewer persons and certain adult or child-care facilities that operate on a less than 24-hour basis and care for not more than five persons.

Figure 1
Access and Service Space

- Side railings minimum 30 inches above roof edge or parapet wall.
- Rungs spaced not more than 14 inches on center.
- Minimum 6 inch toe space.
- Minimum 18 inches between rails.
- Have rungs at least 0.75 inches in diameter and capable of withstanding 300 lb. load.

Figure 2
Ladders over 30 feet require offsets and landings capable of withstanding 100 lbs. per square foot.
Landing dimensions not less than 18 inches and not less than the width of the ladder.
is an important concern in the International Fuel Gas Code

Figure 1 illustrates the minimum design criteria required by Section 306.5. These specific dimensions were developed from OSHA requirements. In addition to width, rung, and toe space dimension requirements, ladder side rails are required to extend above the parapet or roof surface at least 30 inches to provide a safe transition from the ladder to the roof for service personnel.

As noted in Figure 2, fixed permanent ladders more than 30 feet in height have additional requirements including offset sections and landings with guards. The landings must be capable of withstanding 100 pounds per square foot and have minimum dimensions not less than 18 inches.

Sloped roofs present a challenge for maintenance and service personnel in both traveling to an appliance and performing work at the appliance location. Section 306.5.1 of the IFGC addresses this situation. Low slope roofs with a pitch of less than 3:12 (25-percent slope) are considered sufficiently flat to provide a safe walking and working surface. A roof with a slope at least 25-percent slope and not more than 33 percent slope is fairly easy to walk across without toe holds or safety devices, but these slopes do require a level working surface at the appliance for safety of personnel and a means to prevent tools from sliding. The level work platform requires a 42-inch high guard to prevent workers from stepping off the platform and possibly falling off the roof. Roof slopes greater than 33 percent are not considered to provide a reasonable level of safety for service personnel traveling to an appliance location; another means of access is required in this case. On sloped roofs, where there is an obstruction greater than 30 inches in height in the path of travel to an appliance, installation of a permanent ladder or a set of stairs in compliance with the International Building Code is required. (see Figure 3)

These are just a few examples of many code provisions within the ICC's Family of codes that address the needs of Inspection and service personnel.

The ICC’s Plumbing, Mechanical and Fuel Gas (PMG) Group is devoted exclusively to providing PMG products and support to jurisdictions and construction industry professionals across the country and around the globe, with one or more PMG codes adopted in 49 states. The more than 200 superior products and related services were developed specifically by and for plumbing and mechanical professionals. Contact the PMG Group for additional information at 1-888-ICC-SAFE, x4PMG, PMGResourceCenter@iccsafe.org, or visit iccsafe.org.

Lee Clifton, Director of Plumbing Programs for the International Code Council (ICC) has 40 years of experience in the Plumbing, Mechanical, and Fuel Gas Industry. His career began as a second generation plumber, working for his father at Clifton Plumbing Inc. in Tampa, Florida. He retired from the City of Los Angeles in 2007 as a Principal Inspector after 21 years of service.
Resolution in Support of Building Safety Month - May, 2012

Whereas, The Virginia Plumbing and Mechanical Inspectors Association continually strives to address the critical issues of safety, energy efficiency and sustainability in the built environment that affect the citizens of the Commonwealth, both in their everyday lives and during times of natural disaster; and

Whereas, The Virginia Plumbing and Mechanical Inspectors Association actively participates in development of the International Code Council’s family of model codes which provide industry with the highest level of building code standards including safeguards against natural disasters such as hurricanes, snowstorms, tornadoes, wildland fires and earthquakes; and

Whereas, The International Code Council’s family of model codes serve to protect all Americans in the buildings where we live, learn, work, worship, play; and

Whereas, The Virginia Uniform Statewide Building Code is largely based on those model codes; and

Whereas, Citizens of the Commonwealth may go about their daily lives with confidence that their homes and the public buildings they visit are constructed in a safe, efficient and sustainable manner due to the legislature’s timely adoption of, the Board of Housing and Community Development’s proactive implementation of and the local code official’s responsible enforcement of the Virginia Uniform Statewide Building Code throughout the Commonwealth; and

Whereas, May of each year is designated as Building Safety Month and the theme of Building Safety Month 2012 is “An International Celebration of Safe and Sensible Structures”; and

Whereas, Building Safety Month is sponsored by the International Code Council and the International Code Council Foundation to increase public awareness of building safety, green and sustainable building methods, pool, spa and hot tub safety, and new technologies in the construction industry and to also serve as a reminder of the local code official’s critical role in the construction of a safe, efficient and sustainable built environment; and

Whereas, In observance of Building Safety Month, Americans are encouraged to consider ways to improve building safety and sustainability at home and in the community and to take the appropriate steps necessary to ensure the structures in which we live, learn, work, worship and play are properly maintained; now, therefore, be it

Resolved, That the members of the Virginia Plumbing and Mechanical Inspectors Association stand together in full support of Building Safety Month 2012; and

Resolved further, That the Virginia Plumbing and Mechanical Inspectors Association stands in readiness to assist the citizens of the Commonwealth in any manner which promotes public awareness and knowledge of the principles of building safety; and

Resolved Further, That this resolution be published in the Virginia Plumbing and Mechanical Inspectors Association’s Annual Yearbook to serve as a continued reminder of the profound impact that building safety has on the citizens of Virginia.

Adopted this Twenty Seventh day of April, 2012.

Ron Bladen, President

ATTEST: Paul Rime, Vice President
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Encapsulated attics are becoming more and more popular in new home construction, as well as among homeowners seeking to improve the energy efficiency of their existing home. This shouldn’t surprise anyone, given that this type of attic construction may reduce a home’s heating and cooling loads, makes the attic space much more comfortable temperature-wise, and provides many non-energy benefits.

An increase in popularity among homeowners and homebuyers will obviously translate to the submission of permit requests to local code officials. This article provides an introduction to encapsulated attics, and assists mechanical code inspectors when evaluating the mechanical systems permits for homes that have an encapsulated attic.

What Is An Encapsulated Attic?
Essentially, an encapsulated attic differs from a common FHA vented attic in that it is sealed off from Mother Nature outside. The insulation is not installed on the attic floor (i.e., above the ceiling plane), but instead is installed under the roof sheathing. Further, the insulation is used to completely seal the encapsulated attic from outdoor air. This effectively brings the entire volume of the attic (the space between the ceiling of the conditioned living space and the roof rafters) within the home’s thermal envelope. So the thermal break no longer occurs between the conditioned living space and the attic above. Here’s a diagram that should make this clear:

Temperatures inside that encapsulated attic are more stable (greatly attenuated temperature swings) than in the normally ventilated attics, and only differ from the temperature in the conditioned living area below by a few degrees year-round. But this needs to be stated clearly: while an encapsulated attic closely resembles the conditioned space, it is not technically a conditioned space given that it should not be directly conditioned.

This type of attic construction was first recognized in a 2004 supplement to the International Residential Code (IRC); prior to that, a building official had to grant special approval for its construction. Since then, the requirements for the construction of an encapsulated attic have officially been part of the IRC, and even been refined as different issues and concerns have been identified. In order to provide its HVAC contractor members with guidance on me-
Mechanical system design for a home that has an encapsulated attic, ACCA (Air Conditioning Contractors of America) developed a technical bulletin entitled, *Encapsulate Attics and Their Impact on Manual J8 Load Calculations*. This technical bulletin has been available since June 2012.

**What Does Code Require?**
The 2009 Virginia Residential Code (VRC) does not make any different or additional requirements to those found in the 2009 IRC. Removing the superfluous information, the IRC requirements are as follows:

**R806.4 Unvented attic assemblies.** Unvented attic assemblies (spaces between the ceiling joists of the top story and the roof rafters) shall be permitted if all the following conditions are met:

1. The unvented attic space is completely contained within the building thermal envelope.
2. No interior vapor retarders are installed on the ceiling side (attic floor) of the unvented attic assembly.
3. Where wood shingles or shakes are used, a minimum ¼ inch (6mm) vented air space separates the shingles or shakes and the roofing underlayment above the structural sheathing.
4. **NOT APPLICABLE AS THE ENTIRETY OF VIRGINIA IS IN CLIMATE ZONE 4A PER IRC TABLE N1101.2**
5. Either Items 5.1, 5.2, or 5.3 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing.

**5.1 Air-impermeable insulation only.** Insulation shall be applied in direct contact with the underside of the structural roof sheathing.

**5.2 Air-permeable insulation only.** In addition to the air-permeable installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing as specified in Table R806.4 for condensation control.

**5.3 Air-impermeable and air-permeable insulation.** The air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing as specified in Table R806.4 for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.

In the past, when there wasn’t any design guidance available, some code inspectors had added their own requirements. For instance, some have been requiring that the
encapsulated attic be directly conditioned; while others re-
quired airflow communication (e.g., ceiling grille) between
the encapsulated attic and the (conditioned) living space
below. However, ACCA does not
recommend that the en-
capsulated attic be directly conditioned, nor
that there be
engineered ventilation to the conditioned living space.
Simply put, neither is required by code, and no credible
data in support of either practice has been produced.

It should also be noted that “direct-vent” HVAC equip-
ment (sealed-combustion furnaces or water heaters) is the
best choice for use in an encapsulated attic. We arrive at
this conclusion by noting that an encapsulated attic is an
“unvented attic assembly” and thus cannot support at-
mospherically vented combustion equipment. Direct-vent
appliances, however, are defined as those “that are con-
structed and installed so that all air for combustion is
derived from the outdoor atmosphere and all flue gasses are
discharged to the outdoor atmosphere.”

How Does It Affect The Review Of A Mechanical Permit
Request?
Duct loads. The favorable conditions in the encapsulated
attic could lead to a reduction in duct loads, and thus a re-
duction to the heating and cooling loads.
There are many variables that, individually, will impact the
load calculation a certain way. However, these variables
don’t occur in isolation and so the designer will need to
conduct a thorough load calculation that accounts for all
aspects of the specific project. By extension, the code in-
spector will need to conduct a thorough review of the
load calculation to ensure that it accurately reflects the ap-
licable conditions for encapsulated attics. These vari-
ables include:
• Actual temperatures in the attic;
• Duct location;
• Duct leakage;
• Duct insulation;
• Ceiling (attic floor) construction details;
• Infiltration.
While encapsulated attics tend to greatly reduce the duct
loads (sensible loss and gain, and latent gain), they will in-
crease the winter ceiling heat loss. Generally, the reduc-
tion in duct loads has a greater impact on the overall load
calculation, but only if the ducts are located in the techni-
cally unconditioned encapsulated attic. If, however, the
ducts are located in the conditioned space instead, the
only effect of the encapsulated attic on the load calcula-
tion will be from ceiling and infiltration gains and losses.
This is due to the fact that ducts located in the (directly)
conditioned living space do not have a load contribution.

In the Encapsulated Attics technical bulletin, ACCA has
provided mechanical system designers with detailed de-
sign procedures and an example of how to incorporate an
encapsulated attic in their load calculation. This is based
on new information contained in the ANSI/ACCA 2 Man-
ual J-2011 (Manual J8, Version 2.10). The new material in-
cludes a modified Table 4E (ambient air temperature for
encapsulated attics) and the new Tables 7M & 7N (duct
loads for encapsulated attics). If you have an earlier ver-
sion of Manual J8, this new material is available for free
download at https://www.acca.org/Files/?id=862. It
should be noted that the mechanical inspector will need
to pay close attention when reviewing these permit re-
quests in order to make sure that the designer is following
the proper procedure.

Parting Tips
Be careful! An encapsulated attic does not automatically
guarantee smaller equipment size. As you are surely
aware, not all HVAC designers use (or have used) the
ACCA system design procedures found in Manuals J, D
and S (and the VRC) in a consistent manner. Thus, it’s not
guaranteed that a home’s original load calculation was
correct (if it was even done), and that the existing system
was properly designed and selected. The actual effect on
the equipment selection of constructing an encapsulated
attic will only be made apparent when the designer com-
pletes the iterative ACCA system design process. This
may or may not lead to smaller equipment.
Also, beware of moisture. An encapsulated attic must be
comprehensively and perpetually mold and mildew free.
A properly (read, code-compliant) encapsulated attic must
stop all exchange of air with the outdoors. Remember, in-
filtration is a source of moisture. Then it’s up to the
HVACR equipment to properly, and continuously, condi-
tion the living space. This means that a system’s design
needs to account for interior latent heat sources such as
winter humidifiers, fish tanks, and potted plants. At no
point should the dew-point of the attic air be higher than
the temperature of any surface with which it comes into
contact. As always, the inspector must remain vigilant for
lapses in design.

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D. PAUL JACK 1966*
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HARRY CONTE 1969
JAMES B. JONES 1970*
L. W. FURMAN 1971
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J. L. SHIFFLETT 1975
HOMER O. DENNIS 1976
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RUDOLF SCHROECK 1981*
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CHARLES DEDIAN 1983
KENNETH R. SNYDER, SR. 1984
LAWRENCE J. NUCKOLS 1985
JOHN W. THURSTON 1986*
WILLIAM F. HINES 1987
LESLIE A. COURTNEY 1988
JIMMY A. ENGLISH 1989
DOUGLAS L. STOVER 1990
ROBERT M. BROOME 1991
PAUL D. HOSTETLER 1992*
DENNIS W. McNAGHTON 1993
JOHN S. TRENARY 1994
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KATHLEEN T. DYE 1997
HASSEL DeSHAZO 1998
ROY N. McFARLAND, JR. 1999/2000
CLEATIS DYE, JR. 2001
CHARLES GERBER 2002
GUY TOMBERLIN 2003/2004
GEARY SHOWMAN 2005
MICHAEL THUOT 2006
JOHN SEAY 2007
DENNIS MARTINELLI 2008
JOHN MILLS 2009
R. WAYNE KUSHNER 2010
ROBERT ADKINS 2011
BANE COMPTON 2012

*Denotes deceased

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* MR. E. W. BAUGHAN
* MR. FRANK BOSMA
* MR. E. R. CARR
* MR. EUGENE COBANKS
MR. M. D. COOPER
* MR. GORDON I. DAMERON
* MR. JAMES B. JONES, JR.
* MR. PARL C. KING
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MR. CURTIS H. NUNALLY
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* MR. T. C. BROWN
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Spouses attending the SOI may join in any of the activities as our guests. Volunteers will be assisting at Registration on Wednesday morning; stop by for the latest news about activity plans and the activity room.

<table>
<thead>
<tr>
<th><strong>Wednesday, April 3</strong></th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8:00</td>
<td><strong>Registration</strong></td>
</tr>
<tr>
<td>12:00 – 1:00</td>
<td>Lunch (included with registration)</td>
<td></td>
</tr>
<tr>
<td>1:00 – 4:00</td>
<td>Craft</td>
<td></td>
</tr>
<tr>
<td>5:00 – 6:00</td>
<td>VPMIA President’s Reception</td>
<td></td>
</tr>
<tr>
<td>6:00 – 7:30</td>
<td>Buffet Dinner</td>
<td></td>
</tr>
<tr>
<td>7:30 – 11:00</td>
<td>Casino Night</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Thursday, April 4</strong></th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8:45</td>
<td><strong>Meet in lobby</strong></td>
</tr>
<tr>
<td>9:00</td>
<td></td>
<td>Leave for Williamsburg</td>
</tr>
<tr>
<td>12:00 – 1:00</td>
<td>Lunch and Business meeting at Barretts</td>
<td></td>
</tr>
<tr>
<td>1:00 – 3:00</td>
<td>Shop/tour Colonial Williamsburg</td>
<td></td>
</tr>
<tr>
<td>6:00 – 10:00</td>
<td>Banquet</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Friday, April 5</strong></th>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8:00</td>
<td>Breakfast Buffet (included with registration)</td>
</tr>
<tr>
<td>9:00</td>
<td></td>
<td>Bingo</td>
</tr>
</tbody>
</table>

**2012-2013 Roster as of February 2013**

<table>
<thead>
<tr>
<th>Name</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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</tr>
<tr>
<td>June Seay</td>
<td>VPMIA (John)</td>
<td></td>
</tr>
<tr>
<td>Sandy Tomberlin</td>
<td>VPMIA (Guy)</td>
<td></td>
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**BRAE:** Water collection tanks, filtration systems, pump systems, rainwater system controls, water treatment, as well as BRAE Complete Systems

**DORMONT:** Flexible stainless steel connectors for natural gas, liquified propane (LP) gas, and a wide-array of other liquids and gases

**ETERNAL WATER HEATER:** Water heaters that combine tank and tankless features to create a consistent water heating system

**FEBCO:** Backflow prevention devices for irrigation and water service

**GRUNDFOS PUMPS:** Circulator, submersible, and centrifugal pumps for commercial, industrial, and residential applications

**MUELLER STEAM SPECIALTY:** Strainers, check valves, butterfly valves, and specialties

**SAFE-T-COVER:** Aluminum and fiberglass backflow enclosures

**WATTS BRASS & TUBULAR:** Finish plumbing products and fittings

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**DURAVIT:** Leading supplier of sanitaryware ceramics, bathroom furniture, accessories and wellness ideas

**ELKAY:** Stainless steel sinks, faucets, and accessories, plus water coolers and drinking fountains for residential and commercial use

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**OATY-SCS:** Plumbing chemicals, cements, drains, tubular products and specialties manufactured by Oatey, Hercules, Harvey, Cherne and Dearborn

**ORION:** Acid waste and high purity piping systems for commercial and institutional applications

**POLYSTAR:** Advanced copolymer polypropylene piping system from Orion

**TRACPIPE:** Corrugated stainless steel gas piping for residential and commercial applications

**WATTS PEX:** Pex tubing and accessories for plumbing, cooling, and radiant heating

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- Eternal Water Heater
- Geberit
- Ginger
- HANSgrohe
- Newport Brass
- Steamist, & more...

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ACCA Manual J - Load Calculation (VRC §M1401.3)

ACCA Manual S - Equipment Sizing (VRC §M1401.3)

ACCA Manual D - Duct Design (VRC §M1401.3)

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