IN THIS ISSUE

ASPE American Society of Plumbing Engineers™
BALTIMORE

MEETING FORMAT

4:00-5:00PM	Vendor Set Up
5:00-6:00PM	Panel Discussion
6:00-8:00PM	Hands on Demo
	Rotations + Dinner

PLUMBERS & STEAMFITTERS UA Local 486 BALTIMORE, MD

DATE:	January 22, 2025
TIME:	5:00pm to 8:00pm*
PLACE:	UA486 Training School
TOPIC:	Hands on Demo
SPEAKER:	McWane, Copper Alliance, & others

Register Today

ASPE '24 Chapter Award of Merit
2023 – 2024 Recipient

Local Chapters are not authorized to speak for the Society. Newsletter questions? Please contact Nikita Patel

ASPE Baltimore Board of Directors

President
Charles J. Swope, PE, CPD, LEED AP B+C
Mueller Associates
president@baltimoreaspe.com

Vice President- Technical & ASPE Young Professionals' Liaison
Julian Chiveral, LEED AP BD+C
Julian.Chiveral@gmail.com

Vice President- Legislative
Christopher Imhof, PE, CPD
WSSC
Christopher.Imhof@wsscwater.com

VP- Affiliate, Scholarship & Historian
Jason J. Eagles
Bay Associates Group
Jason@bayassociates.com

Treasurer
Kathleen Dwyer-Stephens
EJ Dwyer Company, Inc.
KDwyer@ejdwyer.com

Vice President- Membership
Nicole Murphy
Harry Eklof & Associates
nmurphy@harryeklof.com

Education Chair
Nikita Patel, PE
Sherman Engineering Company
npatel@shermanengineering.com

Women of ASPE- Liaison
Karen Schulte, PE, CPD
Mueller Associates
KSchulte@muellerassoc.com

Corresponding Secretary
Matt Obenchain, PE
Min Engineering, Inc.
Matt.Obenchain@minengineering.com

Chapter Ambassador
Jay Otto
Otto Sales
JayOtto@ottosales.com

Chapter Ambassador
Brian Crisp, CPD
Johnson, Mirmiran & Thompson
BCrisp@jmt.com

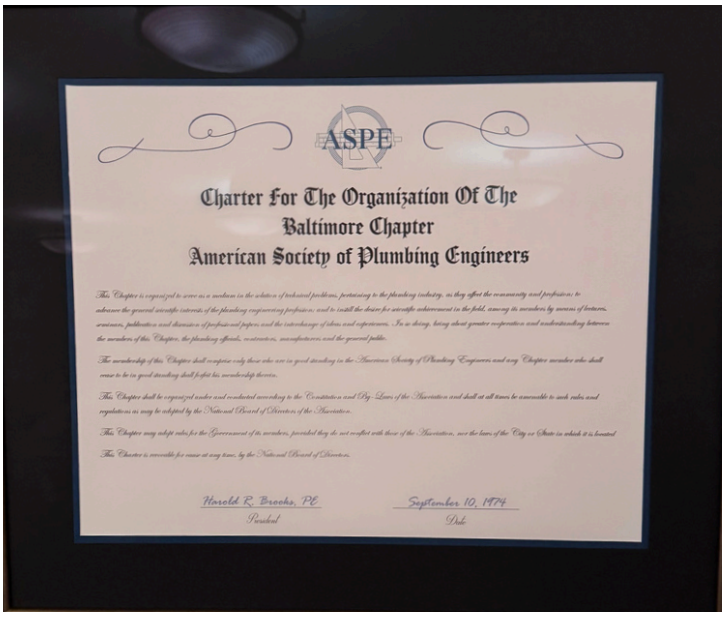
Newsletter Advertising

- As a paid advertiser, you will have your advertisement in the newsletter for one full year (9 editions) and company logo displayed on the Chapter website.
- Ads for the year will begin in the September issue and run through the May issue.
- All ads must be paid in full prior to the advertisement being included in the newsletter.
- Advertiser must provide ads in high resolution PDF format. Logo must be provided in .jpeg format, 200px wide size
- Cost per advertisement is as follows:
  - Full Page $ 750.00
  - Half Page $ 500.00
- Please contact Nikita Patel or Chuck Swope
- Make checks payable to Baltimore Chapter of ASPE. Please contact the Chapter Treasurer with any questions.

ASPE
American Society of Plumbing Engineers™
BALTIMORE

Chuck Swope, PE, CPD, LEED AP BD+C
Chapter President

Happy New Year! Thank you all for making our December Holiday Party so special. It was a great time at a great venue and a fitting end to the year. Fear not, it's not the end of our 50th season! I was happy to show off our newly recreated Charter to commemorate the occasion. I still hold hope that the original wasn't lost to the ether of time, so if you have any leads, please let us know.



There is much more in store for the rest of our celebration. I won't steal any of Julian's thunder, but I may borrow some. This month's meeting is one of my favorites. It all stemmed from a conversation that Chris Imhof and I had years ago about how rare it was for Plumbing Engineers to have real world experience with installing the very pipes, valves, and equipment that we design. The lines we draw on plans have real world implications and it was our goal to help bring the engineering and contractor's worlds together. We were discussing what venue could accommodate such a demonstration with the current chapter president, Jeff Edwards and the realization occurred to us that the Union has a Training School for this exact thing. Jeff reached out to the head of the Local 486 Training School at the time those many years ago and we started (what I hope will be) a decades long tradition. This season we've decided to take it a step further and merge the meeting with our traditional technical meeting, based on some excellent feedback from our members and attendees. January is a tough month to have two meetings and the consensus was that most chose only one meeting to attend.

We recognize the great sacrifices our constituents make to stay entrenched in their work and the need to grow their knowledge and skills. Thank you all for making our chapter so strong. I can personally attest that we are recognized nationally, not only by the Society through our earned awards, but by members of other chapters across the nation. I've attended the annual conventions since 2018 and see the waves even one chapter can make. I'm very much looking forward to seeing everyone at the Region 1 President's Summit this summer and joining our Canadian brethren on the other side of the border. I'd suggest that we change our name to the North American Society of Plumbing Engineers but NASPE doesn't have the same ring. (I'm also very much looking forward to bringing some Chapter Challenge coins home from Connecticut and New York, and maybe more!).

In other news, the ASPE Certified in Plumbing Design (CPD) exams are coming up and will be held April 7th through 18th. The CPD certifications is your chance to show your company and your clients that you take plumbing design very seriously. I am proud to say that for many years, including today, the Baltimore chapter has the highest percentage of members that have both their PE and CPD registration. We are only second in the nation for total holders as well! I've heard from some that a CPD is only good if you can't get your PE, and I have to respectfully disagree (and a little disrespectfully too!). This certification is nationally recognized and demonstrates your full breadth of knowledge in all things plumbing, but not just that sanitary pipes flow downhill. The CPD covers everything from compressed air design, fire protection, and of course domestic and gravity piping system designs. To make things easier, Baltimore and DC team up to offer the famous CPD review class taught by David Bailey, a bonified ASPE Fellow! I can personally attest that his class helped me pass and it is offered free of charge to all chapter members. If you are a Baltimore Member, we will even sponsor your CPD review booklet, which is an excellent resource even after the exam. So don't wait, take a look at the requirements in the link above and use this link to submit your eligibility form today!

ASPE
American Society of Plumbing Engineers™
BALTIMORE

PLUMBERS & STEAMFITTERS
UA Local 486
BALTIMORE, MD

YOU ARE INVITED TO ATTEND

ASPE/UA486

Industry Night

With hands on demos in **cast iron and copper** pipe, and a short course on backflow preventer inspection, attendees will have a lot to learn. Already experienced? Attend our mini product show to learn more about all types of plumbing products and devices

Apprenticeship Training School, 1201 66th St, Rosedale, MD 21237

DATE: JAN 22
TIME: 6-8PM*
*Doors open 5PM

REGISTER NOW

Ultra-reliable Electric and Gas-Fired Water Heaters

Industry's Best Warranties

AquaPLEX®
Engineered Duplex Alloy

Aegis®
Eco-Friendly CO_2 Heat Pump Water Heaters

The Cleaner Way to Heat

Lync® by WATTS

17.335.9531 | lyncbywatts.com/aegis

BAY Associates

1432 Front Ave | Lutherville, MD 21093
410-825-6616 | bayassociates.com | Jason@Bayassociates.com

ASPE YOUNG PROFESSIONALS

ASPE American Society of Plumbing Engineers™ BALTIMORE

Julian Chiveral, PE LEED AP BD+C
Vice President- Technical

Peering out the window at the quiet serenity of snow-covered streets in Baltimore brings to mind many things: Is my faucet dripping? Should the drip be hot water or cold? Have my pipes already frozen?

Before we officially ring in the new year, I wanted to take a minute to thank our presenters from December. Lance MacNevin led an excellent presentation on plastic pressure piping materials for plumbing and mechanical applications. He covered a LOT of material and had several resources for anyone interested in learning more. You can follow up with Lance directly via email at lmacnevin@plasticpipe.org. We also hosted a virtual presentation on fire protection requirements for lithium-ion batteries, and Bryan Berkley led a highly informative session! Thank you so much to both gentlemen for sharing their knowledge with the Baltimore chapter.

For January, we are swapping out our traditional dinner meeting style for industry night, hosted in partnership with the UA Local 486 Plumbers and Steamfitters Union. We'll have some new offerings as well as fan favorite events from previous years: hands-on demonstrations, an interdisciplinary panel discussion, and a mini product show featuring our local reps. Industry night is always a fun one to attend – and its an especially good opportunity to get some of the younger engineers you work with acquainted with ASPE.

I hope to see you at the Local 486 Apprenticeship Training School on January 22nd!
Julian, VP-T

Nikita Patel, PE
Education Chair

It's that time of the year again! I hope you're looking forward to our annual Joint UA & ASPE Event, because I certainly am! This year, we will be joined again by McWane Plumbing Group and the Copper Alliance for our regular demonstrations in cast iron and copper pipe. We'll see the return of our mini product show from last year, and we hope to add two new segments- time and attendance permitting. We will utilize the backflow prevention room at the UA486 Training School for a short seminar on their inspection protocols and we will open our event with an informal panel session geared towards understanding the nuances of a construction project from both the designer and installers perspective. As we've mentioned, this will be our technical session for the month, and we hope to see you there!

Engineers' Week 2025 is around the corner, and as we have for many years, we will kick off the festivities at the Engineers' Club of Baltimore on Valentine's Day. We will introduce the Plumbing Sciences to young high school students by providing a short presentation on what it means to be a Plumbing Engineer, and then we will follow it up with several tabletop activities. This year, we are looking forward to teach these bright minds how to size and layout domestic water supply and return piping, **BUT WE NEED YOUR HELP!**

if you are a plumbing designer or engineer who wishes to lead a small group of 10-15 students in this short activity, please reach out to me to learn more about it! It is a wonderful volunteer activity, and it would really help us introduce a meaningful change to our regular program.

Best,
Nikita
npatel@shermanengineering.com

PAE Living Building: A Roadmap to Net-Zero Water

With far-reaching goals for providing a roadmap for water use in Living Buildings, this project is an attempt to close the water cycle.

October 1, 2024

The PAE Living Building, located in Portland, Ore., at the heart of the city's historic district, is the first fully certified Living Building in Portland, and the largest developer-driven commercial Living Building in the world. To achieve Living Building certification, 100% of water needed for all building functions, including drinking water, is collected and treated on-site before being released back to the environment to complete the water cycle. The solutions that made this possible include a rainwater-to-potable treatment system, greywater collection and treatment system, nonpotable water supply system to flush fixtures and irrigation, urine-to-fertilizer nutrient recovery system, and a vacuum-flush toilet composting system for blackwater treatment.
The PAE Living Building design team's intention was three-fold: achieve the Water Petal requirements of International Living Future Institute's (ILFI) Living Building Challenge (LBC), find a way to decarbonize and provide a replicable roadmap for water use, and redefine what "waste" means.

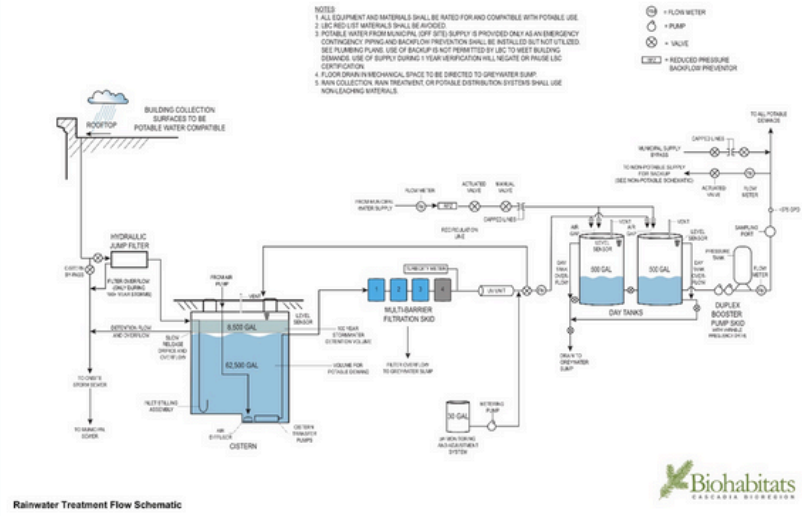
Rainwater-to-Potable Water Systems
The PAE Living Building's water story begins with rainwater falling onto the rooftop catchment system, allowing it to collect 100% of the water used on an annual basis. A Portland ordinance requires buildings in the downtown area to include a green roof. An exception to the ordinance was granted by the city to maximize the rooftop solar photovoltaic energy system and rainwater collection.

Rainwater collected on the roof drains into an internal gravity storm drain piping system, directing it down the five-story building, through a hydraulic jump prefilter on the ground floor, and into a 71,000-gallon, site-built concrete belowgrade cistern. The roof membrane, solar panels, storm drain piping and cistern lining systems are all NSF-rated for drinking water standards.

Around 38 years of local rainwater data was used to calculate the cistern volume to ensure rainwater storage was adequate to provide capacity through the dryer summer months during the years with the lowest rainfall totals.

The stored rainwater is pumped up to the ground floor mechanical room, where it is treated for potable water use at lavatories, showers, break room sinks and drinking/ice-making water. The rainwater treatment system consists of multibarrier filtration and disinfection systems including four stages of micron and membrane filters, UV filtration and a pH analyzer.

The Oregon Department of Health required a chlorine injection system. Two 500-gallon potable water day tanks store the treated rainwater before it's distributed to fixtures via a duplex variable speed booster pump system.



Rainwater Treatment Flow Schematic

This article originally appeared in Plumbing Engineer, a PHCPPros publication. For more articles like this, please visit www.phcppros.com

PAE Living Building: A Roadmap to Net-Zero Water

To operate the rainwater-to-potable treatment system and provide safe, potable water to the building occupants, the system was required to obtain an Oregon permit to become a public water treatment facility. A licensed water treatment facility operator must be on-site daily to operate the system and confirm water quality testing to prove the water is safe to drink. The system must be operated manually to ensure safety.

The two 500-gallon day tanks store enough water to last the building occupants one to two days, so the system generates fresh water in batches. Ultra-low-flow potable water fixtures keep the maximum daily potable water demand to a minimum of around 650 gallons per day.

A caveat and major lesson learned related to drinking water is the use of chlorine in the treatment system. ILFI's LBC Water Petal initiative directs water to be treated without the use of chemicals but allows exception if mandated by the State's department of health who are licensing and permitting the public water treatment system to operate. To grant the exception, LBC allows chlorine injection at the source treatment system if chlorine is removed by 0.5-micron filtration before reaching any drinking water fixtures within the building.

This allows the state requirements to be met with chlorine in the day tanks and distribution piping system, helping keep the supply system clean. The PAE Living Building features 0.5-micron filtration for hot and cold water in all break rooms. These filters, located under the break room sink for easy maintenance, ensure no chlorine enters the water supply to sinks, dishwashers, coffee makers, ice makers and drinking water outlets.

Greywater Collection, Treatment and Reuse Systems

Once the potable rainwater is used at potable water fixtures on the upper floors of the building, it is again collected in a greywater gravity drainage piping system and routed down to the first-floor mechanical room. First-floor fixtures drain to an underground duplex sump pump system, then pumped back up to the greywater main drain in the first-floor ceiling space. Greywater then drains by gravity through a hydraulic jump pre-filter before entering the greywater treatment tank and system.

It is important to note that break room sinks and dishwashers are also connected to the greywater collection and treatment system. Drainage from these fixtures is typically considered blackwater due to the presence of organic food waste. To minimize food waste entering the greywater treatment system, strainers are provided at kitchen sink drains along with training and signage encouraging occupants to discard food waste into the nearby composting bins.

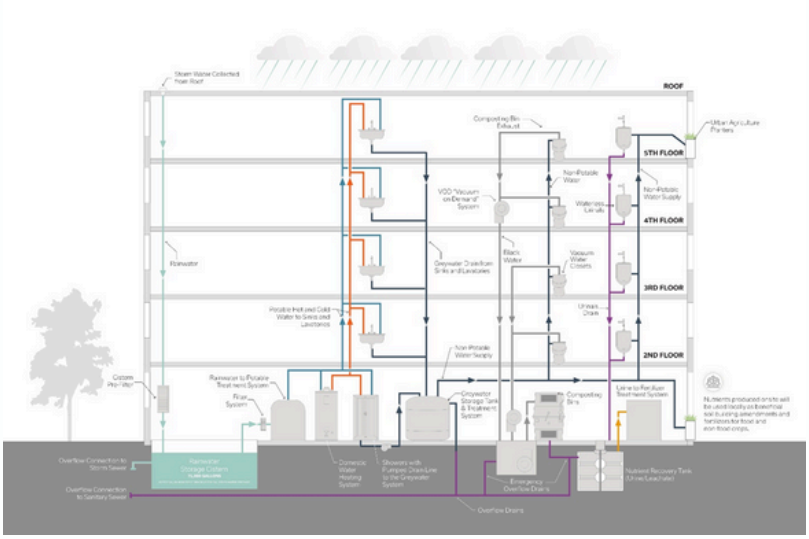
Regardless of the occupants' actions, the greywater system is not technically a greywater treatment system due to the kitchen fixtures' connection. This meant that the pathway for permitting this system under the current greywater recycling code provisions was a roadblock. Ultimately, the Oregon Department of Environmental Quality permitted the greywater system as a blackwater treatment system.

This permit pathway is intended for utility-scale wastewater treatment plants with daily treatment volume in the order of hundreds of thousands of gallons per day. This is a little more than the 450 to 550 gallons/day anticipated in the building. Although the path to permitting this system was not the road most travelled, the expertise and familiarity of water treatment code pathways by the water treatment consultant Biohabitats lead the way to obtaining a permit.

The wastewater treatment system consists of a textile filter pod that includes 25 square feet of textile media containing a suspended fabric fixed film filter using attached growth biological microorganisms. Wastewater is recirculated via a pump from the bottom of the tank and sprayed over the textile media through a pressure distribution system and nozzles at the top of the tank.

This article originally appeared in Plumbing Engineer, a PHCPPros publication. For more articles like this, please visit www.phcppros.com

PAE Living Building: A Roadmap to Net-Zero Water



Wastewater then percolates via gravity for filtering and cleaning by naturally occurring microorganisms living in the media. As the wastewater continues to be filtered by the biological media in the main part of the tank, a portion of the treated wastewater fills the discharge side of the tank for final filtering and distribution to the nonpotable water supply system. The tank, media and pumping flow rates were designed to handle up to twice the anticipated greywater demand to ensure the system is resilient in effectively handling peak flows.

A set of duplex variable-speed pumps in the discharge tank pressurize the nonpotable distribution system and force the treated wastewater through in-line polishing stages of filtration, including 30-micron bag filters, UV disinfection and a hydropneumatic tank.

Due to unexpected high iron content caused by cast-iron drainage piping leeching into the wastewater as it drained, additional filtration including recirculating ozone and a carbon filtration system polished the water to acceptable nonpotable water quality standards. From this point, the nonpotable water is distributed up through the building to supply water closets, urinals, and irrigation.

Nutrient Recovery: Blackwater Systems

The PAE Living Building hosts a first-of-its-kind and scale multistory vacuum-flush composting toilet infrastructure. Eighteen “vacuum on demand” (VOD) flush toilets are distributed around the building along with five distributed VOD vacuum pumps, all connected to ground-floor composters. Similar to fixtures found on airplanes (but quieter), the toilets use vacuum power rather than swirling water to extract waste.

Whenever one of the toilets gets flushed, the VOD vacuum pump kicks on to evacuate the bowl, macerate the waste as it flows through the pump, then direct it down the building to an underground atmospheric collection tank at the composters in the first-floor mechanical room.

Norway’s Jets Vacuum AS manufactured the toilets. They have an adjustable flush flow rate only requiring between 0.11 to 0.22 gallons/flush (gpf) — between 83% and 92% less than code minimum 1.28 gpf toilets. Traditional modern toilets typically use about 1.6 gpf, while older fixtures can use as much as six gallons per flush.

The Jets VOD system is among the most water-efficient water flushing toilet systems commercially available in the world, which is paramount when combining with a composting system. The less water, the better when it comes to composting.

This article originally appeared in Plumbing Engineer, a PHCPPros publication. For more articles like this, please visit www.phcppros.com

PAE Living Building: A Roadmap to Net-Zero Water

All the VOD pump outlet piping is routed separately back to the ground floor mechanical room where it combines into an underground atmospheric collection tank. Waste from the collection tank is pumped via duplex self-priming macerating pumps into a piping manifold system which distributes the waste to the composters.

An automated control system determines which composter should receive the contents to ensure that waste is distributed equally among all the composters. Equal loading of the composters is extremely important to ensure they will all fill at the same rate so that maintenance and removal of compost can be performed for all 20 composters at the same time.

Composter maintenance involves the addition of wood chips and manual turning of tines to mix the compost on a regular basis. Wood chips add carbon to the system to promote an aerobic environment within the composters. The processed solid compost is then manually removed every 18 to 24 months from the units and transported off-site for beneficial use as fertilizer.

Liquid and solid waste travel from the vacuum-flush toilets to the composters. Liquid leachate collected at the composters passively drains by gravity out through the bottom of the units. The leachate drains combine and flow into an underground 2,000-gallon collection tank. Liquid leachate is very nutrient-rich and is pumped out of the tank as it approaches maximum capacity and transported off-site for use as fertilizer.

The building also includes 14 hybrid waterless urinals, which divert approximately 9,400 gallons of urine annually to a dedicated 1,000-gallon underground urine tank for nutrient recovery. At regular intervals as the urine tank approaches capacity, urine is pumped out and processed by a fertilizer production system, which resides on-site in the first-floor mechanical room.

The system converts or removes 98% of the nutrients in the processed liquid. The system produces a commercial retail-quality liquid ammonium fertilizer as well as struvite, a phosphorus-rich powdered fertilizer. The fertilizer products are commercially available for purchase at www.nutrientrecoveryservices.com. “Most fertilizer production right now is heavily fossil-fuel-based and trucked all over the country,” notes Pete Muñoz, PE, of Biohabitats. “The fact that this building is creating a local fertilizer is amazing and adds a whole different dimension to decarbonizing our communities.”

The Future

With far-reaching goals for providing a roadmap for water use in Living Buildings, the PAE Living Building is an attempt to close the water cycle. By collecting rainwater, treating it on-site all the way through the waste process, the building proves what can be possible, while providing some lessons learned. The water systems’ design set out to be a replicable solution for future net-zero water use buildings.

Future net-zero water systems’ designs should aim to use more passive systems and reduce energy-intensive plumbing systems. Water treatment requires a significant amount of space either within the building or on the exterior site.

The PAE Portland Living Building was able to achieve this despite being land-locked in a downtown urban property. While its water systems’ designs may be replicable to an extent, the site and geology of future net-zero water buildings will have the biggest impact on the most practicable design solutions.

Luke Hendricks, PE, CPD and GPD, is a meticulous and driven mechanical engineer with PAE. His extensive experience includes the installation and design of plumbing, fire protection and mechanical systems at many of the West Coast’s top health care and commercial institutions, including the PAE Living Building. Hendricks is passionate about promoting sustainability through design and streamlining the building and design process for owners.

This article originally appeared in Plumbing Engineer, a PHCPPros publication. For more articles like this, please visit www.phcppros.com

Tepid Water Solutions

THE RIGHT TEMPERATURE. AT THE RIGHT TIME.

Bradley's tepid water solutions are designed to create a safe tepid temperature, a necessary addition to your safety planning. The current ANSI standard calls for emergency eyewash and drench showers to deliver tepid water for 15 minutes. This assures that a user would not be subjected to very cold water and possible hypothermia or very hot scalding water and possible skin burns.
Tepid Water Solutions. Brought to Life.

For more information please contact:
Kathleen Dwyer | E.J. Dwyer Co.
Quality Representation for 40+ Years
Mobile: 443-250-0285
Office: 240-553-0112

Bradley
A WATTS Brand

THERMOSTATIC MIXING VALVES | TANKLESS WATER HEATERS | TEPID WATER SYSTEMS

ASPE YOUNG PROFESSIONALS

ASPE American Society of Plumbing Engineers™ BALTIMORE

Nicole Murphy
VP Membership

Happy New Year, everyone! I hope you all enjoyed a fantastic holiday season, filled with tasty treats and even more amazing company. Cheers to new beginnings!

We are delighted to welcome our newest members to the Baltimore Chapter:
Neal King & Bini Koshy Varghese

We're starting the New Year strong with 140 members on our roster! Joining ASPE is an excellent opportunity to connect with professionals who share your interests. Membership comes with great benefits, including our monthly meetings. If you haven't signed up yet, now is the perfect time to join! We also encourage all members to invite their colleagues to our events. We look forward to seeing you soon!

For all the details on membership and our exciting upcoming events, please check out https://aspe.org/join. I can't wait to see everyone on January 22nd at the Local 486 Plumbers & Steamfitters Apprenticeship Training School.

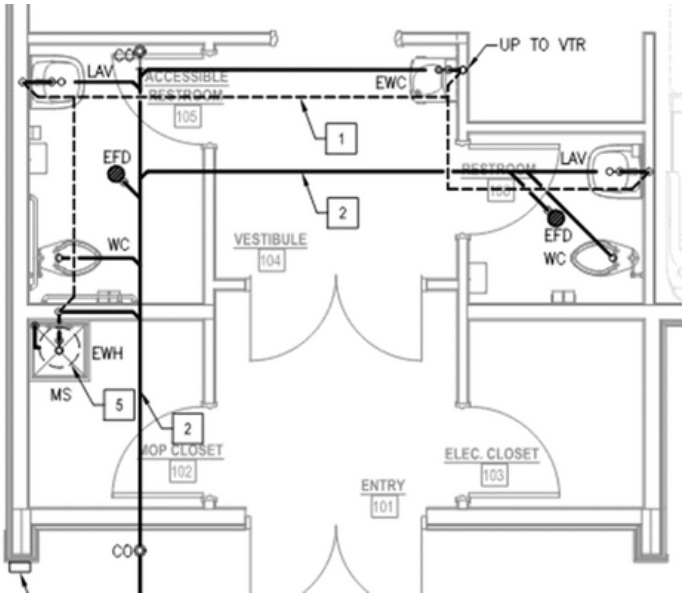
Dave Bailey
Plumbing Plan Reviewer's Corner

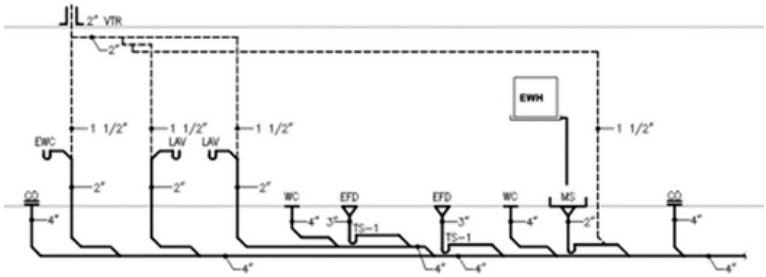
Season's Greetings everyone.Last month, I presented to you a Commission project that I reviewed involving a pair of containment testable backflow preventers and an emergency eye/face wash station. Regarding the proposed BFPs, both devices are void of the NFS lead-free certification. The potable water system shall require that the containment BFP to be lead-free certified. Regarding the emergency eye/face wash station, if one were to assume that the water service was 45oF during the peak of winter, then the maximum mixed temperature deliverable (per specified tankless water heater) to the emergency fixture would be 56.33oF which is below the required tepid water temperature range (of 60 to 100oF). If the assumed water temper were to be 40oF, then the tepid temperature rage becomes even more elusive during the winter days/months.

This month's task involves a project that was turned around within a couple of hours. My involvement with the project was that I received incorrect and/or on any plans submission. At the construction site, the WSSC Water Inspector recognized a problem firsthand and required that a new permit application be filled and plans to be reviewed. In lieu of a new permit application, Permitting wanted the issued permit to be amended while plans would still be required submission. Since the amendment fell on a reviewers watch, they were responsible for reviewing the plan(s).

The plan review was executed quickly, perhaps too quickly that it drew my interest. My quick "survey" of the approved drawing set left me with the follow questions:

Does the Plumbing System meet Code?





Does the proposed ELKAY plumbing fixture meet Code?

EWC	ELECTRIC WATER COOLER	EZH20 LIV PRO IN-WALL COMMERCIAL FILTERED WATER DISPENSER NON-REFRIGERATED MODEL LBWDC00

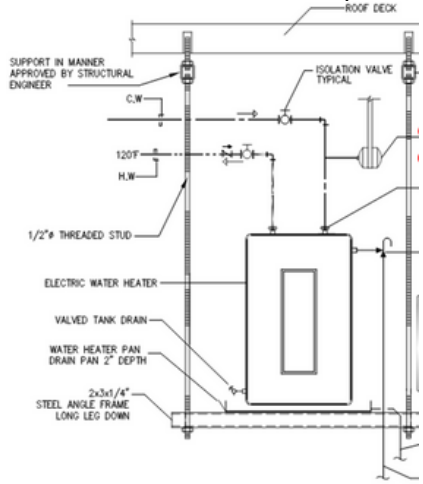
Does the proposed lavatory faucet meet Code?

LAV	LAVATORY (ADA COMPLIANT)	1.0 GPM

Generally, do electric water heaters 20-gallons or smaller have a double element option?

Item Number:	EWH
Manufacturer:	A.O. SMITH
Model Number:	DEL-20
Storage Capacity:	20 GALLONS
Recovery Rate:	25 GPH @ 80° F TEMPERATURE RISE
Electrical Data:	208 VOLT, 1 PHASE, 5000/5000 WATTS NON-SIMULTANEOUS

Any immediate issues with the part. Water Heater detail?



Manufacturers Representative Since 1968

Harry Eklof & Associates, Inc.

Representing ::

CALEFFI Hydronic Solutions

FIELDCONTROLS

FUJITSU AIRSTAGE

NAVIEN

FLORESTONE

A spec above.

SCAN THE QR-CODE

to get more information on product and training!

www.harryeklof.com 1.800.556.7556

ARE YOU RESPONSIBLE FOR DESIGNING COMPRESSED GAS AND VACUUM SYSTEMS?

SINCE 1920, SHERMAN ENGINEERING

has been offering the optimum engineered vacuum and compressed gas systems in the Healthcare, Pharmaceutical, Chemical, Power, and General Industrial markets.

OFFERING 24/7 EMERGENCY SERVICE

our factory trained and ASSE 6000 credentialed service technicians are available to manage preventative maintenance and emergency outages.

SHERMAN ENGINEERING
ESTABLISHED 1920
MEDICAL | SCIENCE | INDUSTRIAL

QUESTIONS? CONTACT

Nikita Patel, PE
570-899-9090
npatel@shermanengineering.com
1830 County Line Rd, Unit 303
Huntingdon Valley, PA 19006

01 Vacuum Pumps
Liquid Ring, Dry Rotary Vane, Dry Rotary Claw, Lubricated Rotary Screw, Lubricated Rotary Claw, Lubricated Rotary Vane, Ejectors

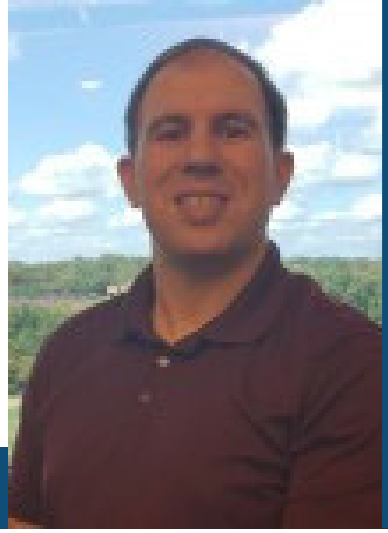
02 Compressors
Oil Less Scroll, Oil Free Rotary Screw, Oil Free Rotary Claw, Oil Flooded Rotary Screw, Oil Flooded Reciprocating, Dryers, Drains, Purifiers, Filtration, Lubricants

03 Medical Gases
ASSE 6060 Design Support, Medical Vacuum, Medical Air, Compressed Gas Manifolds, Medical Gas Outlets, Ceiling Columns, Pedestals, Alarm Panels, Zone Valve Boxes, Gas Monitors

04 Field Services
Medical Gas Verification, 24/7 Field Service Technicians, Installation Assistance, Job Walks, Sizing & Selection, ASSE 6000 Training

05 Engineering Services
Custom solutions for compressed gases and vacuum. Medical gas design sizing and pipe layout. Support within healthcare, pharmaceutical, chemical, power, and general industrial market segments.

BeaconMedæs
NASH by Gardner Denver
Gardner Denver
Elmo Rietschle by Gardner Denver
Standard Xchange
MEDLOK Axially Swaged Fittings
Meditrac Flexible Medical Gas Piping by OmegaFlex



WSSCWATER
DELIVERING THE ESSENTIAL

CHRISTOPHER IMHOF, PE, CPD
Technical Standards
Engineering Manager
Regulatory Services Division

Office: 301.206.8514
Cell: 540.230.4664
christopher.imhof@wsscwater.com

14501 Sweitzer Lane
Laurel, MD 20707
wsscwater.com

ASPE
American Society of Plumbing Engineers™
BALTIMORE

Chris Imhof, PE, CPD
Vice President- Legislative

2025 Legislative Session is Open!

The 2025 Legislative Session opened on January 8th. The following is a list of bills that relate to plumbing, gasfitting, utilities, climate action, water quality, licensure, land use and development

You can follow these bills by reading next month's newsletter.

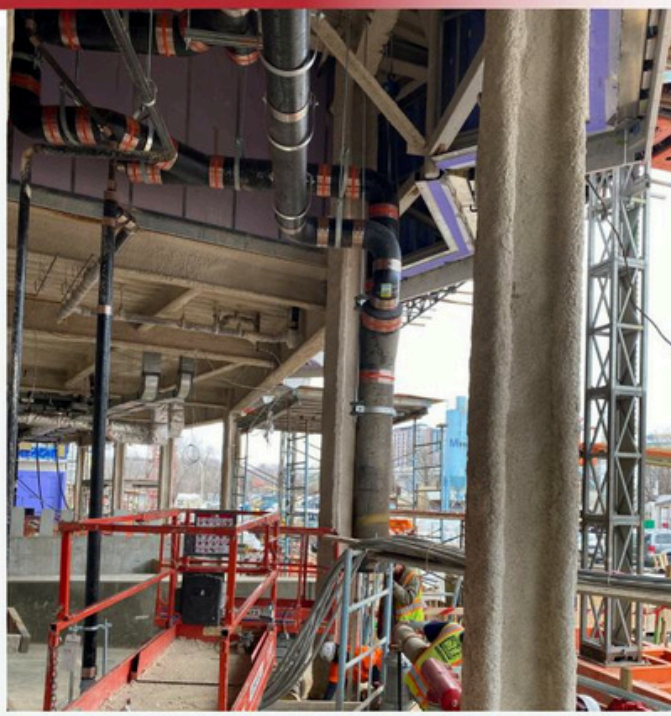
Bill Number		Title	Synopsis
Senate	House		
SB0034		Certificate of Public Convenience and Necessity - Overhead Transmission Lines - Conservation Easements	Requiring the Public Service Commission to consider the impact of the development of overhead transmission lines on certain properties subject to an existing conservation easement in certain proceedings for a certificate of public convenience and necessity; and requiring the Commission to require an applicant for a certificate of public convenience and necessity for the development of overhead transmission lines to consider alternative routes for transmission lines affecting conservation easements or alter proposed routes.
SB0042		Environment - Interjurisdictional Watersheds - Flood Management	Requiring the Department of the Environment to designate the watersheds of Carroll Creek in Frederick City and Frederick County, Gwynns Falls and Jones Falls in Baltimore City and Baltimore County, and Herring Run, including the Herring Run Stream in Baltimore City and Baltimore County and all their headwaters and tributaries as interjurisdictional flood hazard watersheds.

SB0063		Cooperative Housing Corporations, Condominiums, and Homeowners Associations – Funding of Reserve Accounts and Preparation of Funding Plans	Requiring that the annual budget of a cooperative housing corporation, a residential condominium, or a homeowners association include certain funds; requiring that certain funds for certain reserve accounts be deposited on or before the last day of each fiscal year, extending from 3 to 5 years the duration to comply with a certain funding requirement; requiring the governing body of a cooperative housing corporation, a residential condominium, or a homeowners association to prepare a certain funding plan subject to certain requirements;
SB0096	HB0277	Environment - Water Bottle Filling Stations - Requirement	Requiring a water bottle filling station or a combined water bottle filling station and drinking fountain to be installed in certain new construction or as part of certain renovations beginning October 1, 2025; and requiring the Maryland Department of Labor to adopt regulations to carry out the provisions of the Act.
SB0116	HB0270	Data Center Impact Analysis and Report	Requiring the Department of the Environment, the Maryland Energy Administration, and the University of Maryland School of Business, in coordination with the Department of Legislative Services, to conduct an analysis of the likely environmental, energy, and economic impacts of data center development in the State; and requiring the Department of Legislative Services to coordinate preparation of the final report to be submitted to the Governor and the General Assembly by September 1, 2026.
SB0117	HB0131	Environment - Bay Restoration Fund - Septic System Upgrade Program	Authorizing the Department of the Environment to establish performance-based funding levels for best available nitrogen removal technologies for on-site sewage disposal systems using a certain evaluation and ranking process; requiring the Department to make certain eligible funding levels available on its website; altering priorities for funding the repair or replacement of certain on-site sewage disposal systems by identifying failing systems located within the watershed of a nitrogen-impaired body of water; etc.

SB0149	HB0128	Responding to Emergency Needs From Extreme Weather (RENEW) Act of 2025	Establishing the Climate Change Adaptation and Mitigation Payment Program in the Department of the Environment to secure payments from certain businesses that extract fossil fuels or refine petroleum products in order to provide a source of revenue for State efforts to adapt to and mitigate the effects of climate change and to address the health impacts of climate change on vulnerable populations; establishing the Climate Change Adaptation and Mitigation Fund to support efforts to mitigate the effects of climate change; etc.
SB0175	HB0222	Public Safety - Corrugated Stainless Steel Tubing for Fuel Gas Piping Systems - Requirements and Prohibitions	Prohibiting the sale, offer for sale, transfer, or distribution of corrugated stainless steel tubing that does not meet a certain International Code Council standard or is not proven to withstand a certain electrical arcing charge; requiring certain tubing used in the construction of fuel gas piping systems in certain buildings to meet a certain International Code Council standard or be proven to withstand a certain electrical arcing charge; and providing a civil penalty of up to $1,000 for a violation of the Act.
SB0176	HB0140	Agriculture - Soil Conservation and Water Quality Plan - Uses of Information	Authorizing the Department of Agriculture to use information from a soil conservation and water quality plan for certain enforcement actions and statistical purposes.
SB0247	HB0155	Housing and Community Development - Greenhouse Gas Emissions Reductions - Issuance of Loans and Achievement of Targets	Authorizing the Department of Housing and Community Development to issue loans, in addition to grants, for certain purposes relating to reducing direct greenhouse gas emissions from certain multifamily residential buildings; and expanding the sources of savings that the Department may include when calculating the achievement of certain greenhouse gas emissions reduction targets.
SB0256	HB0049	Environment - Building Energy Performance Standards - Compliance and Reporting	Altering an annual compliance fee paid by certain owners of covered buildings under certain circumstances to include the energy use attributable to the building's failure to meet certain energy targets; requiring certain regulations to include a certain annual reporting fee to cover certain costs; and requiring the Department of the Environment to deposit alternative compliance fees into the Maryland Strategic Energy Investment Fund.

SB0263	HB0092	Heating, Ventilation, Air-Conditioning, and Refrigeration Contractors - License Restoration	Extending from 90 days to 4 years the time period during which an individual who has held a heating, ventilation, air-conditioning, and refrigeration contractor license may apply for license restoration after expiration.
SB0265	HB0025	Environment - Reservoir Augmentation Permit - Establishment	Establishing the Reservoir Augmentation Program in the Department of the Environment; defining "Reservoir Augmentation" as the planned placement of reclaimed water into a surface water reservoir used as a source for a drinking water treatment facility; requiring a person to obtain a permit from the Department to perform reservoir augmentation; providing for the modification, renewal, denial, or revocation of a reservoir augmentation permit under the Program; and requiring certain revenues to be used for the operation and oversight of the Program.
	HB0024	Bay Restoration Fund - Authorized Uses - Connection to Existing Municipal Wastewater Facility	Altering the authorized uses of a certain account of the Bay Restoration Fund to include the cost of connecting certain property using an on-site sewage disposal system to an existing municipal wastewater facility under certain circumstances.
	HB0061	Public School Construction and Renovation - Solar Canopies for School Parking Lots - Underground Infrastructure	Requiring that each construction project or major renovation project of a public school building proposed after December 31, 2025, that includes the construction or renovation of a school parking lot be designed, engineered, and constructed in a manner so that the parking lot is equipped with the appropriate underground infrastructure necessary to support solar canopy installation.
	HB0212	Maryland Building Performance Standards - Fossil Fuel Use and Electric-Ready Standards	Requiring the Maryland Department of Labor to adopt, on or before January 1, 2026, and as part of the Maryland Building Performance Standards, a requirement that new buildings meet all energy demands of the building without the use of fossil fuels and an electric-ready standard for certain buildings.
	HB0213	Public Utilities - Natural Gas Energy Generation - Authorization and Limitation	Authorizing the construction, permitting, and operation of energy generating systems that produce energy from natural gas until the State meets 100% of its energy needs from renewable energy resources, including nuclear energy; establishing certain requirements for energy generating systems that produce energy from natural gas; requiring the Department of the Environment to approve or deny an application for the construction of a new energy generating system that produces energy from natural gas; etc.

SUPPORT FOR ASPE BALTIMORE



Mueller Associates practices and promotes the link between good quality plumbing, health, environmental sustainability, and economic prosperity.

Mueller

Mueller Associates
1306 Concourse Drive, Suite 100
Linthicum, MD 21090
www.muellerassoc.com
410.646.4500

ENGINEERING GREAT EXPERIENCES

HUBBELL

&

BAY Associates

TO LEARN MORE CONTACT
Jason Eagles: Bay Associates
JASON@BAYASSOCIATES.COM

OMNI **PBX**

A fully integrated, energy efficient heat pump water heater. Available in 50, 65, 80 & 119 gallon capacities.

OMNI **HHP**

Air or water source heat pump

Fully configurable heat pump system with 120-5000 gallon storage capacity and fully programmable controller

PLC Controller

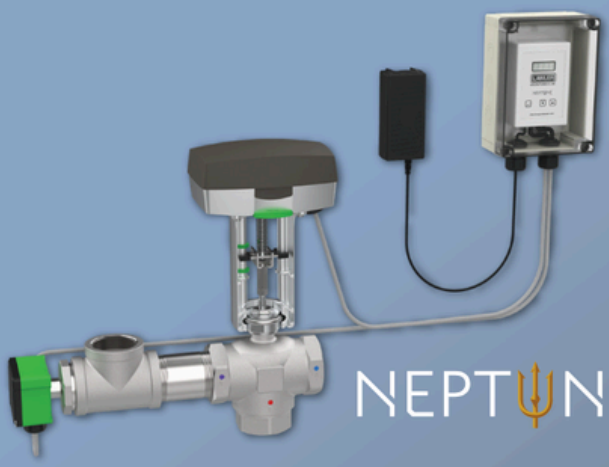
Recirc/backup heater

Cement lined storage tank

LAWLER
MANUFACTURING CO., INC.

Experience Ease of Installation, Integration, and Control with Lawler's

Fully Electronic Mixing Valve, Neptune!



NEPTUNE

Neptune EMX Electronic Mixing Valve

- Accurate control of domestic hot water in all flow conditions
- Simple 3 button interface
- High temperature alarm
- Two valve installation in parallel with one controller
- ModBus and BACnet™ communication standard
- Rugged lead-free stainless-steel valves
- ASSE 1017 and NSF 372 listed

Neptune EMX Electronic Mixing Valve Manifold Systems for Recirculation

- Plug-and-play
- Pre-assembled / tested
- Standard and custom designs

Contact your local rep **Jason Eagles** at **Bay Associates Group** (**Jason@Bayassociates.com**) or visit www.temperedwater.com to learn more.

BAY Associates

Superior Performance & System Reliability

DuRa Pipe™ enhanced epoxy coating applied to cast iron soil pipe and fittings. It is well suited for aggressive DWV applications where greater performance is required.

AB&I FOUNDRY
ABIFoundry.com

anaco–husky
Anaco-Husky.com

TYLER
PIPE & COUPLING
TylerPipe.com

SCAN TO CONTACT
TECH TEAM

TWA
TOM WEAVER ASSOCIATES
WASHINGTON D.C. AREA
EST. 1952

MIFAB®

MPB-2022-USA
SPECIFICATION
DRAINAGE
(LIT-067)

CLPB-2022
LIGHT COMMERCIAL
PRODUCTS
(LIT-048)

AD-2022-USA
ACCESS DOORS
(LIT-043)

BEECO-2022
BACKFLOW PREVENTERS
AND ACCESSORIES
(LIT-071)

NH-2022-06
NO HUB COUPLINGS
(LIT-044)

TDPC-2023
POLYMER CONCRETE
TRENCH DRAINS
(LIT-076)

TD-2023
GRP & STEEL
TRENCH DRAINS
(LIT-046)

TDSD-2023
SHOWER DRAINS
(LIT-077)

TDSS-2023
STAINLESS STEEL
TRENCH DRAINS
(LIT-072)

ROOFGUARD-2020
ROOFGUARD ROOF
DOMES
(LIT-058)

C-PORT-2023
ROOFTOP RUBBER
PIPE SUPPORTS
(LIT-047)

DB-2022
DIALYSIS BOXES
(LIT-070)

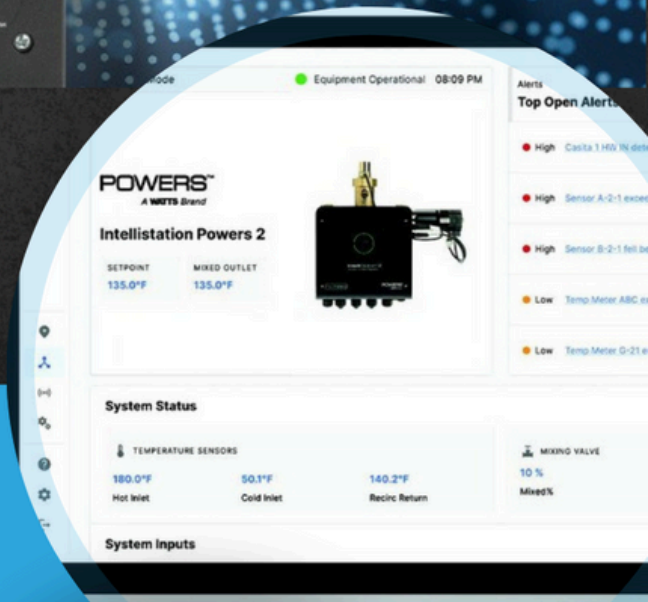
HYDROMAX-2020
SIPHONIC DRAINAGE
(LIT-062)

INT-2023
INTERCEPTORS & ACID
NEUTRALIZATION TANKS
(LIT-095)

TSP-2022-08
TRAP SEAL
PRIMERS
(LIT-062)

THE NEXT GENERATION OF DIGITAL MIXING

Temper Water. Not Expectations.



Key Features:

- Improved temperature control with Globe Valve Design
- Sensor package options to fit any application
- Improved touchscreen with screen swipes
- Full temperature monitoring and pressure/flow rate monitoring options

works with nexa

IntelliStation 2 performance data can be viewed from anywhere and tracked over time for trends that can help optimize your system and anticipate issues. This next generation mixing valve can be monitored and controlled remotely via **Nexa** or your BMS, and doesn't require factory preprogramming, a laptop, or special software when commissioning or making or adjustments.

nexaplatform.com

POWERS™
A WATTS Brand

powerscontrols.com

The JOYCE AGENCY

Interested in learning more?
Contact Matt Morris of The Joyce Agency
410-903-9177 | mmorris@thejoyceagency.com

Come see the most disruptive break through pumping technology the industry has seen in decades!

-Eliminates the wet well; Maintenance
-No Odors
-Reduce excavation/construction costs

OverWatch™
Direct In-Line Pump System

AMES, Inc. is a manufacturer's representative of water and wastewater treatment, pumping, and HVAC equipment. We serve the municipal, commercial, and industrial markets in Delaware, Maryland, Northern Virginia, West Virginia, and District of Columbia.

PARTNERING WITH THE INDUSTRY'S PREMIER BRANDS

PENTAIR AURORA
OverWatch Direct In-Line Pump System
STANCOR
wilo
TIGERFLOW
ZURN GreenTurtle
wahaso
USF FABRICATION
BURUMPUMP
AK INDUSTRIES

PRODUCT OFFERINGS:

- Overwatch Direct Inline Pumping System
- Pumps
- Controls
- Water & Wastewater
- Packaged Systems
- Rainwater & Water Reuse
- Grease/Interceptor

PARTS & SERVICES

- New Construction Field Service
- Warranty & Repair
- Maintenance Contracts
- Parts & Aftermarket Sales

8918 Herman Drive | Columbia, MD 21045
www.amesinc.com | info@ames.com

HOW CAN WE HELP?
410.995.8899

WILLOUGHBY

COUNT ON US.

Family-owned and -operated since opening in 1947, Our fixtures and water management systems are Willoughby-tough and purpose-built for their environment! From sinks and lavatories to ligature-resistant plumbing fixtures for behavioral health facilites, we can help with fixtures for the most extreme environments.

TWA
TOM WEAVER ASSOCIATES
WASHINGTON D.C. AREA
EST. 1952

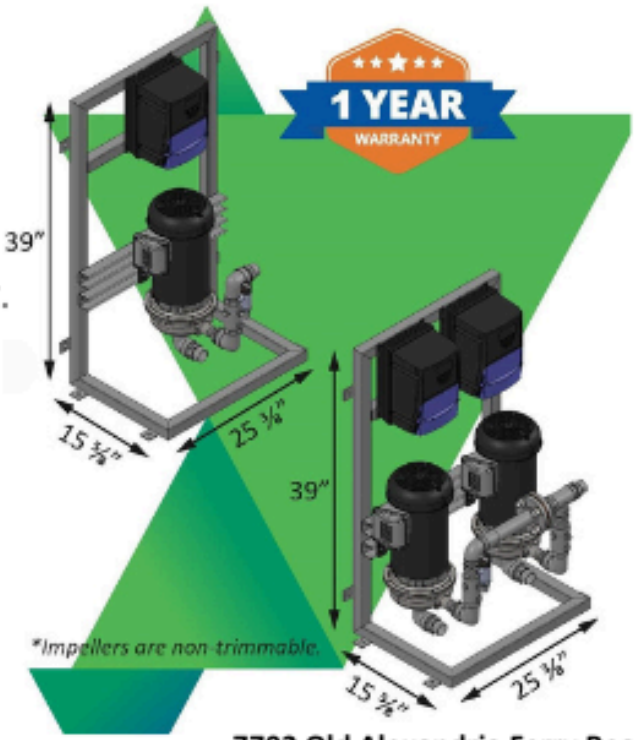
7702 Old Alexandria Ferry Road
Clinton, MD 20735
www.tomweaverassociates.com
301.877.2300

When You Need a Micro Boost, Insist on a MicroFlo

15 YEARS
QuantumFlo
A WILO BRAND

MicroFlo Series Out of the Box High Efficiency Compact Booster.

The MicroFlo Series is a highly compact, 1 or 2 pump booster for LOW FLOW -- LOW BOOST applications. Buildings that are only a couple stories, have lower water movement needs, or small footprints. **The MicroFlo is designed specifically for these smaller appli-**



TWA
TOM WEAVER ASSOCIATES
WASHINGTON D.C. AREA
EST. 1952

7702 Old Alexandria Ferry Road
Clinton, MD 20735
www.tomweaverassociates.com
301.877.2300

DURAGUARD® PRODUCT LINE

Public health and safety are a common concern. Targeted for commercial applications, Bemis has a comprehensive offering of seats with DuraGuard® Antimicrobial Built-In Seat Protection™ and STAY·TITE™.

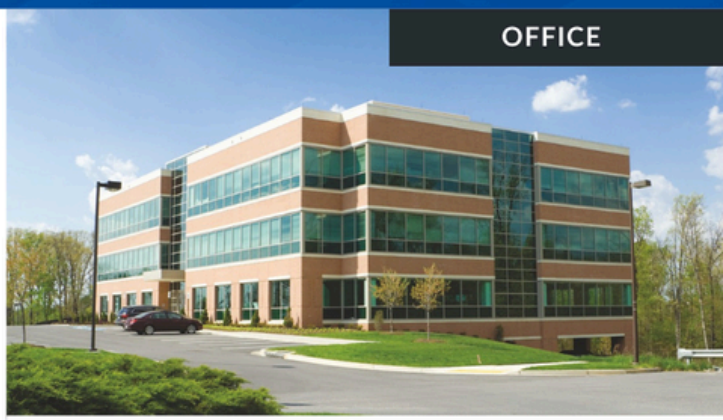
WHAT IS DURAGUARD?

DuraGuard is an antimicrobial property built into the toilet seat to inhibit the growth of bacteria. The active ingredient in DuraGuard is zinc pyrithione, a non-VOC (volatile organic compound), broad-spectrum, highly effective antimicrobial agent used to control mold, mildew, yeasts, fungi, algae, gram positive and negative bacteria. DuraGuard does not protect users or others against bacteria, viruses, germs, or other disease-causing organisms.

WHAT IS STAY·TITE?

STAY·TITE Seat Fastening System™ anchors the toilet seat to the bowl by using a patented bolt design with a finned bushing and glass-filled nylon nut, eliminating the need to retighten the seat to the bowl after installation.

CONTACT YOUR REP FOR ADDITIONAL INFORMATION



YOUR COMMERCIAL SPEC JUST GOT EASIER

Specifiers know they can count on our **ElectriFLEX Series™** for a vast array of commercial solutions. It gives you the flexibility to meet every one of your customer's installation requirements.

- Features our exclusive Vitraglas® tank lining with Microban® antimicrobial technology
- Converts easily to the right voltage, phase, and kW input to meet your application demands
- Field-convertible at the supply house or in the field by a qualified installer using a conversion kit
- Light, Medium, and Heavy-Duty models available: a single model solves multiple installation requirements

Check out our Specifying & Cross Reference Tools!

BRADFORD WHITE®
WATER HEATERS
Built to be the Best®

Barnard Associates
55 Aileron Court, Suites 1 & 2
Westminster, MD 21157
(P) 410-720-0900, (F) 410-720-0904

Canplas
Plastic Grease Traps, PVCDWV Fittings and Plumbing Specialties
Centoco Corp
Toilet Seats
Compass Manufacturing
Toilets and Stainless-Steel Sinks
Enfield
Acid Waste Piping, High Purity Piping
Guardian
Double Containment Piping Systems
Hammond Valves
Plumbing and Heating Valves
Ideal Tridon Couplings
No Hub, Heavy Duty and Specialty Couplings
Ipex
Schedule 40 & 80 PVC and CPVC Pipe
Milwaukee Valve
Domestic & Import Metal Ball, Butterfly, Check, Gate, Globe
High Performance Butterfly
NAC-NewAge Casting
Cast Iron and Epoxy Coated Pipe
SAS Safety Corporation
Protective Safety Equipment
Speakman Company
Hospitality Fixtures, Commercial Brass Emergency Equipment
Wolverine Brass
Plumbing Products for the Professional

Contact:
Office Phone: 410-720-0900
Office Fax: 410-720-0904

SHAFER, TROXELL & HOWE Inc.

Your Solutions Partner Since 1973

Representing:

Grundfos • Peerless •
PACO • Myers • Synrcroflo •
Cougar Controls • Topp Industries •
Primex Controls • See Water

les and Service Specialization:

Sump/Sewage Pump Stations • Water Booster Systems •
Fire Pump System • Rainwater Harvesting Systems •
Circulating Pumps • Water Filtration Systems

Contact our Engineering Team

800•233•7718 | engineering@sthinc.com

97 - D Monocacy Blvd. • Frederick, MD 21701 • www.sthinc.com

THE PATHWAY TO DECARBONIZATION

VERITUS®

Heat Pump Electric Water Heater
High Coefficient of Performance
Pairs with Thermal-Stor™ Heat Pump Storage Tank
Operates In Below Freezing Ambient Conditions of 23°F
Modular Design Concept
Low Global Warming Potential (GWP) Refrigerant (R513A)
Package Solutions Available
Features SMART TOUCH™ Operating Control

LECTRUS™

Resistance Electric Boiler
15 - 150 Kilowatts
Modulating Control
Cascade Up to 8 Boilers
ASME Rated Pressure Vessel
160 PSI Working Pressure
SMART SYSTEM™ Control

Lochinvar

CUMMINS-WAGNER
100% Employee Owned
Call 1-800-966-1277 Or Visit
Cummins-Wagner.com For Our Contact Information

CHARLOTTE
PIPE AND FOUNDRY COMPANY

Edge
HP IRON

A NEW LEVEL OF COATING PERFORMANCE:
EDGE HP IRON™

SPECIALLY COATED CAST IRON
PIPE AND FITTINGS
FOR AGGRESSIVE DWV APPLICATIONS

charlottepipe.com/EdgeHPIron

A Thinner Shield is Better!

TRANSFERENCE OF TORQUE
Thicker gauge shield material blocks the torque from getting to the gasket. A thinner shield protects the gasket while allowing a more efficient transfer of torque therefore providing a better seal.

DEFLECTION
A thinner shield is more forgiving, flexible, and malleable. It bends with the joint allowing the seal to remain strong. A thick shield is rigid and does not form itself over the joint.

STEPPED JOINTS
The thinner shield allows the shield to conform over the stepped joint providing a more effective seal.

Interested in learning more? Contact Glenn Spilling, National Sales Manager
gspilling@idealtridon.com | 615-686-7826

IDEAL TRIDON

Or visit us online at IdealTridon.com!

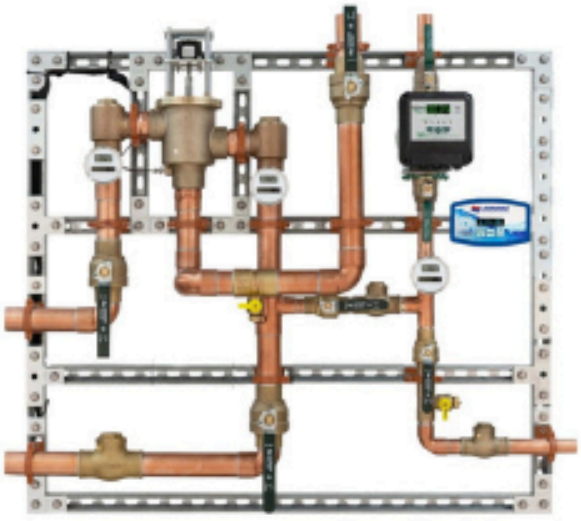
Viega, LLC - Mike McCarthy:

Technical Manager (571) 328-1143
mike.mccarthy@viega.us
Viega Questions? Lunch & Learn sessions, project support & specification review.

viega

LEONARD®
WATER TEMPERATURE CONTROLS

Complete Mixing Valve Solutions

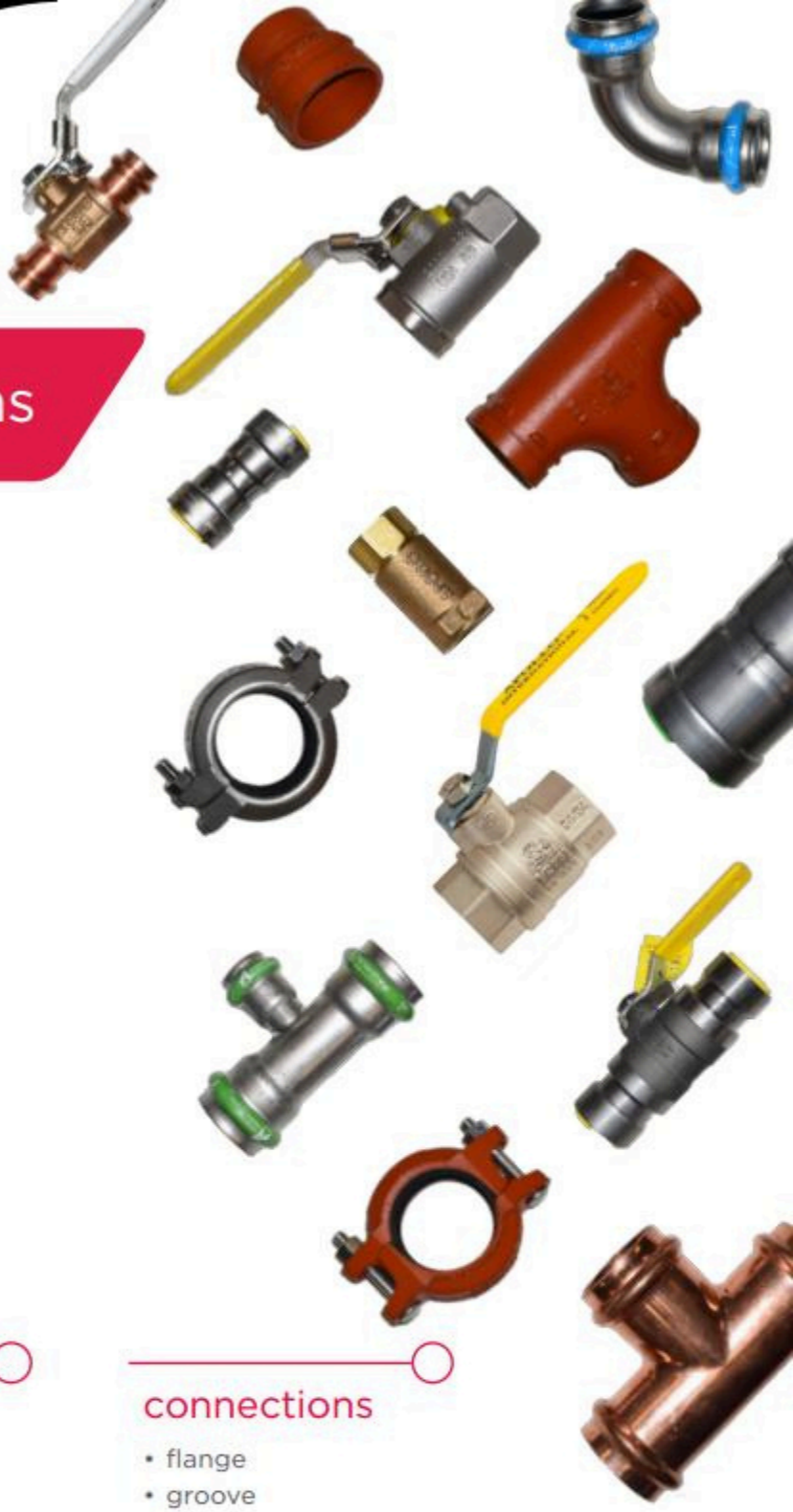


TWA
TOM WEAVER ASSOCIATES
WASHINGTON D.C. AREA
EST. 1952

7702 Old Alexandria Ferry Road
Clinton, MD 20735
www.tomweaverassociates.com (301) 877-2300

aalberts integrated piping systems

valve and piping solutions



don't just buy products, buy solutions

At Aalberts integrated piping systems, we create mission-critical products surrounding valve and connection technology.

Our group creates systems that are applicable for key verticals such as residential, commercial, industrial, and utility. These are designed and developed by our team of in-house engineers.

This complete piping and valve solution combined with our services are available through different channels.

verticals

- battery
- chemical
- data centers
- education
- food and beverage
- hospitality
- oil & gas
- pharmaceutical
- power generation
- mixed-use
- water treatment

materials

- brass
- bronze
- carbon steel
- copper / steel
- ductile iron
- lead-free brass
- stainless steel

connections

- flange
- groove
- press
- push
- solder
- threaded
- welded

Aalberts integrated piping systems
customer service | US 704.841.6000 | Canada 800.443.1603
aalberts-ips.us

"Apollo" Valves | SHURJOINT®

Schedule of Events

SEPT 25	Tankless Water Heaters	Olive Grove Linthicum
OCT 16	Elevator Codes and Standards	Little Havana Locust Point
NOV 20	RO/DI Water Systems	Valley Inn Timonium
DEC 18	Pros & Cons of Plastic Pipe	Valley Inn Timonium
JAN 23	Industry Night with UA486	UA Local 486 Training Ctr Rosedale
FEB 26	Fire Suppression Specialties	TBD
MAR 26	Heat Pump Water Heaters	TBD
APR 23	Radon Mitigation	TBD
APR 2024	Annual Golf Tournament	Details to Follow
MAY 21	Everything We Do Wrong	TBD
JUN TBD	Annual Summer Party	Details to Follow

MONTHLY SPONSORSHIP OPPORTUNITIES

Tabletop Presentations: $100 to provide a tabletop presentation of equipment or material relative to the plumbing profession. The tabletops will be set up from the beginning to the end of the monthly meeting and provides the opportunity to provide a brief (under 5 minutes) presentation. We ask that the affiliate register for tabletop presentations in non-consecutive months to allow other presenters the opportunity to support the chapter.

Social Sponsorship: $250 to provide a running slideshow presented on screen of logos, linecards, and a 8.5x11" sign at the bar. This slideshow will be provided during the social period. There will also be a special mention by the master of ceremonies during the opening and closing remarks. Slideshow must be submitted prior to the meeting for approval. PowerPoint, .jpg, or, .png formats are preferred.

Please make checks payable to the Baltimore Chapter of ASPE. Contact Kathy Dwyer or Chuck Swope if interested