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THE MAGAZINE OF THE VIRGINIA MUNICIPAL LEAGUE

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BETTER COMMUNITIES THROUGH SOUND GOVERNMENT



#### ABOUT THE COVER

These folks work hard to create affordable housing opportunities in the Commonwealth but rarely get pictures of their own house featured anywhere...so we decided that Virginia Housing's Richmond headquarters deserved the cover this month! Learn about some great things being done with Virginia Housing grants in Southwest Virginia inside.

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#### **FEATURES**

#### Virginia Housing grants making a difference

#### **Building the future**

#### ALSO IN THIS ISSUE

#### PFAS: What it is and how your municipality may be entitled to recovery

#### Power Surge: The benefits and challenges of data center development

#### Member Spotlight: Middletown

#### CBM Spotlight: Tremco Roofing & Building Maintenance

#### **CBM Spotlight: Dominion Energy**

#### CORRECTION\_

The March issue of *VTC* incorrectly identified the copyright holder of "Blueprint for Going Green" by Gerald P. McCarthy. In fact, the author is the sole owner of the copyright.



Visit www.vml.org or scan the QR code to download the VML app.

### Housing, the General Assembly, and all things summer (including baseball)!

ML STAFF EAGERLY awaited April 17 to see if the General Assembly or the Governor would prevail in the State Budget. But when the big day arrived, we were completely disappointed! Instead of coming to an agreement on the budget, the legislators and the Governor simply came to an agreement to meet again in May. While this is frustrating, there is hope that they will stick to the May 15 date so we can all plan our summers and budgets with (a little) time to spare!

It's always a pleasure to work with our friends at Virginia Housing and putting together the featured article for this issue of the magazine was no exception. Virginia Housing recently named their new Chief Executive Officer Tammy Neale and VML looks forward to continuing our good work with Virginia Housing with Ms. Neale at the helm – Congratulations!

While the featured stories in this issue of the magazine deal with housing, I encourage you to also please take the time to read the articles on PFAS and Data Centers as both are very interesting and relevant to the housing pieces.

In related news, the Virginia Housing Commission recently met to set out their work plan for the summer. There will be three workgroups that will take up bills from the 2024 General Assembly session: (1) Affordable Housing, Landlord Tenant and Real Estate Law, (2) Accessory Dwelling Units and (3) Local land use and community living. These groups are open to the public and I would encourage you to look at the bills and provide comments to the Housing Commission.



### Use the QR code to access the Virginia Housing Commission 2024 Workgroups bill summary.

In one of the many housing studies, Alex Horowitz of Pew Charitable Trusts reports that in 2023 half of renters are spending 30% or more of

their income on rent while one quarter are spending 50% or more. This is happening even as the average household size has fallen to an all-time low of 2.5 people. Other interesting facts are that rent is rising faster in Colorado than in jurisdictions that have reformed zoning for more and lower cost housing and that

minimum lot sizes force buyers to buy more land than they want. Also, it comes as no surprise to learn that homelessness increased in areas where rents soared over the last several years, further exacerbating the housing crisis.

As I am writing this article, the United States Supreme Court is hearing arguments in the *City of Grants Pass v. Johnson* case dealing with the city's ban on "public camping." The homeless plaintiffs said that the ban constituted "cruel and unusual punishment" in violation of the Eighth Amendment. How this case is decided will affect many localities seeking to address the housing and homeless crisis in America. According to the federal government's Department of Housing and Urban Development (HUD); there are over 650,000 people who experienced homelessness in 2023.

Of course, issues like affordable housing are felt by every locality but small towns experience the challenges differently than cities and counties and need solutions tailored to their resources. Recognizing that towns have their own challenges and opportunities across many topics is the inspiration behind the upcoming (first ever!) Virginia Small Towns Conference being held in Abingdon June 10-11. VML is pleased to be working with various entities at Virginia Tech to put together this event which I'm sure many of our members will find incredibly helpful. Equally important will be the summer offering of VML's Elected Officials Conference series happening June 26 in Richmond. This conference and training event is a great opportunity for both new and experienced local elected officials to trade lessons learned and learn a few new lessons! To sweeten the deal, VML will be hosting an evening of baseball at Richmond's Diamond stadium when the Flying Squirrels take on the Somerset Patriots the evening June 25. We hope you can come early to join us as there are few better ways to celebrate summer than with some homegrown baseball!

Details and registration for both events are available at **www.vml.org/Calendar/Event-List**.

Enjoy this issue of the magazine and let's hope that on May 15 we can all celebrate a state budget!

#### **CALENDAR**

#### Learn more about these events and additional opportunities at www.vml.org

May 16-17 2024 Broadband Together Conference - Hilton Short Pump, Richmond, VA. Registration and information at www.broadbandtogether.com. (See page 18)

**June 10-11 Small Towns Conference** - Southwest Virginia Higher Education Center, Abingdon, VA. (*See page 25*)

June 26 Virginia Local Elected Officials Conference - McGuireWoods - Fances Hayes Conference Room, Richmond, VA.

Oct. 13-15 2024 VML Annual Conference - Marriott Virginia Beach Oceanfront Resort



### In memoriam: David P. Helms

AVID P. HELMS, mayor of the Town of Marion and former president of the Virginia Municipal League, passed away on March 21 following a brief illness.

He was born in Glade Spring, VA in 1940. Mayor Helms graduated from Glade Spring High School, and Emory & Henry with a Bachelor of Arts degree in Elementary Education and a Masters degree in Education from Radford University. He took additional classes from the University of Virginia. He began teaching at Meadowview Elementary in Washington County and later taught at Glade Spring Elementary. He became a teacher at Marion Intermediate School and soon after was serving as Assistant Principal at Marion Primary School. Mayor Helms was promoted to principal of Marion Primary School in 1973, where he served until his retirement from secondary education in 2000. He served for several years on the Southern Association of Colleges and Schools (SACS), including two years as chairman of SACS Virginia Elementary Committee. He was named Outstanding Educator by Francis Marion VFW Post 4667 in April 1999. Always the public servant, Helms served as a member of the Glade Spring Town Council 1968 - 1970, Marion Town Council 1990 - 2000, Mayor of Marion 2000 until present. He served on the Executive Committee for the Virginia Municipal League and as President 2013 - 2014. He served on Mount Rogers Planning Commission as an original Board member and Board of Directors. He was instrumental in the success of Marion Downtown Revitalization. He worked with Francis Marion VFW Post 4667, East Tennessee Chapter of Rolling Thunder and other Veterans groups. He was named Citizen of the Year by Marion Noon Rotary in 2005. He has worked with the Salvation Army Red Kettle Drive for over 20 years. He remained active in many organizations and events, including projects ranging from the local VFW and Memorial Day activities to bringing and expanding his college alma-mater into Marion with the Emory & Henry College of Health and Sciences.

#### VML remembers David P. Helms

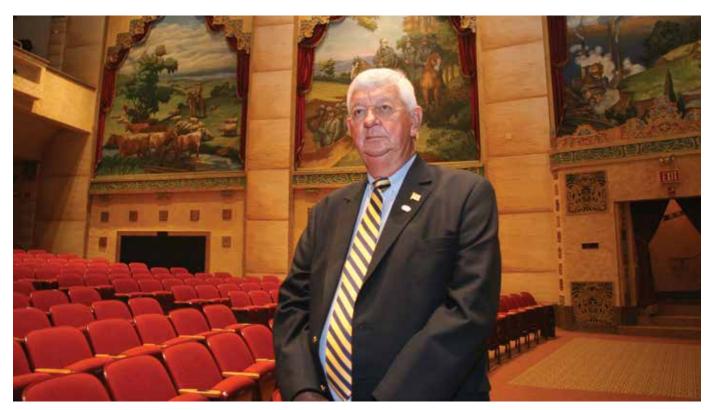
Mayor Helms' heartfelt dedication to the league's mission meant that his influence and support for sound local government resonated throughout Virginia. While our deepest sympathies go out to the Town of Marion, there are people serving local governments in every corner of the Commonwealth whose lives he touched that will also miss him dearly. The next time our members gather his absence will be deeply felt.

- Michelle Gowdy (Executive Director, VML)

Mayor Helms was a gentle giant that spoke his mind when needed and was a strong advocate for his southside Virginia. At every VML conference we would have conversations and he always gave me words of encouragement. And when I became President of VML, he called me at home with a congratulations. He will be missed.

- A.D. Chuckie Reid (Vice-Mayor, Town of Farmville; President, VML)

I don't remember when I first met Mayor Helms so many years ago, but I liked him from the start! It was something about his big smile and friendly demeanor that drew me in right away. He was never too busy to stop and talk to me anytime I saw him at a VML conference or meeting. He and his wife Sue and I became friends. I could not wait to see them each year to share a laugh or the most recent news and gossip. He always had a good joke to tell. I would receive Thanksgiving cards and Christmas cards from Mayor Helms and Sue each year. He really reached out to me during my mom's illness and after her passing. I remember during the time of COVID, and we were working from home, I had just arrived at my mom's house to care for her over the weekend and my cell phone rang as soon as I walked in her door. It was Mayor Helms calling to check on me and my family.



#### David P. Helms

He was truly one of the kindest, most considerate, and caring people I have ever met. I miss him already so much as I know Sue does too. I talked about him so much over the years my family felt like they knew him too, and they had never even met each other! Everyone has more than one "best friend" if they are lucky and he truly was one of mine. I will miss him dearly and never forget him. Heaven truly just got a wonderful deserving new angel. I know he is up there watching over us all.

#### - Joni Terry (Office Coordinator, retired VML)

Mayor Helms loved VML, second only to Marion. He served as VML President during the turbulent times when VMLIP split from VML, and he was the one that recruited me to serve on the VML Board from 2018 to 2023. His presence will be missed as VML transitions into the future.

#### - Bill Rush (Town Manager, Town of Marion; former member of the VML Board of Directors)

I first met David Helms in August 2000 at a regional hearing on education funding

that JLARC held in Marion. He gave welcoming remarks. Some years later he became actively involved in VML and we were so fortunate that he was willing to serve on the Board and as president. He and his wife Sue always attended the annual conference. Over all those years, David was one of the nicest, warmest, most sincere people I've ever met. I don't believe there was a mean bone in that man's body! He was just sweet and kind and humble and nice. He could have chosen to simply enjoy his retirement, but he was truly a public servant who loved his community and the people in it and wanted to give back to it. He was a remarkable leader who led by example and through gentle strength, never as a braggart or person seeking attention and personal gratification. Such a wonderful person who has left a lasting legacy for Marion and VML.

#### - Mary Jo Fields (Legislative Associate / Director of Research, retired VML)

I ran to be on the VML Board in 2012 because my buddy David Helms told me to. He still calls me at least once a month. He called just the other day because his wife wanted to know if it was okay if they put my name on their church's prayer list. He checks on me all the time. I appreciate it.

#### - Jill Carson (former Vice Mayor, Town of Pennington Gap; President, VML – interviewed in December 2022, a few months before her passing)

Mayor Helms' motivation was never ego; never, "Look at me!" It was always about making things better. Better for Marion, with his vision for bringing vitality to an area that wasn't guaranteed success. And better for local governments across the Commonwealth.

Everyone I ever saw interacting with him loved him. This included VML members statewide, and especially locally. One morning, I had breakfast with him at Atkins Tank, a very

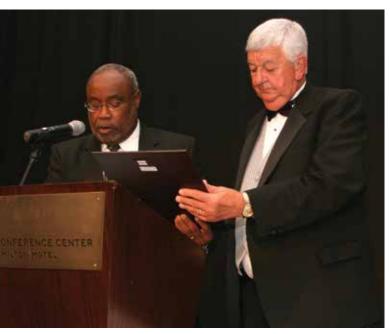


local breakfast place. While there, some 20 folks came and went. Every one of them walked up to say something kind to him. He clearly liked everyone and knew everyone. That morning made me think of Louis Armstrong's "What a Wonderful World":

I see friends shaking hands Saying, "How do you do?" They're really saying, "I love you."

That was David Helms.

- Mark Flynn (General Counsel / Lobbyist, retired VML)



The recent passing of David Helms presents an opportunity to reflect on his many contributions to the Town of Marion and VML. His civic fingerprints are very present in the Town and the Smyth County region. Following his graduation from Emory and Henry, David embarked on a thirty-seven-year career as an educator by teaching in the classroom as an elementary school teacher and in 1973 becoming the principal of the primary school, a position he held until he retired in 2000. Just think of the hundreds of students that David Helms helped mold over the years!

In 1990 David was first elected to the Marion Town Council (both his father and brother had served in area local government positions). In 2000 he was first elected mayor. His commitment to the Town was demonstrated by his frequent walks to visit with merchants in downtown Marion and his reputation for never missing a local event. After serving on the VML Executive Committee for several years he was elected President in October 2013. His fellow Executive Committee members and VML staff always found David to be an active, team-oriented member, always focused on finding the right option to solve every problem. He believed that if you put a group of people in a room to address an issue, a solution would soon be found. He and his lovely wife, Sue, were folks you always looked forward to catching up with at each VML meeting.

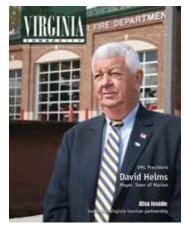
Although the Town of Marion must now look to new leadership, the legacy of David Helms will be evident for years to come. The beautifully restored Lincoln Theatre in downtown Marion is one such legacy. The Emory and Henry health-science campus in Marion on the grounds of the old Smyth County Community Hospital is another. May his selfless dedication to his community be an inspiration to current and future VML officials!

#### - Mike Amyx (Executive Director, retired VML)

I was introduced to Mayor Helms at the 2013 VML Annual Conference by Joni Terry who told me "This is someone you should get to know."

Unlike most people who pick up his packet of registration information, he had his whole Town of Marion crew with him including Bill Rush, Bill Weaver, and Ken Heath. He came behind the registration table and gave Joni a hug.

Mayor Helms stayed with us for about 15 minutes telling jokes. I thought he seemed friendly and figured that would be my only time talking to him. Little did I know that he knew and remembered everyone. So, at Host City Night I heard someone shout "Patrick!" I turned around and it was Mayor Helms holding court



telling stories and cracking jokes. I wound up hanging around him for about 45 minutes. As I was leaving, he asked me if I liked bourbon? I said, "Who doesn't?" He smiled and said, "The next time I see you I will bring you a little something. Not giving it much thought I said, "Thanks." Once the conference was over, he stopped by our table and said, "Don't forget I'll be bringing you some snakebite medicine."

True to his word, at the next "VML Day at the Capitol" event Mayor Helms presented me with a fifth of Maple Bourbon made in Marion. But that was just for starters! At every VML event I attend after that, Mayor Helms always had a little snakebite medicine waiting for me.

#### - Patrick Ford (Press Operator/Clerk, VML)

Mayor Helms was an amazing man, kind, and understanding, and not only cared about Marion but had the best interest of all Southwest Virginia. He will truly be missed. He was a great friend to me and the town of Saltville. I could always ask him for honest advice, and he would give it to me. He truly helped shape me into the mayor I have become. I am grateful to him and will miss Mayor Helms.

- Todd Young (Mayor, Town of Saltville, At-Large Member, VML Board of Directors)



#### Lexington hires Carroll as new city manager



The mayor and city council of the City of Lexington recently announced the hiring of **Tom Carroll** as the new city manager. Carroll succeeds Jim Halasz, who retired from the city on May 1. Carroll joins

• Carroll • on May 1. Carroll joins the city with over 20 years of municipal leadership experience having served as city manager in Loveland, OH as well as village

manager in Loveland, OH as well as village manager in Silverton, OH. Carroll currently serves as city manager in Cambridge, MD.

Carroll is a credentialed manager with the International City/County Management Association. Additionally, he's also a member of the National Academy of Public Administration, a non-profit organization that works with Congress, federal agencies, as well as state and local governments on issues of importance.

Carroll holds a Bachelor's degree in History from the University of Virginia as well as two Master's degrees from Indiana University in the areas of Sociology and Public Affairs. He will assume his new role with the city on or about June 1.

#### Fairfax City's Zipp appointed to new assistant city manager position; Shinaberry promoted to clerk



The Fairfax City Council announced during its April 9 meeting the appointment of **Melanie R. Zipp** to the newly created position of assistant city manager. Zipp joined the city in August 2004 as city clerk. Office

**- Zipp -** 2004 as city clerk. Office administration was added to her duties in January 2014. She was promoted again in September 2019 to chief of staff.

The new assistant city manager position was unanimously approved by the city council on Feb. 13 and will provide needed capacity, coordination, and oversight for several critical functions, such as Title VI administration, legislative affairs, ADA coordination, communications and marketing, and the development review ombudsmen function. The chief of staff function has been eliminated, and the city clerk function has reverted to a standalone full-time position.

Zipp earned her Master of Public Administration, with a focus on local govern-

ment, from George Mason University in 2016. She earned a Bachelor of Science, with a focus on diversity and critical thinking, from the University of Phoenix, and she earned an Associate in Arts degree in liberal studies, with a focus on sociology, from Minnesota State University.

Zipp completed the University of Virginia' LEAD certification program (Leading, Educating, & Developing) in 2022. She also completed the Conflict Resolution for Political Leaders in 2020 and earned the Certified Municipal Clerk designation in 2007. Zipp is a member of the Virginia Local Government Managers Association, the International City/County Management Association, the Virginia Government Communicators, the Pi Alpha Alpha Honor Society, the Virginia Municipal Clerks Association, and the International Institute of Municipal Clerks.

**Melissa Shinaberry** was promoted to city clerk from her position as deputy



city clerk, which she has held since July 2019. In her role as city clerk, Shinaberry will serve as liaison/coordinator to the city manager, mayor, city council, department heads, other city staff,

- Shinaberry - and the public. Other duties include managing records, providing administrative support to city council, recording city council meeting minutes, maintaining the city code, maintaining city council policies and procedures, and supporting city boards and commissions. The city clerk also swears in city officials including city council members, police officers, the fire marshal, and animal control officers.

Shinaberry joined the city as an administrative assistant in October 2018. She holds a Bachelor of Business Administration from Strayer University and an Associate of Applied Science in business management, administrative support, and technology specialization from Northern Virginia Community College. She is a certified Commonwealth of Virginia Notary and a certified municipal clerk.

#### Smith is Middletown's new treasurer

As of April 1, **Keith Smith** is the new treasurer for the town of Middletown. Smith, who has been an integral part of Middletown since October 2023 as a bookkeeper, steps into this role succeeding Interim Treasurer Rejoyce Lunceford, who admirably served since November 2022. Notably, Lunceford,



a seasoned CPA and esteemed accounting professor at Shenandoah University, will continue her contributions to the town in a new part-time capacity.

Smith brings a wealth of experience and exper-

tise to his new role. His career highlights include a significant tenure at Shenandoah Telephone Company in Edinburg, where he served as a cost accountant for multi-million dollar projects. Additionally, for the past 25 years, he has successfully operated his own business, specializing in providing comprehensive financial services such as monthly statements, job costing, client consultations, and the preparation of over 250 tax returns annually.

Smith's educational background includes Lord Fairfax Community College, Shenandoah University, and James Madison University, culminating in a degree in accounting.

#### Hampton names Sledge as new economic development director



Following a nation-wide search, **Leonard Sledge** has been named Hampton's director of economic development. This is a homecoming for Sledge, who served in the role from 2013 to 2018. He will begin in June.

- Sledge -

After leaving Hampton, Sledge became executive director of the Development Authority in Henry County, GA. He returned to Virginia to serve as Richmond's director of economic development and executive director of the Economic Development Authority. Prior to his work in Hampton, he served as the as director of economic development for the College of William & Mary; in workforce development roles for the Virginia Community College System and Maricopa Community College District (AZ); and advanced manufacturing supervisory roles in the semiconductor and food processing industries.

During his 11 years in local economic development work, Sledge has led projects that have resulted in \$3.9 billion in announced capital investment and 9,600 in announced new jobs. Under Sledge's economic development leadership in Richmond, the city adopted its Strategic Plan for Equitable

Economic Development; increased development along the riverfront that includes a corporate research and technology campus expansion and amphitheater; approved the mixed-use redevelopment of a 67-acre publicly owned property that will also include a new minor league baseball stadium; and won 10 Excellence in Economic Development Awards from the International Economic Development Council. In Hampton, projects included the development of The Vanguard Brewpub & Distillery, Hyatt Place hotel, Maximus, Howmet Aerospace

(Arconic) expansion, Mango Mangeaux, and the Kroger-anchored redevelopment of RiverPointe.

Sledge serves on the Boards of the International Economic Development Council and the Virginia Economic Developers Association. He also previously served on the Virginia Economic Development Partnership's Committee on Business Development and Marketing.

A graduate of Hampton City Schools, Sledge holds undergraduate degrees from Morehouse College and Georgia Tech, and a Master of Business Administration degree from the University of Phoenix.

#### Dumfries hires Nichols as new public works director



- Nichols -

On April 15, **James M. Nichols** began as the Town of Dumfries' new director of public works. Nichols brings 22 years of operations management experience to the town, with 12 of those years in public works.

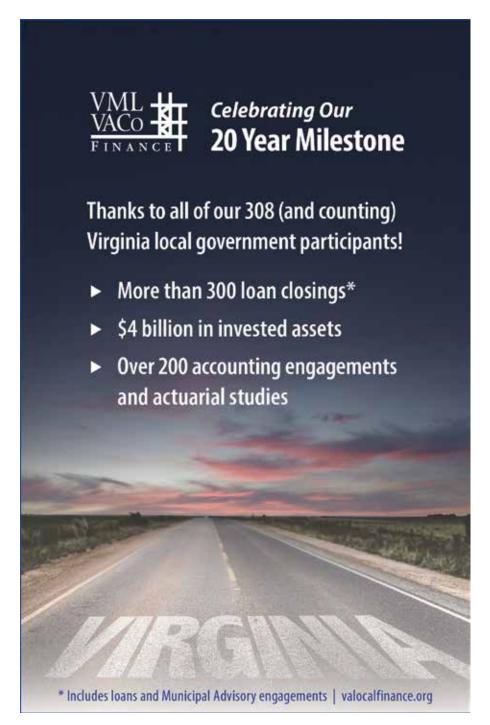
Nichols has developed annual budgets and overseen individual and major projects ranging from as little as \$2 million up to \$39 million throughout his career. His past roles with the town include assistant maintenance superintendent, interim maintenance superintendent, division chief / operations and maintenance, and superintendent of landscaping and grounds. Nichols also has experience in stormwater management and street operations, where he led various projects to improve infrastructure resilience and mitigate environmental impacts. Additionally, he has directly and indirectly supervised over 100 team members. In his most recent position, Nichols was the residency administrator assistant for the Virginia Department of Transportation, where he was responsible for assisting with the leadership, coordination, integration, and management of resources allocated to the Fairfax residency maintenance program.

Nichols holds a Master of Public Administration and Policy degree from Walden University, a Bachelor of Science in Ornamental Horticulture Design from Auburn University, and an Associate of Science in Horticulture Science from Trenholm State College in Montgomery, AL.

Nichols is also a Certified Public Manager, Certified Program Planner, and Certified Park and Recreation Professional, and he holds many other certifications and professional accolades.

#### Movers and shakers

Do you know someone who's on the move? Send your announcements about new hires in local government, promotions, retirements, awards and honors to Rob Bullington at rbullington@vml.org.



#### Town of Ashland taps Miller and Goodman to assume new executive leadership roles



- Miller -

Martha J. Miller and Doug Goodman have been promoted to assistant town manager positions for the Town of Ashland. Miller will serve as assistant town manager of external operations and Goodman will

serve as assistant town manager of internal operations. Both will assume their new roles effective June 25.

"After taking time to evaluate the organization and my needs for support on the town's leadership team, I've decided to promote two internal employees who have exhibited excellence in their current roles and are already seen as leaders in the town government, regardless of titles, and have reputations of integrity in the larger Ashland community," said Town Manager Josh Farrar in a press release.

Miller joined the Town of Ashland in 2021 as its first community engagement manager with the task of professionalizing and growing civic participation initiatives and tourism marketing efforts. Miller came to the town after more than 15 years of professional experience in public relations and marketing and holds a Bachelor's Degree in Corporate Communications from James Madison University, a Master's Degree in Writing from Johns Hopkins University, and professional certifications in community engagement, public participation, and diversity, equity and inclusion.

In her new role, Miller will lead efforts to inform, build trust, and engage community members in town operations. Community engagement will continue to be a central focus of her responsibilities and she will also manage the town's growing Parks & Recreation function, oversee legislative affairs to monitor how state government and General Assembly actions impact the town, as well as serve as lead facilitator for special events throughout the year.



- Goodman - oversee the town's American Rescue Plan Act (ARPA) grant projects

and serve as the town's clerk.

In addition to serving nearly 29 years in law enforcement, Goodman holds a Bachelor's Degree in Sociology from Virginia Tech and a Master's Degree in Public Administration from Virginia Commonwealth University.

In his new role, Goodman will lead efforts to improve government efficiency and integration of feedback into town processes. Goodman will continue as clerk and oversee grant projects funded through the American Rescue Plan Act (ARPA) fund while also assuming responsibility of the town's information technology and human resources functions. In addition, Goodman will manage the town's innovation portfolio to include downtown WIFI, smart city technology, and more.

#### Town of Herndon appoints Smith director of economic development



- **Smith** - native Florida.

The Town of Herndon has named **Marc G. Smith** as director of economic development. Smith succeeds Dennis Holste, who had been the town's economic development manager prior to relocating to his

In his new post, Smith will be responsible for promoting the Town of Herndon as a desirable location in which to start or grow a business, establishing cooperative and mutually beneficial relationships between town businesses, and furthering initiatives related to economic development and business vitality. He will serve as the town's primary liaison to the Fairfax County Economic Development Authority, the Dulles Regional Chamber of Commerce and other entities dedicated to Herndon's commercial sector, and he will work with new and existing town businesses as they navigate town processes.

Smith has most recently served as senior business development manager for Arlington County, where he led a team charged with attracting and retaining businesses in the county, resulting in \$28 million capital investment and 6,400 new jobs, to include the recent location of CoStar Group's head-quarters in the county, a net of 650 jobs and \$20 million capital investment. He also managed the county's lead generation and business development portfolio and created a new strategic plan for the division. Previously, Smith was a business manager for the

Virginia Economic Development Partnership (VEDP), the economic development authority for the Commonwealth, where he developed and executed lead generation strategies and served as project manager for significant prospects, amounting to \$7 billion in capital investment and 9,400 new jobs; and served as business development officer for Stafford County, where he oversaw business attraction, development, and expansion.

Smith holds a Bachelor of Science in Political Science with a minor in History from Radford University.

#### Pudlow is Prince George County's new deputy county administrator

In early February, Prince George County welcomed **Kristen Pudlow** as the new



deputy county administrator. In this role Pudlow is responsible for supervising and managing different county departments, collaborating with the county administrator and department directors, and handling

• Pudlow - directors, and handling special projects. Additionally, she represents the county on local and regional boards and commissions, assists with the preparation of the annual budget, and coordinates strategic goals. With over 20 years of experience in public service, both at the state and federal level, Pudlow brings a wealth of knowledge and expertise.

Pudlow's impressive career includes 15 years of active-duty military service, where she retired as a medical detachment first sergeant in the Idaho Army National Guard. As a first sergeant, she took charge of approximately 60 soldiers of all ranks and provided support to other military units. She underwent extensive training at the United States Army Sergeant Major Academy, graduating in February 2023. During her military tenure, Pudlow also served as a senior human resources sergeant, overseeing multiple organizations within the state of Idaho, and as the state education and incentives officer.

Throughout her career, Pudlow has served in various positions at the local government level. Most recently, she acted as an emergency planning contractor for the City of Nampa, ID, where she played a crucial role in the development of the city's emergency operations plan. She also worked in the City of Nampa Mayor's Office and Emergency Management Team where she

Goodman formerly

served as Ashland's chief

of police for 14 years,

retiring from that role

in 2022. Later that same

year, he rejoined the

town as its administrative

services coordinator to

handled communication with citizens, state representatives, and community leaders.

Pudlow holds a Master's degree in Public Administration from the University of Southern California, with a Certificate in Public Policy. She earned a Bachelor of Science degree in Sociology from Excelsion College in New York.

#### Freas promoted to Charlottesville's deputy city manager for operations

On March 24, the City of Charlottesville announced the promotion of **James Freas** to deputy city manager for operations. Freas has served as director of neighborhood de-



velopment services for the city since September 2021.

As deputy city manager for operations, Freas will oversee a variety of assignments relating to the city's capital improvement plan and spe-

cial projects, organization-wide initiatives, and operational efficiencies. His portfolio will include the Office of Community Solutions, Public Works, Transit, and Utilities. Freas will hold dual roles as he will continue as director of neighborhood development services until the latter role is filled.

Freas joins the City Manager's Office with an impressive 15-year background in public service with experience in city planning throughout Massachusetts and Virginia where he has led collaborative planning and implementation work. Freas has also developed strategies for housing, transportation, climate and economic development and he has experience drafting policies and zoning ordinances.

Freas holds a Bachelor's degree from the University of Virginia and Master's degrees in planning and environmental law from the University of Rhode Island and Vermont Law School, respectively

**NEWS & NOTES** 

### The Ripple Effect: Progress on Virginia Beach's Windsor Woods tide gate

IN THE AFTERMATH of Hurricane Matthew's devastation over seven years ago, Virginia Beach still recalls the awful impacts, particularly in the Windsor Woods, Princess Anne Plaza, and The Lakes neighborhoods. Memories of these events linger to this day. However, signs of hope are emerging on the horizon as a new project aimed at fortifying the city against flooding begins to take shape.

Anyone driving past I-264 lately may have noticed the towering presence of a red crane near the skate park and Mount Trashmore. It marks the site of one of more than 40 Flood Protection Programs planned across the city.

Low elevations in the neighborhood, undersized pipes, high tides that steal storage capacity, and more frequent and stronger storms all account for flooding experienced in this area. Placing a new tide gate across Thalia Creek is an initial step in addressing these issues. The project's centerpiece, the new Windsor Woods Tide Gate, which is now under construction, will span 60 feet across and comprises four gate openings. Its primary function? To protect storage capacity for stormwater runoff, safeguarding neighboring communities from flooding during severe weather and storm events.

Each gate measures 10 feet by 5 feet. Most days, they remain open, allowing the tide's and ecosystem's natural rhythm to continue undisturbed. But when storms loom on the horizon, they close at low tide, forming a barrier against the encroaching waters.

In addition, interim pumping mechanisms go online, lowering the lake's elevation to further increase storage capacity for stormwater runoff. This coordinated effort is designed to offer maximum protection to local neighborhoods.



#### About The Ripple Effect program

The Virginia Beach Flood Protection Program – The Ripple Effect – is a comprehensive 10-year plan to address recurrent flooding in Virginia Beach. In November 2021, Virginia Beach voters overwhelmingly supported a resiliency package for several key flood protection initiatives to include drainage improvements, tide gates, pump stations and flood barriers throughout the city. The projects are led by Public Works with support from a community oversight board for transparency and accountability. Learn more at www.virginiabeach.gov/RippleEffect.

### Arlington neighborhood ranked best place to live in the U.S.

NICHE, AN ONLINE RESOURCE that helps people identify schools, neighborhoods and workplaces that suit their particular interests, recently published a study that identified Colonial Village in Arlington as the "Best Place to Live" for 2024.

The study's authors used various sources, including statistics from the U.S. Census and weighed several factors including cost of living, schools, crime, outdoor activities, job opportunities, and to create their ranking.

Colonial Village received the highest possible rating in several categories including nearby public schools, nightlife, health & fitness, and commute.

Rounding out the top three were the suburban town of Carmel, Indiana, home to 99,453 people, and Chesterbrook, a suburb of Philadelphia. Both were given the highest possible marks for their public schools and family-friendly communities.



The Radnor/Fort Myer Heights neighborhood in Arlington finished in 8th place. See the list of the top 20 neighborhoods for 2024 on the Niche website at www.niche.com/places-to-live/search/best-places-to-live.

#### **NVRC** wins two resilience related grants

THE NORTHERN VIRGINIA Regional Commission (NVRC) was recently awarded a \$220,000 grant from the Department of Conservation and Recreation to create regional resilient design guidelines.

Current engineering design standards are based on historical observations and extreme rain events often overwhelm undersized stormwater infrastructure. To better prepare for future conditions there is a need for guidance on how to implement climate-informed design storm depths. To help support the adoption of new design standards, NVRC will develop practical guidance with the associated costs and benefits of new design guidelines by using the Mid-Atlantic Climate Adaptation Partnership's Intensity Duration and Frequency (IDF) curve tool that provides change factors to scale design storm depths accounting for recent and projected climate change.



The Regional Resilient Design Guidelines are intended to be considered for adoption by NVRC localities to fulfill DCR resiliency plan requirements and will provide decision-making support in the form of case studies, cost of adaptation versus inaction, and climate scenario guidance. By developing this plan at a regional scale, we will be able to provide support to local governments interested in updating their regulations and policies to protect their communities and infrastructure from flooding.

#### Stormwater Management Best Practices Manual

NVRC was awarded a \$22,000 grant from the National Fish and Wildlife Foundation to update regional resources for properly maintaining stormwater infrastructure. Stormwater management systems are prevalent throughout Northern Virginia and their effectiveness relies on their long-term maintenance. The maintenance responsibility often falls to individual homeowners, homeowners' associations, and property management companies and is often overlooked.

NVRC published a stormwater maintenance guidebook for private owners and operators in 2007 which provided valuable information about the inspection of stormwater systems, planning for maintenance costs, and troubleshooting tips. In the 17 years since this publication, technology has improved, and maintenance costs have increased. This calls for an updated resource to support our local governments in the education and outreach for stormwater system maintenance.

The proposed project garnered great interest and enthusiasm from our local governments, who requested about 1,500 printed copies across the region.

#### Historic Manassas Farmers Market achieves Gold Level certification from Virginia Farmers Market Association

THE HISTORIC MANASSAS Farmers Market, recognized as one of Northern Virginia's premier markets, has garnered numerous accolades, including awards for Best Farmers Market and Best Agritourism Attraction from publications such as Virginia Living and InsideNOVA.

Recently, the Historic Manassas Farmers Market was awarded Gold Level certification by the Virginia Farmers Market Association (VAFMA). The Historic Manassas Farmers Market is one of only four markets that have this level of certification in the entire state of Virginia. This prestigious recognition, under the newly launched Virginia Certified Farmers Market Program, underscores the market's commitment to upholding the highest standards of excellence in serving its community.

The certification levels – Bronze, Silver, and Gold – are determined by a comprehensive point system evaluating food safety, public safety, innovation, and the continuing education of the farmers market manager. The Historic Manassas Farmers Market solidified its reputation as a market of outstanding quality and standards by satisfying 29 out of 33 validation points, earning the Gold Level certification, the highest standard achievable.

"We are proud that the Farmers Market has been awarded a Gold certification, and that the VAFMA has recognized what we already knew: that our market has been a star attraction in our city, growing every year in the number, diversity, and quality of vendors. We can't wait for the 2024 season to start," said Mayor Michelle Davis-Younger in a press release.

About the Virginia Certified Farmers Market program

The Virginia Certified Farmers Market Program, spearheaded by VAFMA, aims to highlight and celebrate farmers markets across the state that excel in transparent food sourcing and offer enriching experiences for both vendors and consumers. This initiative ensures shoppers can confidently support local agriculture while enjoying a safe and inclusive environment.

An advisory committee of market managers, state agencies, and university staff developed the Virginia Certified Farmers Market Program standards.



### York County embraces eco-friendly tourism and becomes a Virginia Green Travel chapter member

YORK COUNTY RECENTLY became a chapter member of Virginia Green Travel, a partnership program that encourages green practices in tourism. The county takes pride in its rich history of championing sustainable living and environmental initiatives within its community, while also offering eco-friendly options to tourists. Throughout the area, businesses and organizations are working together to protect its beautiful waterways, beaches, and historic places. At Riverwalk Landing, restaurants are required to use sustainable straws or no straws at all, and businesses are heated and cooled by geothermal well fields. Throughout the shopping area, streetlamps use LED lights, and many businesses, such as Ben & Jerry's and Patriot Tours & Provisions, participate in beach cleanup efforts. Likewise, the Yorktown Cottages use energy efficient appliances and have created a garden to attract



pollinators, such as bees and butterflies. Historic Yorktown offers tourists a number of travel options to reduce gas emissions and air pollution. E-bikes and Segways are available for rent from Patriot Tours & Provisions, and sidewalks and Battlefield roads encourage travelers to walk or peddle around town. Visitors are also encouraged to use the convenient and complimentary Yorktown Trolley to reduce the number of vehicles traveling throughout the area. At the Riverwalk Landing Parking Garage, drivers have access to electric vehicle charging stations.

The county also has initiatives in place to preserve waterways and beaches. Several times per week, members of the Public Works Department clean Yorktown Beach and its walkways. In addition, Riverwalk Landing Piers is a member of the Virginia Clean Marina Program, a cooperative that investigates and implements methods to protect and improve our local wa-



terways. On Saturday, April 13, the County kicked off the 2024 Yorktown Market Days season with its annual Go Green Market, a day dedicated to sustainable living.

#### Virginia Housing grants making a difference

### MRPDC is providing affordable housing in Southwest Virginia with some help from Virginia Housing grants

VER THE LAST TWO YEARS, the Mount Rogers Planning District Commission (MRPDC) has worked tirelessly to develop much-needed new homes across the region. Thirty-three new homes have been completed in that timeframe, and over 100 are under construction. This progress is a result of strong partnerships and creative thinking across the region along with Planning District Commission (PDC) grants from Virginia Housing.

PDC grants first came about in 2021 when Virginia Housing awarded a \$40 million grant program to Virginia's 21 Planning District Commissions (PDCs) to stimulate regional affordable housing initiatives. Today, the funds together with their respective PDCs have brought over 250 apartments and single-family homes to communities in Virginia, with many more on the way.

PDCs have collaborated with community partners and other stakeholders to develop and implement regional approaches to housing development in order to create new affordable homes. Virginia Housing estimates that more than 1,800 affordable units will be developed by the end of the three-year grant program. The grants are supporting projects that are identified by the PDCs and their partners to address rental, homeowner, and mixed-use housing needs in their respective regions. These include financing new affordable home-

ownership opportunities, renovating vacant and blighted properties, supporting the development of a regional housing trust fund, and creating upper-story housing in downtown business districts.

"The use of our PDC grants has elevated the topic of affordable housing across Virginia and spurred more regional conversations aimed at addressing the need for new housing," observes Tammy Neale, CEO of Virginia Housing. "We're proud of the projects that have come to life as a result of our investment and are excited to see the continuous impact these will have on communities across the Commonwealth."

#### **Demand without supply**

The MRPDC region includes the cities of Bristol and Galax; Bland, Carroll, Grayson, Smyth, Washington, and Wythe counties; and the towns located within those counties. The region also borders the Appalachian regions of Kentucky, Tennessee and North Carolina and includes the crossroads of Interstates 81 and 77. All of this makes Mount Rogers a prime location for current and future residents, visitors, and businesses.

According to the Mount Rogers Regional Housing Study conducted in 2022, Mount Rogers has a population of 196,722, which comprises 80,127 households. Like many communities across the U.S., Mount Rogers is in real need of workforce housing; 1,000 new units are needed to match the growth in economic opportunities in the region. The housing study also analyzed the current and potential market for new homes within Smyth County, including the towns of Marion, Chilhowie, and Saltville, which concluded that the lack of new housing unit development is an issue of supply rather than demand.

#### Getting creative to provide affordable homes

To increase inventory, the MRPDC solicited proposals from for-profit and nonprofit developers. Funding for accepted applicants has come from the MRPDC's Housing Unit Development Trust which gained its initial funding through a \$40 million PDC grant from Virginia Housing that was distributed to PDCs across the state. MRPDC was awarded a \$2 million PDC Grant, a \$1 million U.S Department of Agriculture grant and given \$500k from the Marion Economic Development Authority (EDA.) With this funding, they have implemented a creative way to engage developers and encourage ongoing affordable housing development.





Housing development director at MRPDC, James Moss, notes, "The way we have used this PDC grant to leverage continuous housing development is unique in that the initial funding from the grants allows homes to be built and sold, funneling those profits back into the trust for future housing."

This creativity has quickly inspired developers to invest in Southwest Virginia. Brad Cole, co-owner of BCW Properties, has been a project manager on the new build homes his company is developing in Galax. "When we applied for funds from the MRPDC, we knew it was an opportunity to fulfill a need in the area for affordable housing.

It's easier for residents now to find new build homes with this program and it's also helping with the shortage of homes in our area."

With Galax being the hub of employment for all surrounding counties in the area, it's fitting that in addition to the BCW Properties single family homes built, R&K Land Developers has also developed homes in the hills of Woodlawn – conveniently located between Hillsville and Galax. Beyond these hills, there are also four duplexes built in Wytheville by G.W. Hill Construction LLC and Brewer Construction LLC. Inspired by the increased housing stock, new businesses have started popping up. Specialty restaurants, boutiques, and the

area's first membership-based car wash chain have established roots in the area. In Wythe, Grayson, and Smyth counties, 21 homes built for \$245k-\$320k were under contract before they were even finished with most buyers being young professionals with families who relocated to the area for employment and needed housing.

Ken Heath, executive director of community and economic development for Marion, observes, "Nobody expects that in Southwest Virginia there will be newly developed units going for sale because no one has seen it in decades. But we are making that happen for this community and we'll continue to work at it until the housing stock is where it needs to be."











#### Renewing "America's Coolest Hometown"

One specific case study of an effort to ease the shortage of workforce housing in the Mount Rogers region can be found in the Town of Marion. There, the EDA, in partnership with the Town of Marion and the Marion Redevelopment and Housing Authority, is turning blighted buildings into safe and affordable housing for residents.

Since the early 1990s, a number of neighborhoods on Marion's south side have deteriorated. To add to that, Marion has many traditionally well-maintained houses falling into disrepair across town. It has been difficult for the community to stay on top of the problem over the long term due to the natural decline of very old buildings that require owners, renters and landlords to do their part with ongoing maintenance. All told, there's a real need to address blight and stop its spread.

Thankfully, the EDA has found a way forward. Through its innovative Blighted, Abandoned, Underutilized and Derelict Properties (BAUD) program, dubbed "Renew Marion," the authority is purchasing substandard and unsafe residential, commercial, and municipal properties and repurposing them into safe and sustainable housing stock. This program also demolishes existing structures that are unlivable









Contact James Moss at 276-783-5103 or JMoss@MRPDC.org



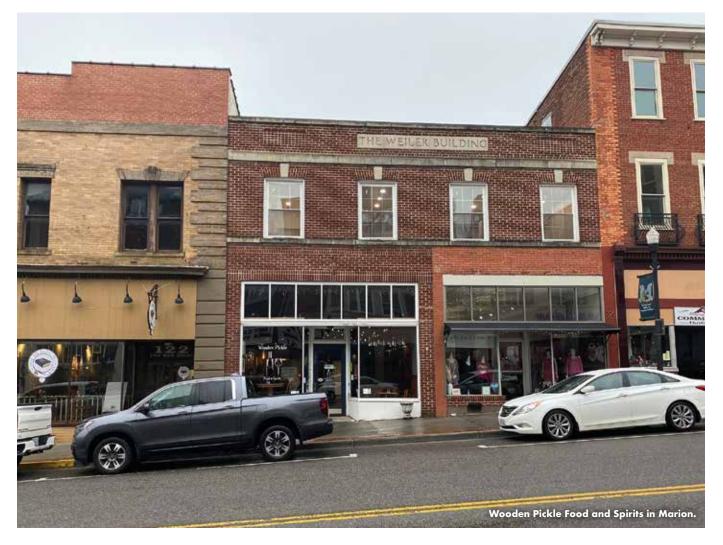


and builds new homes on the property which will be sold under the BAUD Home Ownership program. Currently, 10 modular homes have been prefabricated and are ready to be set on their foundations. A total of 30 are expected to be built under the program. Properties addressed by the BAUD program are affordable workforce housing, with preference going to first-time homebuyers, veterans and seniors – all markets that were identified as being underserved in the housing study. Revenue from the sale of these properties goes to replenish the housing unit development funds, creating a cycle through which Marion is building back the heart of its community and paving the way for future economic and cultural growth.

On Marion's Main Street, the owners of Wooden Pickle Food and Spirits utilized \$75,000 in PDC funds to build four apartments over the business, generating considerable interest from developers in creating mixed-use/mixed-income properties in Smyth County.

Marion Town Manager Bill Rush notes, "Our intention is that the focus on how we're getting innovative with this funding and investing in Smyth County and the Town of Marion will show that putting more housing into the community will affect the local economy in a positive way. I'm looking forward to seeing how it turns out."

**About the author:** Adrian Robinett is the public relations manager for Virginia Housing



## Building the future: How workforce development can make Southwest Virginia an industrialized housing construction hub

VER THE NEXT DECADE, U.S. real estate developers will increasingly use building systems that have been prefabricated in a factory and are shipped to the job site for assembly. If done correctly, industrialized construction (IC) has the power to reduce waste, emissions, construction timelines, and costs compared to traditional construction. Already, IC and modular manufacturing have accelerated project timelines by 20-50 percent. By 2030, the U.S. and European IC market is projected to grow to \$130 billion with the potential to provide construction savings of \$22 billion annually, largely through compressed construction timelines of around 35 percent.

Industrialized construction also has the potential to create well-paid manufacturing jobs, decarbonize buildings, and address the affordable housing crisis. However, the U.S. currently lacks the IC capacity to support the demand, as proven by developers who are importing their buildings from foreign countries (i.e. China and Poland). Central Appalachia in general, and Southwest Virginia specifically, with its existing workforce skills and infrastructure, is well-poised to be a national leader in IC. To catalyze this industry, the region needs to revamp its workforce development initiatives to create the newly skilled workforce needed to make domestic IC a viable option.

Historically, Appalachia was an engine of U.S. industry; however, in the past several decades, many areas of Appalachia have experi-

enced severe economic contraction, which has driven higher-than-average poverty rates and reduced opportunities for upward mobility. In the last six years alone, this region has lost over 50,000 mining jobs and 10,000 skilled manufacturing jobs. Talent shortages and skill gaps have "reached a critical level" in manufacturing companies. Workforce sustainability remains an ongoing issue within construction due to complexity of worksites and hazardous work environments. Today, almost 30 percent of Central Appalachia's construction workforce is 55 years old or older and will retire soon. Furthermore, racial and gender diversity in construction is drastically lower than the national average.

And yet the region's projected industry job growth, entrepreneurial spirit, and education assets provide an ideal environment for catalyzing and growing a state-of-the-art IC industry. Workforce development is a core component to capturing the growing IC market and establishing the region as the nation's IC center of gravity. Already, Central Appalachia's existing workforce from the once booming textile, coal, and steel industries has the foundational skill sets to build upon and slowly transition the region to IC.

Bottom line: There needs to be a holistic approach to training and upskilling the new workforce that will implement these innovative, industrialized solutions in construction.

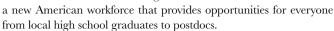




#### Enter Virginia Tech and the Industrialized Construction Institute

In conjunction with partners throughout the region, the Center for Economic and Community Engagement (CECE) and the Virginia Center for Housing Research (VCHR) at Virginia Tech are set

to develop a workforce training initiative that will focus on diversifying, growing, and sustaining Central Appalachia's industrialized construction economy. This process will begin by conducting a regional analysis of current industry needs and workforce capacity. Once the industry landscape needs have been clearly defined, the group will coordinate across existing public and private workforce programs to align efforts and identify gaps. This includes reviewing student curricula and activities beginning at the junior and high school levels. Where programs or certification regimes do not exist or cannot be repurposed, the partners will create first-of-kind training programs and, where necessary, establish standards. This effort will focus on training



This is a truly regional effort that will involve organizations from Ohio, Pennsylvania, West Virginia, Virginia, Tennessee, Maryland, North Carolina, and Kentucky. The desire for an initiative of this kind is evidenced by the forty-four letters from industry, education, workforce, and economic development partners in support of the Appalachian Regional Initiative for Stronger Economies (ARISE) grant application received by the group.

This project is the first step in developing an industrialized construction cluster in Central Appalachia. Through this planning process, the participating groups will inventory existing needs and assets across Central Appalachia, noting similarities, differences, and synergistic efforts across the multi-state region. They will then coordinate a regional approach to enhancing workforce education in construction and manufacturing. This will occur at various levels to align and strengthen the workforce pipeline with several on-ramps starting in K-12 schools and continuing through four-year education institutions, and with clear off-ramps that connect programs and workers to regional employers. The planning process will not only build from existing successes but will also explore various strategies including:

- De-stigmatize construction and manufacturing occupations through marketing efforts.
- · Reintroduce "shop class" into high schools.
- Expand community college rural area technical training and certification programs.
- Expand apprenticeship programming.
- Increase advanced manufacturing and construction graduates at 2-yr and 4-yr higher education centers.

#### Vision for long-term impact and inclusion

This transition from on-site, labor-intensive building development to more off-site manufacturing also poses opportunities for a more inclusive construction workforce. Historically and currently, the regional construction workforce has had limited representation from

women, people of color, and people with disabilities. These communities have been historically excluded from the industry in part due to the labor demands of the industry, the social make-up of the region, and national trends that have pigeonholed certain groups from higher paying occupations. During this planning process, partners will take several steps to incorporate diversity, equity, inclusion, and accessibility (DEIA) measures in the implementation plan:

- Include data gathering that helps to examine how/where/when minorities, disabled and women can participate in and accelerate IC industry growth.
- Identify and engage organizations that serve underrepresented communities to facilitate industry and workforce on-boarding of these underrepresented communities.
- Work with partners to shape DEIA strategies for the implementation plan to potentially include a DEIA-targeted management and workforce training scholarship program for disadvantaged students to attend IC classes and work with IC employers.

#### A ready workforce can transform the region

Not only is this an opportunity focused on advancing the existing workforce for IC but also combatting the confluence of related challenges, including high carbon emissions that exacerbate climate change, an unprecedented housing affordability crisis, workforce shortages, and continued industry fragmentation. This first step will help to unlock and leverage additional regional assets from across the region such as underutilized infrastructure, rail, and factories. All these assets combined illustrate a significant opportunity. This initiative will align and leverage these assets through a region wide effort.

The culmination of these workforce efforts will be a market signal to new and existing IC firms that Appalachia has the current and future workforce required to launch new factory operations and capture IC market growth in the coming years. Regional partners will also conduct business creation and attraction activities; provide technical assistance to existing construction and IC businesses; and pursue IC-related research and technology transfers to businesses that will place the region's IC industry at the forefront of the global industry. With these efforts combined, the IC industry has the potential to transform Appalachia's economy, housing, and commercial building infrastructure to meet the demand for affordable and market rate housing that attracts workers and companies to the region.

**About the author:** Andrew McCoy is director of the Virginia Center for Housing Research (VCHR), professor of the Department of Building Construction, and associate director of the Myers-Lawson School of Construction (MLSoC).

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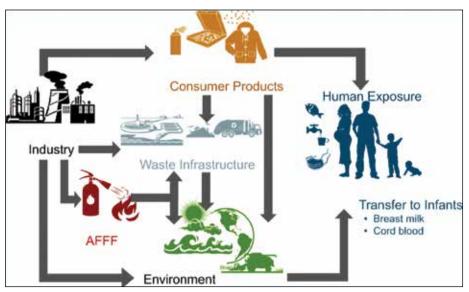


### PFAS: What it is and how your municipality may be entitled to recovery

This article was originally published in April 2024 issue of the *Louisiana Municipal Review*.

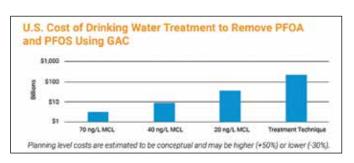
ER AND POLYFLUORINATED Substances, often referred to as "PFAS", are a group of man-made "forever chemicals" characterized by their strong chemical bond. Due to their unique chemical structure, PFAS are extremely stable and are highly resistant to oil, grease, water and heat. As a result, PFAS have permeated many aspects of our everyday society, including food packaging, pesticides, adhesives, clothing, furniture, automotive parts, and non-stick pans.

Recent studies show that PFAS have serious adverse impacts on human health. Exposure to PFAS, even at low levels, is associated with various cancers, decreased immune system function, and fertility issues. PFAS also migrate easily, and because of their persistence, can travel far from where they were released into the environment.



One major use of PFAS is in aqueous film-forming foam (AFFF), which was commonly used for decades to suppress fuel fires at locations such as airports, military bases, industrial facilities, and fire training centers. AFFF contains extremely high levels of PFOS or PFOA, two PFAS compounds, and were manufactured or distributed for decades by large corporations such as 3M, DuPont, Chemours, Tyco, Corteva, Kidde Fenwal, BASF, and Dynax. AFFF use is banned in Virginia and by the U.S. government at military bases, subject to emergency exceptions.

PFAS from AFFF released into the environment has migrated into public drinking water sources, and, given its strong chemical bonds, is difficult to remove and requires complex and expensive treatment solutions. The EPA has also proposed a new maximum contaminant limit of 4 parts per trillion (ppt) for PFOS and PFOA, which public water systems will be required to meet under the Safe Drinking Water Act. Estimates from the American Water Works Association project PFAS treatment costs to be upward of \$100 billion dollars for public water systems across the country.



As a result, public water systems in Virginia and across the county have filed lawsuits against the companies that manufactured and distributed AFFF for the recovery of costs associated with removing PFAS from drinking water. In 2023, historic settlements were reached with 3M and DuPont in these cases that will collectively pay up to approximately \$14 billion to participating public water systems. The

settlements provide funding for public water systems with any amount of PFOS or PFOA in any of their water sources, even if below the proposed 4 ppt limit, and systems are not required to demonstrate that the PFOS or PFOA originated from any particular AFFF use in the area. The funds are also general funds that are not tied to any specific abatement measures.

The deadlines for public water systems to "opt out" of these settlements have now passed, meaning that all systems who have not opted out are part of the settlements and must affirmatively make timely settlement claims; otherwise, their right to recovery will be forfeited. Information on the settlements and deadlines may be found at **www.pfaswatersettlement.com**. As many as 164 public water systems in Virginia may be eligible for recovery under the settlements.

Deadlines are fast-approaching in these settlements and it is crucial that public water systems consult with experienced legal counsel to take necessary action and protect their right to recovery. Additionally, litigation remains ongoing against many of the remaining AFFF defendants, and public water systems should counsel with counsel regarding their rights as to these defendants.

Although much has already been won, there is still far more PFAS news on the horizon. Staying up to date with the status of PFAS litigation is an important step in ensuring that your municipality recovers the funds it deserves.

**About the authors:** John Gallagher is a senior counsel at Milberg Coleman Bryson Phillips Grossman, LLC and retired executive director of the Louisiana Municipal Association.

Tristan Duarte is a law clerk at Milberg Coleman Bryson Phillips Grossman, LLC and a student at Temple University Beasley School of Law.

Milberg Coleman Bryson Phillips Grossman, LLC: is a national environmental and toxic tort law firm that represents public water systems across the country in the PFAS water contamination litigation.

# Power Surge: The benefits and challenges of data center development

This article originally appeared in the Jan/Feb issue of IMLA's Municipal Lawyer: The Journal of Local Government Law.

N THE 1990'S GATORADE'S SLOGAN was "I want to be like Mike." Michael Jordan was the greatest basketball player of his time, maybe ever. When it comes to attracting data center development in the 2020's and the foreseeable future, many localities may say "I want to be like Loudoun," as Loudoun County, Virginia is home to Data Center Alley and has the largest concentration of data centers in the world. If the next six highest data center markets are combined, it wouldn't equal what exists in Loudoun.

The mass of data centers in Loudoun County is the foundation for the internet and the cloud. Data centers have greatly contributed to the quality of life and the amenities offered in Loudoun. They are a major reason why last year new commercial investment in Loudoun exceeded \$10 billion which is more than several states. As data centers proliferated in Loudoun, the real estate tax rate decreased by nearly one third while the County budget increased by nearly 400% since 2010. In addition, data centers provide high end construction jobs, employ a high-income work force, promote associated business growth, and attract prestigious technology companies to locate nearby.



The rapid growth of data centers in Loudoun County, however, created negative impacts on the community, exceeded available electrical capacity, drove up the cost of land, squeezed out other types of commercial, residential and community development, and resulted in community opposition to new data center development. This article will describe why data centers are so lucrative, why they have been and will continue to be in demand, how localities need to balance the fiscal benefits of economic development with good land use planning, what issues localities should consider in reviewing administrative and legislative land use applications by data centers, how the impacts of data centers may be mitigated, and finally take you on a tour of a data center.

#### The data center "Big Bang"

Data centers are the unsung heroes of the digital revolution, powering the technologies that have become integral to our lives. The Commonwealth of Virginia, and Loudoun County in particular, have emerged as powerhouses in the world of technology, boasting a rapidly growing and thriving data center industry. With its strategic location, robust infrastructure, favorable business environment, and a commitment to sustainable practices, Virginia has become a magnet for data center development and innovation.

From facilitating global communication to powering artificial intelligence (AI), data centers are indispensable in modern society. Their role will continue to expand as technological innovation accelerates, enabling the unlocking of new frontiers and opportunities in the ever-evolving digital landscape. These facilities are the backbone of the modern digital network, enabling businesses, governments, and individuals to harness the power of data, cloud computing, and connectivity.

The concept of data centers dates back to the emergence of mainframe computers in the mid-20th century. In the 1950s and 1960s, computers occupied entire rooms and were operated by specialized teams. These mainframes required controlled environments, including temperature and humidity regulation, to ensure optimal performance. Data was stored on magnetic tapes and punch cards, laying the foundation for the idea of centralizing computing resources. As computing technology advanced, data centers evolved with many companies building their own facilities to house the hardware necessary for their own operations.

The 1990s marked a significant turning point in the history of data centers with the proliferation of the internet and the dotcom boom. The increasing demand for online services, e-commerce, and connectivity led to the establishment of commercial data centers. Pioneering companies like Equinix and Digital Realty offered co-location services, allowing businesses to rent space for their servers within these facilities. The 2000s witnessed the rapid growth of virtualization technology and the emergence of cloud computing. Cloud providers like Amazon Web Services (AWS), Microsoft Azure, and Google Cloud introduced the concept of renting computing resources on-demand, eliminating the need for businesses to manage their own physical servers. This shift catalyzed the expansion of massive data center complexes around the world, designed to accommodate the infrastructure required for cloud services.

Loudoun County has mirrored and led this transformation. Loudoun was the home to one of the biggest internet pioneers, America Online. AOL chose Loudoun County as its headquarters in 1997 and became a major driver in attracting a high-level technology workforce and the construction of digital infrastructure. With its headquarters already based in the county, AOL recognized the need for robust infrastructure to support its expanding user base and the increasing demand for online content. The company established data centers in the region to house the servers and networking equipment that formed



the backbone of its services. By the mid 2010's, Loudoun became the largest co-location market in the world, and led the industry into the cloud as AWS built its largest collection of data centers throughout the late teens and early 2020's.

Today, Loudoun County is home to more than 175 buildings and more than 31 million square feet of data centers, with another 4 million square feet currently under development. But data center growth is not limited to Loudoun. Since 2015, data centers space worldwide grew 17-fold to approximately 3.6 billion square feet. Data center growth, as measured by power consumption, is anticipated to be 10% a year through 2030. The continued rise in the use of AI will further drive the need for data center expansion.

#### Data center design

As data centers have become more prevalent in Loudoun and across the world, they have become similar in their size and design. Striking, albeit vague, concrete structures on the outside, data centers house a series of complex processes and mission-critical equipment that enable the reliable operation of the internet economy. Some of the critical components of the buildings include:

- Servers and Hardware: The primary purpose of a data center is to house servers, which are powerful computers designed to handle data storage, processing, and networking. Servers come in various forms, from traditional rack-mounted servers to blade servers that maximize space efficiency.
- Networking Infrastructure: Data centers require robust networking infrastructure to ensure seamless communication between servers, devices, and external networks. This includes routers, switches, and firewalls that manage data traffic and security.
- Storage Systems: Data centers house a variety of storage systems, including hard drives, solid-state drives, and other storage arrays. These systems store vast amounts of digital information that businesses and users rely on.
- Cooling Systems: The heat generated by the intense processing power of servers can be detrimental to their performance and lifespan. Data centers employ sophisticated cooling systems to maintain optimal operating temperatures.
- Power Distribution: Uninterrupted power supply is critical
  for data centers to ensure constant operation. Data centers employ redundant power sources, backup generators, and Uninterruptible Power Supply (UPS) systems to prevent downtime.

- **Security Measures:** Security is paramount in data centers due to the sensitive nature of the data they house. Facilities implement access controls, surveillance systems, biometric authentication, and other measures to protect against unauthorized access.
- Monitoring and Management Tools: Advanced monitoring and management tools track the performance of servers, cooling systems, and other components, ensuring efficient resource allocation and timely troubleshooting of issues.

As the digital era continues to expand, data centers have emerged as vital hubs for storing, processing, and distributing the vast amounts of information that power our lives. However, alongside their undeniable benefits, data centers also raise significant environmental concerns. The energy consumption, carbon footprint, and heat generated by these facilities have sparked discussions about sustainability and the need for responsible practices within the industry.

#### Use of resources and sustainability

As concerns about energy consumption and environmental impact grew, data centers faced pressure to become more energy efficient. The latter half of the 2000s and the 2010s saw a focus on sustainability and green initiatives within the industry. Data center operators began implementing advanced cooling techniques, optimizing server configurations, and adopting renewable energy sources to reduce their carbon footprint.

Data center operators have sought to reduce their power consumption, use more green and renewable energies, and reduce water consumption. They have become outspoken advocates in the battle to fight climate change. Corporate leaders such as Microsoft, Facebook, and Salesforce, are establishing sustainability strategies to support the planet. Microsoft released an aggressive plan to halve its carbon emissions by 2030. Amazon Web Services has committed to the use of 100% renewable energy by 2025 and currently has more than 120 megawatts of renewable projects in the works. Environmentalists are noticing. Greenpeace gave Apple, Facebook, and Google an "A" on their clean company scoreboard and Salesforce, Microsoft and Equinix have been given high grades in categories such as energy transparency, renewable energy commitment, energy efficiency and advocacy. Analysts have reported a significant decline in pollution over the U.S., northern China and western Europe as compared to the same time frame in 2019. Energy sustainability is a priority for the data center industry, which accounts for about 3% of global power consumption.

#### **Power Surge**

Here are a few of the ways that the data center industry is working toward its sustainability goals:

- Investing in Green Energy: Utilizing green energy sources, such as wind and solar power, is a primary way for a data center to reduce its carbon footprint. The industry is working together with Dominion Energy in Virginia to deliver an unprecedented amount of renewable energy, including an 830-acre solar array planned for Loudoun County.
- Energy-Efficient Buildings: Many Loudoun data centers use energy-efficient building design standards, such as Leadership in Energy and Environmental Design (LEED).
- Energy Storage: Utility-level energy storage is coming, with several operators already announcing projects to use lithiumion batteries for their backup power. Full adoption of this technology could lead to the eventual elimination of diesel backup generators.
- Minimizing Water Usage: Data centers use water to cool
  their computer equipment. In addition to utilizing reclaimed
  water lines, data centers in Loudoun are exploring new ways
  of cooling, including air cooling, recycled water loops, and submersive cooling technology.
- E-Waste Management Programs: Nearly all operators have implemented electronic and electrical equipment recycling programs.
- Ongoing Investment in New Technologies: Data center
  operators continue to innovate and look for new ways to reduce
  their carbon footprint, including waste heat recycling, on-site
  energy generation and other initiatives that can help the industry better integrate with their communities.

#### Planning and zoning considerations

As the data center industry becomes more entrenched in our communities, local governments are working to understand how to accommodate these facilities within their zoning ordinances and planning documents. In 2000, Loudoun County first addressed data center zoning in a determination letter by the Zoning Administrator, which stated, "Uses commonly referred to as 'data centers' are most similar to 'office' and are permitted wherever offices are permitted." At the time industry representatives described the use to Loudoun staff as similar to what was commonly known as a telephone exchange building. These were generally small structures, infrequently sited by telecommunications providers to house equipment, and had little to no occupancy by employees and generated minimal amounts of traffic. Loudoun's ordinances allowed office use by-right in many zoning districts. Coupled with market conditions and a staggering magnitude of demand that was not known in 2000, this decision to consider data center and office uses as equivalent led to the proliferation of data centers where a more strategic land use and planning approach would not have otherwise permitted them. Data center development drove out other forms of commercial development and resulted in existing land uses (commercial, residential, and civic) to be sold and redeveloped as data centers.

In 2000, the County's Comprehensive Plan, Choices and Changes, General Plan 1990 – 2000 was undergoing a major revision that dealt primarily with planned reduced residential densities in the County's rural area. The Comprehensive Plan carried over many of the non-residential land use policies of the prior plan that supported planned business and industrial land uses generally along transportation corridors and proximate to Dulles International Air-

port. The planning policies did not account for the advent of the data center phenomenon. For the period between 2000 and 2014, the zoning permission for data centers was based on the determination letter allowing data centers to locate where office uses were allowed. While that may appear to some observers in hindsight to be short sighted, due consideration must be given to Loudoun's rapid population growth creating a demand for residentially zoned properties to provide housing for the influx of residents. Many properties were proposed for conversion from non-residential planned land use and non-residential zoning to absorb the demand, so proposed data center development was welcomed as an alternative to diminishing acreage otherwise planned for business development. Continued data center development also began to offset the burden on residential property owners to pay the costs of increased local services escalating due to increasing population levels.

Regulating data centers in the same manner as office buildings meant applying the same setbacks, parking allocation, front entrance requirements, height, massing, and floor to area ratios. At the time, Loudoun's Zoning Ordinance did not require windows and architectural treatments for large buildings. Buildings were designed and constructed to accommodate their function, which for data centers resulted in large concrete buildings resembling warehouses more than office buildings.

As a significant number of data centers were constructed, the differences between office use and data center use became apparent. An office building primarily houses people during the day, meaning that the office building has parking, utilities, HVAC, and other facilities sized in a manner for an office use. Additionally, due to the nature of the office use, office buildings are developed in a manner that is reasonable attractive to the public with careful attention paid to screening, landscaping, and aesthetics. An office building primarily housing people also has windows and architectural treatments to enhance the buildings appeal to workers and visitors.

In contrast to office buildings, data centers primarily house computer equipment, require significant amounts of electricity, robust cooling systems, and require many huge backup generators. A single data center may use up to 32 megawatts or more of electricity. A series of high voltage powerlines are required to meet the electricity demands of data centers. The backup generators also need to be regularly operated to ensure they will function when needed. Mitigation of noise impacts is a significant difference between data centers and office buildings.

These differences in ancillary needs (i.e., high voltage transmission lines, power substations, numerous large and loud generators, and massive HVAC systems) impact surrounding properties and caused the County to define data centers as a specific use. In 2014 zoning amendments defined the data center use as:

A facility used primarily for the storage, management, processing, and transmission of digital data, which houses computer and/or network equipment, systems, servers, appliances and other associated components related to digital data operations. Such facility may also include air handlers, power generators, water cooling and storage facilities, utility substations, and other associated utility infrastructure to support sustained operations at a data center.

The 2014 amendments also introduced performance standards for data center development that required the following measures:

- Principal building facades need to avoid undifferentiated surfaces by including design elements such as a change in building height, building step back or recesses, fenestration or change in use of building material.
- · Screening of mechanical equipment.

- Exterior lighting to be fully shielded and directed downward.
- Provisions for pedestrian and bicycle facilities.
- · Additional standards for landscaping, buffering, and screening.

While the amendments added specificity to Loudoun's ordinances regarding the use, the district use permissions stayed largely similar. As a result, the amendment did not constrict data center development.

The next major update to the County land use policies occurred in 2019 with the adoption of the Loudoun County 2019 Comprehensive Plan. This effort introduced the concept known as "place type" in the County's long-term land use planning document. This step began the initial effort to strategically align a land use policy document with zoning district regulations that would serve to implement the comprehensive plan. While many articles on Loudoun's data center experience attempt to introduce the topic, the discussion herein offers a practical explanation.

The place type planning approach designates land areas appropriate for uses based on context within the County's five plan policy areas; the suburban policy area; the transition policy area; the rural policy area; the towns and joint land management area(s) (JLMAs); and a newly added urban policy area. The text below offers insight into this planning approach.

#### The Loudoun County 2019 General Plan describes the place type approach as follows:

The place type approach differs from the County's previous approach to land use planning in that it provides a way to shape the future of Loudoun by concentrating on context—the look and feel of places, their form, and their character—instead of focusing only on conventional land use categories and specific uses. Place type categories define not only the basic expected land uses for Loudoun County 2019 General Plan [CHAPTER 2-8] specific areas in the County, but also preferred development patterns, streetscapes, and design features that make places and environments visually distinctive and functional for people.

The place type approach is intended to create distinct and "complete" residential neighborhoods, employment centers, open spaces, and other areas. By providing greater flexibility in development types and uses while providing additional guidance on design expectations, place types can also facilitate more dynamic, livable neighborhoods and allow for established areas to evolve and improve. In the next graphic you will find the transect of the County, which transitions from rural to increasingly urban place types. A transect defines a series of place types that transition from sparse rural farmhouses to the dense urban core. Each place type contains a similar transition from the edge to the center of the neighborhood. The transect does not show all place types found in the plan, but rather a few to show the transition at a higher level. Through the use of place types in the General Plan, the County aims to achieve Loudoun's vision for a prosperous and inclusive community consisting of great places in a variety of settings.

Further, most data center development occurs in the suburban policy area and examples of place types that either call for data center development or do not portend that type of development are the suburban employment and suburban mixed use place types, respectively.<sup>1</sup> The suburban mixed use place type is called for along the County's major transportation corridors of Route 7, Route 28 and

Route 50, while the suburban employment place type is designated in areas north and west of Dulles Airport. The place type concept, as described above, also includes use categories expected in each area including core and complementary uses that will fulfill the intent of the place type and appropriate conditional uses. Within the suburban mixed use place type, no category of core, complementary or conditional use includes data centers. Within the suburban employment place type, data centers are listed only within the category of conditional uses.

The place type planning approach equips the Loudoun Board of Supervisors (Board) with policy guidance to consider the possibility of future amendments to the zoning ordinance to direct future data center development to districts that are located within the place type that calls for such uses, or to add new performance standards or to consider approval by special exception. As 2023 drew to a close, the only amendments before the Board were those that added additional performance standards but largely maintained the current district use permissions. Additional amendments are possible once the 2024 Board establishes its future work program.

Future regulations will also need to address technical considerations, such as power supply, connectivity, and infrastructure requirements. Additionally, the environmental impact of data centers, including energy consumption, water usage, and waste management, must be carefully weighed against local sustainability goals. However, all regulations will need to strike a balance between supporting economic growth and innovation while addressing the potential issues. Collaborative approaches that involve community engagement and public input are crucial to achieving this balance.

#### Regulating impacts and the siting of data centers

Jurisdictions should define the term "data center" as a distinct use in their zoning ordinance and comprehensive plan. The definition should be broad enough to encompass small or modular data centers, which are a few hundred or thousand square feet to large traditional data centers which sometimes exceed one million square feet. The definition and its application in the ordinance should also be flexible enough to cover data centers which are ancillary to a principal use. The impacts of each type of data center vary greatly and must be addressed differently for planning and zoning purposes.

For planning purposes, the comprehensive plan should identify planning areas where data centers may be located, where data centers are prohibited, and where the data center use can be controlled through a legislative approval such as special exceptions or use permits. Zoning ordinances should identify development criteria for by-right data centers located in close proximity to homes, schools, civic uses, and commercial development. These development criteria include size, height, buffers, setbacks, design and construction standards, landscaping, noise attenuation, backup power, and the provision of utilities.

<sup>&</sup>lt;sup>1</sup>Other place types included in the suburban policy area, transition policy and JLMA policy area that call for data center development include the Suburban Industrial/Mineral Extraction Place Type, the Transition Light Industrial Place Type, the Transition Industrial/Mineral Extraction Place Type, the Leesburg JLMA Employment Place Type and the Leesburg JLMA Industrial/Mineral Extraction Place Type.

<sup>&</sup>lt;sup>2</sup>As of late 2023, data centers remain allowed permitted by right in the PD-OP, PD-IP, PD-RDP and PD-GI zoning districts and by special exception in the CLI district. Current amendments allow the use in the MR-HI district. Draft performance standards as of late 2023 include additional façade treatment requirements and site planning standards such as loading bay location, location of mechanical equipment screening, refuse collection standards, additional parking setbacks and setbacks to residential development, and noise, light and glare standards.

#### **Power Surge**

To expand on this point further, subject to market specific indicators, most data center developers are interested in obtaining a floorarea ratio (FAR) of 1.0 or more and a building height of 100 feet or more. Jurisdictions need to recognize and incentivize locations where local zoning can accommodate such bulk standards and when developed adjacent to residential areas, require screening, buffering, and noise attenuation that mitigates visual and aural impact. Areas subject to airport noise or ambient noise levels that are similar to data center noise impacts provide opportunities that may be suitable for future data center development. Areas that are proximate to existing utility infrastructure also may be preferred for data center development. This will be challenging for jurisdictions like Loudoun given the diminishing supply of suitable tracts of land in the suburban policy area. In the face of this challenge, a review of the land use place types and development of realistic regulations that are scalable and context appropriate are needed.

Additionally, the location of permitted data center development should be based on the ready availability of high voltage transmission lines. Electrical utilities will be required to serve the data centers. This may require new high voltage transmission lines along highways, scenic corridors, environmentally sensitive areas, or in close proximity to residential developments.

Noise is an ever-present impact of data centers. The most frequent noise complaints relate to the operation of the generators. Data centers may be required to run their generators due to power outages and the generators need to be tested regularly. Site and building design can greatly reduce this impact. More significant buffers, setbacks and landscaping may reduce this noise impact on other properties. Another less common complaint is a low frequency persistent humming noise usually generated by fans or chilling units. The hum may be troublesome even within the standards set by a local noise ordinance.

Localities should consider performing a land study to determine the best location for large data centers. An analysis of available land may help localities plan for and zone land properly for by-right data center uses. A data center park would allow buildings to be grouped in a given area where impacts may be greatly reduced or mitigated through reasonable performance standards. Design and setback regulations may also be reduced within the park. The co-location of data centers provides the opportunity for shared facilities such as backup power generation that can make data centers more eco-friendly. In addition, co-locating data centers provides the best opportunity to recapture the energy and heat expended by data centers and reuse that power to increase energy efficiency and reduce environmental impacts.

#### The tour

To further compare Loudoun County's data center industry with Gatorade, the motto should be the internet's "Performance Starts Here." As data centers are highly secure facilities, an invitation is required to get a peek behind the curtain. Protecting the information stored in the Cloud is critical to the data center market. Once an invitation is received, registration with the data center is required and strict appointment times are set to ensure smooth entry and minimize disruptions to ongoing operations.

Passersby will notice security measures such as large windowless walls, fencing, wires, bollards, surveillance cameras, gates, lighting, ditching, and security guards. Inside the facility is more of the same as visitors are restricted to an access-controlled vestibule while credentials are checked. The tour begins with a security guard leading the way, while another person follows in the rear.

Inside the bowels of the building, a cavernous steel and concrete structure that is many football fields long by several football fields wide

unfolds and the cool air of the climate-controlled facility, in an effort to "Beat the Heat" (Gatorade again!) is immediately felt. Given the high level of security at these facilities, a combination of digital keys and biometric data, including fingerprints and retina scans, are used to control access. The tour guide explains the intricacies of the cooling setup, including hot and cold aisle containment and airflow management techniques to keep the servers at optimal operating temperatures.

The secured rooms are owned or leased by operators and house data from companies large and small within highly advanced servers. These servers are replaced frequently to keep up with changing technologies and energy efficiency. Upon approaching one of the racks of servers you can feel the heat being generated and hear and feel the electricity pulsing throughout the units. Most impressively, you view racks filled with servers as far as your eyes can see. The tour guide explains the specific server models and functions, highlighting aspects of their CPU, memory, energy use, and storage configurations. When security escorts a visitor from the room, the doors are meticulously closed and secured.

One of the more interesting parts of a data center is the electrical power storage and generation. Data centers cannot tolerate even momentary interruption in service, therefore, an army of locomotive-sized generators, flanked by UPS systems are used in the event of a power outage to support the critical load needed within the data center. At the conclusion of a data center tour, an extensive question and answer session is offered, with information that includes an overview of the data center's commitment to environmental sustainability, such as using renewable energy and green building design. Departing the secure facility leaves you marveling at the complexity and sophistication that goes into the development and operation of data centers from a technical and practical perspective.

#### **Conclusion**

The data center industry is a complex and rapidly evolving sector that is necessary to allow the technologies upon which we have come to rely in daily life to operate and innovate. Data centers offer a magnificent opportunity for localities to capitalize on a growing industry that provides exponential returns on investment. Business development in the community, taxes for local schools and programs, and opportunities for a well-compensated workforce highlight data centers as quality community partners. With intentional planning from community leaders and open dialogue with data center partners, localities can ensure they implement best practices for smart growth of an exciting industry within their borders.

If you would like additional information to better understand the various aspects of the dynamic growing industry, or to discuss Gatorade marketing campaigns of years past, we are available to assist you in exploring the regulatory framework, environmental implications, land use considerations, and economic impact of data centers.

**About the authors:** Leo P. Rogers is the Loudoun County attorney. From 1990 to 2014, he was the assistant, deputy, and County Attorney for James City County. From 1990 to 2006 he was an Adjunct Faculty member at William & Mary Law School.

Buddy Rizer is the executive director of Loudoun County Economic Development. Nicknamed the "Godfather of Data Center Alley," Mr. Rizer helped build Loudoun County into the largest concentration of data centers in the world. Mr. Rizer has been named a Tech Titan seven times by Washington Magazine, has been named one of the 50 most influential Virginians six times by Virginia Business Magazine, and was named three times to the Washington Business Journal's Power 100 in Washington D.C.







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#### TOWN OF MIDDLETOWN

By Town of Middletown staff

### Preservation triumphs in Middletown with commitment to honoring heritage

HE PRESERVATION OF 30 ACRES in Middletown stands as a testament to the unwavering dedication of the community to safeguarding its rich historical legacy. This significant achievement, celebrated by Mayor Charles Harbaugh IV and the Shenandoah Valley Battlefields Foundation, marks a pivotal milestone in the ongoing endeavor to honor and protect our nation's past.

Middletown, which lies in Frederick County, is the fastest growing county in the state of Virginia. The latest Census of Agriculture data from the United States Department of Agriculture, released Feb. 13, revealed that Frederick County had over 15,000 fewer acres of farmland in 2022 than it did in 2017 when there was a total of nearly 110,000 acres.

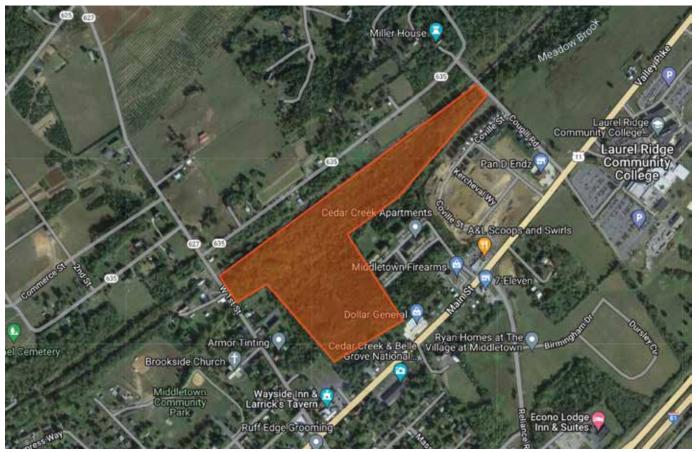
The 5-acre parcel of land, adjacent to the esteemed 25-acre, 2022 preserved tract in Middletown, serves as a crucial extension of the cherished Civil War battlefield. Mayor Harbaugh underscored the profound importance of this strategic conservation effort, emphasizing its role in preserving local history for future generations.

By safeguarding this land, not only do we protect tangible remnants of the past, but we also ensure that the stories and memories embedded within these hallowed grounds endure.

Integral to this preservation endeavor is the inclusion of the Historic Miller House, a poignant symbol of the region's rich heritage. The significance of this milestone cannot be overstated; it epitomizes the community's steadfast commitment to fostering a vibrant and resilient future rooted in an appreciation of its historical roots.

The property saw significant action during the October 19, 1864, Battle of Cedar Creek. During the Battle, Middletown experienced the tide of war as Confederates pushed Union troops from their camps through town in the morning and then fled the Union counterattack in the afternoon. Heavy fighting occurred just North of Wilkerson's Tavern (Wayside Inn) and scattered fighting occurred in the streets. Artillery and small arms fire damaged several buildings and properties in town. Vice Mayor Jeffrey H. Pennington, a longtime reenactor and supporter of the battlefield





Aerial view showing highlighted preserved portion.

observes, "Preserving parts of the battlefield internal to the town and creating a future usable greenspace is important in preserving the historic integrity of Middletown."

The significance of these preservation efforts extends beyond mere conservation; they serve as poignant reminders of the pivotal events that shaped our nation's history. Indeed, the Miller House, serving as the furthest advance of Jubal Early's Confederate army, serves as a tangible link to a crucial moment in time. Reflecting on this pivotal juncture, one cannot help but ponder the profound impact it may have had on the course of history, particularly in the context of President Lincoln's re-election.

Mayor Harbaugh extended his heartfelt appreciation to Vice Chairman Nic Picerno and Executive Director Keven Walker of the Shenandoah Valley Battlefields Foundation for their unwavering support and dedication to Middletown. Their collaborative efforts have been instrumental in realizing this transformative project, further solidifying Middletown's position as a guardian of its cultural heritage. With this combined 30-acre parcel, the 9 acres at the Middletown Town Park, and 1 acre tract at the Veterans Memorial, the town now has 40 acres of preserved land in town limits and close to 2,000 more just outside of town limits.

Looking ahead, the Shenandoah Valley Battlefields Foundation

eagerly anticipates continued partnership with the Town of Middletown in preserving, protecting, and interpreting the hallowed grounds of the Cedar Creek Battlefield. Mayor Harbaugh's steadfast advocacy for historical preservation aligns seamlessly with the foundation's mission to provide open-air classrooms where the public can connect with and honor the sacrifices made nearly 160 years ago.

As we commemorate these preservation achievements, we are reminded of the enduring importance of community collaboration and collective stewardship in safeguarding our shared heritage. Through continued partnership and dedication, we can ensure that the stories etched into the landscape of Cedar Creek Battlefield remain a source of inspiration for generations to come.





#### TREMCO ROOFING & BUILDING MAINTENANCE By S

**By Shelton Clough** 

### Protect your public buildings with the building envelope approach

EWTON'S THIRD LAW of motion says that for every action, there is an equal and opposite reaction. Think about this concept in terms of a building's envelope, which consists of six sides plus related components such as roofs, walls, windows, doors, foundations, and more. How these elements connect is crucial to controlling the flow of air, heat, and moisture. Left uncontrolled, air and moisture can wreak havoc on building structures and lead to higher energy costs as well as compromise the health, safety, and comfort of those who use the building.

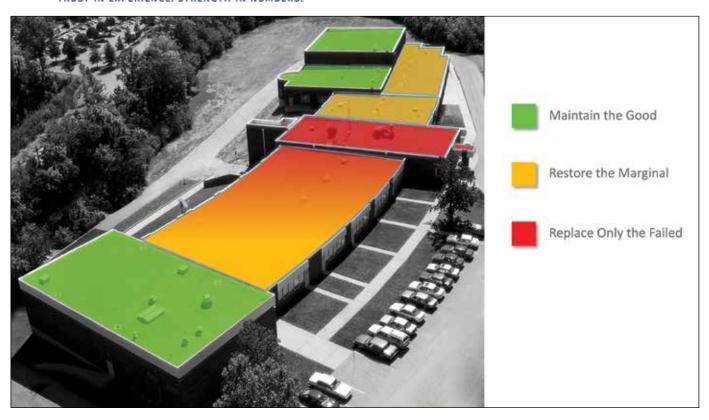
Defects in building envelopes can vary dramatically based on initial construction, building age, the environment, and previous maintenance. While a building may seem airtight, even tiny holes in parts of the building's envelope can go undetected and cause big problems. These openings, coupled with air pressure differentials, result in air leakage. Remember, "For every action, there is an equal and opposite reaction."



### How to stop air leaks and use less energy

According to the U.S. Department of Energy, more than 10% of all energy use in the country is attributed to the condition of building envelopes. Buildings that leak energy due to age or poor envelope construction can cost building owners up to 40% more in heating and 15% in cooling costs due to unintentional air filtration. Consequences of this unintended air leakage can include:

- Unnecessary heat loss in winter or heat gain in summer, resulting in excessive energy consumption.
- Improper operation of mechanical ventilation systems.
- Poor indoor temperature and humidity control.
- Condensation, moisture, mildew, and mold damage in hidden cavities.
- Deterioration of building materials at air leakage points.
- · Degraded indoor air quality.



You've likely heard these common complaints – certain rooms are too hot, others are too cold, or odors and noises from the outside permeate the halls. Or perhaps everyone seems to have dry, irritated throats. Controlling air movement can quickly solve odor, noise, and thermal comfort complaints.

A building assessment conducted by experienced auditors can get to the root of these issues. These auditors can inspect and test the building's air barrier system to identify any breaches or areas of air leakage. Professionals may use various methods, such as blower door tests, thermal imaging, and smoke tests to detect air leaks and assess the overall effectiveness of the building's air barrier.

After the gaps, cracks, and holes in the building's envelope have been identified, measures can be taken to stop air leaks with minimal cost and disruption to occupants.

### The advantages of proactive asset management

Equally important to a building's air barrier is its roof. All too often, surprise roof leaks are the first sign of a problem. Typically, when the cause is discovered, undetected issues have already caused significant damage. Letting roofs "run to failure" is costly and disruptive and can be avoided by taking a proactive asset management approach.

The first step in the asset management methodology is to partner with a roofing expert to triage the condition of all roof areas and then categorize them as Green (Maintain), Amber (Restore), and Red (Replace). This gives you the information you need to build a structured, proactive long-term (10-20+) year plan. This same approach can be used for all aspects of your building envelope – not just the roofing.

Being truly proactive means having a plan in place to monitor your roofs and building envelopes on a consistent basis through visual inspections, diagnostics as needed, and ongoing maintenance. Taking care of your facilities' roofs and building envelopes doesn't have to equate to a large capital project. In fact, it can help put off those large projects. Furthermore, an ongoing asset management program can help establish predictable budgets and significantly extend the life of your roofing assets. Here's how:

- Proactive Maintenance: Performing regularly scheduled inspections and maintenance can help identify potential issues and avoid surprises. Addressing developing issues before they result in significant damage helps you avoid costly repairs or replacements.
- Cost Savings: Proper inspections and maintenance that enable you to eventually restore (rather than replace) your roof can, over time, significantly lower your dollars per square foot per year. If, for example, you have 20 buildings totaling one million square feet of roofing and 40% of that inventory is restorable, that equals 400,000 square feet. At an approximate savings of \$15 per square foot with restoration over replacements, you're looking at a savings of \$6 million!
- Risk Mitigation: The health, safety, and comfort of the occupants of any building are important, especially for public buildings. The asset management approach helps reduce the risk of leaks, structural damage, and related safety hazards, such as degraded indoor air quality from mold caused by leaks.
- Energy Efficiency and Indoor Air Quality: Properly
  maintained roofs and building envelopes can aid energy conservation. Proper insulation and air sealing can reduce heating
  and cooling costs and improve indoor air quality.

- Compliance and Warranty Requirements: Do your roofing systems come with warranties that require regular inspections and maintenance? An established program will meet these requirements and protect warranty coverage.
- Record Keeping: These programs often include comprehensive record-keeping, which can be invaluable for tracking maintenance history, budgets, and planning for future projects.
- Sustainability: Your roof and building envelope management program can help you meet sustainability goals by extending roof and building envelope life, avoiding landfill waste from premature roof replacements, and improving energy efficiency.

#### Let's get started!

If you don't already have a clear picture of the condition of your roofs and building envelopes, you're not alone! Partner with an industry expert like Tremco Roofing & Building Maintenance to conduct a thorough assessment. The "building envelope approach" can help you avoid emergency repairs, establish predictable budgets, and improve building performance to ultimately reduce facility lifecycle costs.

**About the author:** Shelton Clough, P.E. is a senior field advisor with Tremco Roofing & Building Maintenance. With more than 30 years of experience in roofing and waterproofing, Shelton oversees Tremco's Virginia team, which brings comprehensive and deep expertise to providing customized, professional solutions for all aspects of roofing and building envelope waterproofing. You can reach Shelton at (757) 617-7663 or sclough@tremcoinc.com.





DOMINION ENERGY By Jerri Northedge, Leslie Downey, Machesha Hasty, and Susan Rivera

#### Dominion Energy's LED conversion program

LIGHT EMITTING DIODE (LED) lighting is one of today's most energy efficient and rapidly developing technologies. Dominion Energy offers outdoor LED styles perfect for our residential, commercial, and municipal customers. Dominion's LED conversion program started in 2018 and subsequently all failed outdoor fixtures began being replaced with LED equivalent fixtures. As of March 2024, Dominion Energy had converted over 133,000 fixtures.

#### Why convert to LED?

There are many advantages of LED lights. Some of those advantages are:

- · Industry standard for outdoor lighting
- · Energy-efficient lighting with attractive monthly rates
- · Long lifespan and damageresistant fixtures
- · Mercury- free technology
- · Lower maintenance requirements

#### Cost and rates

Solid State Outdoor Lighting (SSL) rates were established for VE-PGA (Virginia Energy Purchasing Governmental Association) as well as a very attractive flat rate conversion fee per light for customers to proactively convert their existing High-Intensity Discharge (HID) inventory to LED. The conversion fee depends on the existing fixture to be converted. There is a flat rate conversion fee for basic fixtures as well as premium fixtures. Dominion subsidizes most of this cost and the customer essentially pays for the average cost of the remaining assets value and does not pay for the new LED fixture or labor to convert.

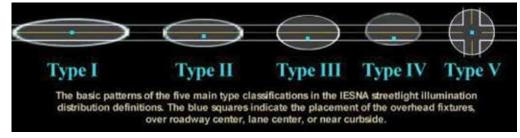
Monthly rates for HID fixtures are based on the wattage and reference approximate lumen values, whereas monthly rates for LED streetlights are based on billing kWh tiers; the rate schedule does not reference lumen values. Monthly rates for LED can provide cost savings for customers compared to the equivalent HID monthly rates.

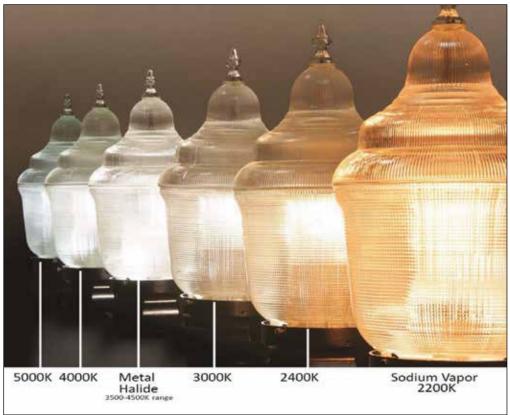
#### How to request

A dedicated team of designers was formed to handle the mass conversion VEPGA projects along with a centralized mailbox where information can be submitted directly to the LED Conversion Team.

When a municipality is ready to initiate a new LED Conversion work request, they will need to do the following:

· Initiate a new DJLED work request. This may be done online using e-builder or by calling the Key Account Customer Call Center #1-866-591-0157. When speaking with the Call Center representative, please indicate that this is an LED Conversion Project.





Visual representation of LED color temperatures. Dominion offers most fixtures in 3000K and 4000K.

- If you initiate your work request online, please make sure to enter the Customer Name (your Jurisdiction) in the WR Name field.
- Each work request initiated should be limited to a maximum of 50 lights. This will allow for better tracking of projects and associated material orders.
- Send an email to the LEDconversion@dominionenergy.com mailbox; reference the WR# on the Subject line and attach the following documents required to design the LED Conversion projects: A map with streetlight locations, complete with pole numbers, highlighted and a Letter of Request specifying the Jurisdiction's LED fixture choice referencing its Stock # or LED CU code.
- Please avoid partial submittals by providing all the information listed above in the email you send to the centralized mailbox.

#### **Available options**

An extensive portfolio of LED fixtures is available in a variety of basic and premium styles. Customers can choose from various lighting patterns and two different color temperatures, depending on the fixture style they select. There are great resources on our Outdoor Lighting Website. Our current LED fixture offerings, spec sheets, IES files and iso plots can be found on our website at www.dominionenergy.com/virginia/products.

**About the authors:** The following Dominion Energy staff contributed to this article:

- Jerri Northedge, Outdoor Lighting Manager
- Leslie Downey, Outdoor Lighting Program Manager
- Machesha Hasty, Electric Distribution Program Manager
- Susan Rivera, Outdoor Lighting Program Manager

#### **Smart City Pilot Program**

DOMINION ENERGY has partnered with several Virginia cities to pilot innovative smart city technologies. These partnerships aim to enhance urban living, improve sustainability, and empower local communities. A few of the pilot locations include the City of Falls Church and the City of Richmond.

#### Next generation streetlight poles

In partnership with The Virginia Tech Transportation Institute (VTTI), Dominion Energy will install a network of cutting-edge sensors on streetlights that are owned and operated by Dominion Energy. These sensors monitor critical urban parameters such as air quality, video surveillance, noise levels, vehicle speeds, and traffic flow. By collecting real-time data, these sensors enable informed decision-making and enhance overall safety and quality of life.

#### **Adaptive Smart Bus Stops**

Dominion is also working with the City of Richmond to introduce the Adaptive Smart Bus Stop. This innovative bus stop

concept promises to transform the waiting experience for commuters. Key features include:

**Adaptive Lighting:** The bus stop adjusts its illumination based on ambient light conditions, ensuring visibility and safety for passengers.

**Integrated Speaker System:** Real-time announcements keep travelers informed about bus arrivals, delays, and other essential information.

**Pedestrian Counting:** Smart sensors track foot traffic, optimizing bus stop design and resource allocation.

**Wi-Fi Connectivity:** Commuters can stay connected while waiting, accessing essential services and information.

**Air Quality Monitoring:** The bus stop continuously assesses air quality, promoting healthier urban environments.

Dominion Energy views these pilot projects as invaluable learning opportunities. By analyzing data from these smart city initiatives, the company aims to empower governmental stakeholders with actionable insights. Informed decisions can lead to more efficient resource allocation, enhanced public services, and a sustainable future for all.



#### CALL FOR ENTRIES

### 2024 VML Innovation Awards

THE PEOPLE WHO MAKE local governments work do so much for their residents with little or no expectation of recognition. That's why 48 years ago, the Virginia Municipal League launched our "Achievement Awards" to recognize outstanding work being done by local governments across Virginia. The program went on to become Virginia's highest honor in local government creativity. In 2017 the name was changed to "Innovation Awards", but the purpose remains the same: To celebrate all that you do to make your city, town, or county a great place to live!

It's time again for our members are to spotlight programs and individuals that have made a big difference to your residents by creating innovative solutions to address emerging needs.

The awards will be presented at VML's Annual Conference in Virginia Beach in October.

#### Criteria

Projects and programs are judged on how well they demonstrate the following:

- · Innovative problem solving
- · Improved quality of life
- Excellence in management
- Making the most of local resources
- Increased citizen participation
- · Long-term value to the community
- Adaptability to other communities

Award-winning projects typically demonstrate innovative ways of delivering services, addressing community needs, or significantly improving an existing service.

#### 2024 CATEGORIES

AWARD CATEGORIES are based on broad topics with local governments of all sizes competing within these categories. The entries will be judged based on the scope and effect of the project in relationship to the community's size, thereby putting all localities on a level playing field.

Many projects relate to more than one category. When deciding what category best fits your project, consider the primary goal of the project and which components of the project demonstrate the greatest innovation.

Localities may submit only one entry in each of the seven following categories (i.e., a maximum of seven submissions total per locality):

#### **Community Health**

Includes building healthy community environments through active lifestyle programs, nutrition education and improving access to healthier food choices.

#### **Economic Development**

Includes business development and retention; international competitiveness; infrastructure development and investment; planning, land use and zoning; blight; enterprise zones; housing; transportation; workforce development; and historic preservation.

#### **Environmental Quality**

Includes natural resources and the authority of local governments to manage the environment, including water resources and quality, solid and hazardous waste management, air quality and the Chesapeake Bay.

#### **Public Safety**

Includes police, fire, rescue services, emergency planning and coordinated response, building code enforcement, jails, health, and mental health related to public safety.

#### Working with Youth

Includes civics education, pre-k-12 education, summer programs, parks and recreation, and literacy programs.

#### **Communications**

Includes promotional campaigns, branding campaigns, crisis plans, events, customer service programs; media can include online, video, print, social and other formats.

#### **Risk Management**

Includes a proactive process of identifying, assessing and mitigating a locality's risks. This includes but is not limited to fiscal and physical assets, information technology and data, governance and management.

#### President's Award for Innovation

One winning project from the category winners will be selected for the top prize – the President's Award for Innovation – and will receive this top honor in addition to the award in their category. The President's award can come from any of the categories.

#### Deadline

All entries must be received via e-mail by 5 p.m., Monday, Aug. 26, 2024.

#### **Rules for entering**

The competition is open to all VML local government members.

All entries must be submitted electronically via email. Localities must download the entry form at **www.vml.org/Opportunities/Innovation-Awards** and fill in all of the requested information directly on the form. The completed form must then be e-mailed to **mtimbreza@vml.org**.

Entries must cover **new projects** or programs completed between Jan. I, 2023 and June I, 2024, or – for **existing projects** – entries must cover major enhancements during the same time period.

Each entry form must be fully completed and must be signed by the local government's chief administrative or elected official.

A local government can only submit one entry in each of the seven categories. The President's Award for Innovation is not a separate category.

Supporting materials totaling no more than 10 pages, including photos, brochures, charts, or other information, can be included in a separate document. This document must also be e-mailed as an attachement.

A **video is also required** as part of your supporting materials, include the URL (or web address link) to that video (i.e., YouTube, Vimeo, etc.). Maximum length of video is five minutes.

#### **Questions?**

For more information about completing your entry or other details, contact VML's Manuel Timbreza at **mtimbreza@vml.org** or call 804-649-8471.

#### The judging

Entries are screened by VML staff and judged by a panel of judges chosen for their expertise in local and state government. The judges generally represent a variety of backgrounds, including small and large localities and state agencies.

#### The winners

Awards will be presented at the 2024 VML Annual Conference Awards Banquet in Virginia Beach, Oct. 13. All winning entries will also be featured in *Virginia Town & City.* 

Don't miss this premiere opportunity to spotlight innovative programs that make your town, city or county a great place for people to call home!



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Scan For More Information

#### Join VML

Set your organization apart in the local government marketplace of product, services, and ideas by joining the VML Community Business Membership (CBM) program. For more information contact Rob Bullington at rbullington@vml.org or check under the "Corporate Engagement" tab at www.vml.org.





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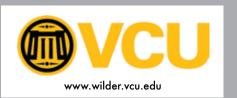


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#### About the VML Community Business Membership (CBM) Program

As a CBM organization you hold a sustaining membership in VML and keep your firm or organization connected with the issues that are important to municipalities around you. Being a CBM places your organization at the forefront in the minds of VML members, ensuring you the visibility, access, and awareness that will help move your organization forward.

Please note that each level of membership includes both year-round benefits as well as benefits specific to VML's Annual

Conference held in the fall.



# You've got vision. We've got resources. Let's solve this.

Virginia Housing offers a variety of grant and loan programs to help local governments, nonprofits and developers revitalize neighborhoods and solve workforce housing needs.

To learn more about partnering with us, contact us at Resources@VirginiaHousing.com.



