

Sustainable Materials and Technologies

MARYLAND GREEN BUILDING COUNCIL ANNUAL REPORT 2020

Preservation

Smart Growth

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The Maryland Green Building Council provides current and thoroughly researched information and advice on state green building issues to the Maryland Governor and General Assembly. This is its annual report.

he University of Maryland's Brendan Iribe Center for Computer Science and Engineering Complies with International Green Construction Code (IgCC) 215,600 SF GSF



Message from the Secretary

The Maryland Green Building Council and Department of General Services are pleased to submit this 2020 Annual Report to the Governor, General Assembly and citizens of Maryland. The report represents collective efforts and hard work of multiple Maryland agency participants and representatives of environmental, business and citizen interests who serve on the Maryland Green Building Council.

The council promotes creation of State of Maryland buildings and technologies that increase efficiency in use of energy, the sites on which they are placed, conservation of natural resources and in construction and operation.

The Maryland Green Building Council evaluates high performance building technologies and provides recommendations on those that are most cost-effective for use in design and construction of state facilities. The council provides recommendations on evaluation criteria for state facilities and means of expanding green building in the state.

These efforts align with efforts of other State of Maryland agencies to conserve the state's financial, natural and human resources.

In 2020, the Maryland Green Building Council made progress in *Changing Maryland for the Better* by positively influencing the

creation of hundreds of thousands of square feet of new, energy-efficient facilities used for research, kindergarten through high school and higher education, and state offices.

Through the council's efforts, buildings constructed by the state, directly contribute to the health of the state's citizens, and create positive impacts on the state's economy and the environment.

Sincerely,

Ellington E. Churchill, A

Ellington E. Churchill, Jr., Secretary Maryland Department of General Services

Message from the Chair

After serving as an appointed member on the council for 4 years, I was delighted to assume the Chairmanship of the Maryland Green Building Council in 2020. My goals for the council are threefold: 1) to serve as a resource for the Governor and Maryland Department of General Services 2) to provide a forum for state agencies to consider the value and impact of Green Building for their new and existing facilities and 3) to spark dialogue that moves us all closer to a more efficient, sustainable, and greener Maryland.

LOOKING AHEAD

Upon assuming Chairmanship for the Maryland Green Building Council, I took an in-depth assessment of what we could accomplish. As we are in the midst of an unparalleled election year, a raging pandemic, social unrest, and progressing climate change, looking forward is crucial.

Climate change continues to loom as the existential crisis affecting us all. While we have to be aware of all these other looming issues and think globally, we have to act locally within our sphere of influence.

The council needs to focus on three key areas- being informative, being resourceful, and being insightful. Informative of what is

happening on a macro and micro level. Resourceful to State agencies on how to effectively implement green building. And insightful of the impact we can actually achieve. The Maryland Green Building Council must be a body that challenges the norms for Green Building and encourages efficiency, sustainability, and resiliency for the large contingent of existing buildings within the State's portfolio. I look forward to looking ahead.



Sincerely,

Cherise Seals, Chair. Maryland Green Building Council

Summary

HOW GREEN BUILDING FITS WITH MARYLAND

The State of Maryland has long sought to protect and conserve our state's resources. This mission has been a focus of nearly every agency in the state. With the Maryland Department of General Services Green Building Council's efforts to promote the delivery of efficiently built and operated facilities, the department performs its role in advancing the state-wide conservation mission. The efforts dovetail with other state agency programs such as the Maryland Department of Agriculture's conservation practices and programs to balance crop and livestock production with protection of natural resources, the Department of Planning's Water and Sewerage Plan Facilities to assure adequate water and sewerage facilities will be provided to support planned redevelopment and growth as outlined in the Comprehensive Land Use Plan, the numerous programs of the Maryland Department of Natural Resources to conserve and enhance open space and Maryland Department of the Environment's efforts to clean and protect the state's surface waters, air and indoor environments.

The Maryland Green Building Council (Council)was established in 2007 with *House Bill 942 – Section 4-809* of the State Finance and Procurement Article. The Council is within the Maryland Department of General Services (DGS). Its membership consists of private-sector representatives appointed by the Governor, representatives from key state agencies and staff support from DGS. The Council meets monthly and reports to the Governor and General Assembly annually.

Maryland *State Finance and Procurement Article Code Ann. § 3-602.1* (2014) requires that the State employ green building technologies when constructing or renovating State-owned buildings that meet specific criteria. To promote the technologies, the council established the *High-Performance Green Building Program*. The *High Performance Green Building Program* applies to all State of Maryland agencies and local educational agencies (LEAs) that program, design and build facilities.

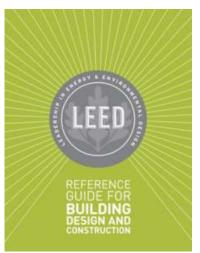
The *High Performance Green Building Program* also pertains to capital projects funded solely with State of Maryland funds, state-funded new and replacement school construction and community college capital projects receiving state funds.

The *High Performance Green Building Program* requires the use of one of three green building certification or rating programs in the design, construction and operation of facilities: LEAs must follow the Program but are exempt from certification requirements.

- 1. Leadership in Energy and Environmental Design (LEED), a program of the U.S. Green Building Council
- 2. *International Green Construction Code* (IgCC), one of the many codes of the International Code Council
- 3. The Green Globes protocol of the Green Building Initiative.



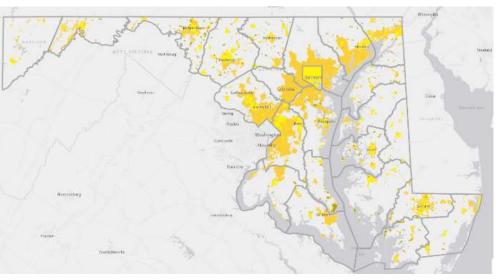




MARYLAND GREEN BUILDING COUNCIL GOALS

Council goals include the promotion and creation of energy efficient buildings throughout the State of Maryland. For state facilities, this includes achieving compliance with the *High Performance Green Building Program*, promoting new green building technologies and developing criteria for highperformance buildings. At the beginning of 2018, the council set out the following goals:

- 1. Existing Building Education
 - a. Upgrade existing buildings for energy conservation
 - b. Focus on how to improve performance of existing buildings
 - c. Develop recommendations to improve efficiency of state leased facilities
- 2. Conduct Outreach
 - a. Correlate Maryland Green Building Council initiatives with the governor's agenda.
 - b. Engage with other, related state agencies
 - c. Perform outreach at conferences and conduct seminars



Maryland Priority Funding Areas Maryland Department of Planning https://mdpgis.mdp.state.md.us/PFA/publicinfotemplate/index.

- d. Assess effectiveness of the council through surveys and year over year High Performance Green Building Program use
- 3. Energy Efficiency Education
 - a. Develop recommendations to measure energy and water use in existing buildings in order to guide upgrades and future facilities.
 - b. Highlight demonstration projects
 - c. Assist in the establishment of state energy reduction goals
- 4. Financial Incentives
 - a. Promote use of green building standards for private sector
 - b. Recommend financial incentives for renovation of existing facilities

HIGHLIGHTS

Through the past year, we have worked to amplify our efforts and strengthen the relationships between the Green Building Council and other state agency committees engaged in complimentary efforts.

We participated in discussions with another M-DGS committee, the Maryland Green Purchasing Committee, to establish procurement requirements and standards for more energy efficient building systems.

Council members participated in the Maryland Department of the Environment's Commission on Climate Change report 'Decarbonizing Buildings in Maryland'. The report recommends policy goals of achieving carbon neutral facilities in Maryland and outlines a path for achieving them.

OUTREACH

Outreach and education are integral to the Maryland Green Building Council's mission. The council's Outreach Committee is tasked with boosting demand for green building principles among facility designers, builders, owners, investors, and managers. The stakeholders' awareness and acceptance of green building features begins with an understanding of how the features may benefit the projects. The Outreach Committee works to communicate these features' impacts on facility comfort, productivity, return on investment, and containment of operating expense and risk.

This year's efforts included the ongoing delivery of a presentation on the role of the council and application of green building programs and technologies in state funded facilities projects. The presentation was first delivered in June of 2019 at the Maryland Community College Facilities Planners Council at their Garrett Community College meeting and repeated again this year. A revised version describing how government policy initiatives promoting energy efficiency directly affect new facility design, was delivered to college students.

ENERGY EFFICIENCY, EDUCATION AND EXISTING BUILDINGS

The Energy Efficiency and Existing Buildings Committee works with the Department of General Services to encourage State agencies to provide information on building use, square footage and energy consumption so that an inventory could be compiled of State buildings. While green building in new construction is important, the majority of the state's buildings are existing. Understanding the full complement of existing buildings can help state agencies prioritize green building upgrades in order to direct scarce and competing resources.



John Shaw House, Annapolis National Register of Historic Places and one of the State of Maryland's oldest facility assets – view from the State House dome.

Legislative Review

Each year, bills with potential impacts to building energy efficiency or sustainability are brought forth in Maryland General Assembly. The DGS Legislative Liaison assists the Maryland Green Building Council in tracking proposed legislation and provides input on them in the form of resolutions to the Secretary of the Department of General Services and Governor, testimony at hearings or through informal correspondence. During the 2020 session, the council reviewed several bills and provided informal recommendations.

With its requirements for the Green Building Council, the *21st Century Schools Facilities Act* (Senate Bill 1243 and House Bill 1783) passed in 2018, remained the focus of the council's efforts in 2019. In 2020, the changes took effect.

The Act requires that the "Maryland Green Building Council develop guidelines for achieving the equivalent of LEED Silver standards without requiring LEED certification of new school buildings, including some independent certification that school systems have achieved the required standards."

As stipulated in the Act, the council developed the required high-performance green building guidelines for the Maryland Local Education Agencies. Guidelines were delivered to the Department of General Services for approval in October 2019. The standards went into effect in 2020.



| 2020 Maryland Legislative Activities Related to the Maryland Green Building Council | | | | |
|---|--|--|--|---|
| Bill | Name | Sponsor | Status | Maryland Green Building Council Response |
| Senate Bill 7 | Green Building Council, Membership | Chair, Budget & Taxation Committee (By Request, DGS) | Enacted under Article II, Section 17(c) of the Maryland Constitution, Chapter 494 | Alters the membership of the Maryland Green Building Council by removing the Secretary of Housing and Community Development as a member and substituting the Secretary of Labor as a member. |
| House Bill 192 Senate Bill 299 | DGS, Energy-conserving Standards, Maryland Sustainable Buildings Act of 2020 | Delegate Hill Senator Lam | House Bill passed, no Senate action | Requiring DGS to establish standards for state buildings to conserve energy & minimize impacts to birds that are consistent with the GBC LEED Pilot Credit & the American Bird Conservancy Bird-friendly design recommendations, update the standards every 5 years, appropriately shield and minimize from midnight to dawn each day interior & exterior lighting, etc. |
| House Bill 790 | Income Tax, Green Buildings Tax Credit, Multifamily Housing | Delegate Wilkins | Hearing in House committee, no further action | Allowing a credit against State income tax for certain costs, paid or incurred by an owner of multifamily housing to meet certain energy and water efficiency standards; requiring the Maryland Energy Administration to issue a tax credit certificate; prohibiting the Administration from issuing tax credit certificates totaling more than \$1,000,000. |
| Senate Bill 655 House Bill 1636 | Capital Projects, High Performance & Green Buildings, Alterations (Green Building Restoration Act) | Senator Hettlemen Delegate Forbes | Passed Senate, no further action | Altering the application of certain high performance building requirement to apply to capital projects for which more than 50% of the funding is for the acquisition, construction, or renovation of the project; repealing a requirement that the Maryland Green Building Council develop guidelines for new public school buildings to achieve LEED Silver or comparable rating; requiring the Maryland Green Building Council to ensure that certain State buildings, schools and community colleges meet certain standards. |
| Senate Bill 592 House Bill 1370 | State Funded Construction & Major Renovation Projects, Solar Panels, Requirement | Senator West Delegate Forbes | Hearings in Senate & House committees, no further action | Bill requires State projects to include structures that would hold solar panels in the futures, resulting in a .06% cost increase. The Green Building Council must recommend design considerations consistent with the bill's intent. |
| House Bill 1490 | Environment, Building Energy Performance Standards & Green House Gas Emissions Reduction Target | Delegate Stewart | Hearing in House committee, no further action | Bill would require non-state buildings (state buildings are excluded) to report and reduce greenhouse gas emissions. It would also update the state building codes; DGS would update our manual to reflect the changes. |

Building Green in Maryland

PROJECTS REQUIRED TO COMPLY WITH THE HIGH-PERFORMANCE BUILDING ACT

These are projects that receive all their funding from the State of Maryland and therefore must meet the minimum requirements defined in the Maryland High Performance Green Building Program; of either USGBCs LEED Silver, 2 Green Globes or compliance with the *International Green Construction Code*.

Notable projects for which design or construction have been initiated or completed during the past year are included here. These facilities join a long, cumulative list back to the inception of the program in 2007.

| Annapolis Post Office LEED Silver (Minimum) | 22,000 GSF \$13,500,00 | Anticipated complete by late 2020 |
|---|---------------------------|---|
|---|---------------------------|---|

The facility located on Church Circle in Annapolis, was purchased by the state from the U.S. Postal Service. It is receiving a comprehensive renovation and will be used for State of Maryland offices.

| St. Mary's College Academic Building and Auditorium | LEED Silver | 52,300 GSF | Construction underway anticipated completion |
|---|----------------|--------------|---|
| | (Minimum) | \$66,000,000 | 2022 |

Facility for the College's Music department, Educational Studies department, a learning commons study space, and a 700-seat auditorium.





Annapolis Post Office Renovation Adaptive Use LEED Silver Ziger Snead Architects (above)

St. Mary's College Academic Building and Auditorium LEED Silver GWWO Architects with Graham Gund and Holder Construction

GREEN BUILDINGS INDEPENDENT OF THE HIGH-PERFORMANCE BUILDING ACT

Although not required to do so, these facilities meet the minimum requirements defined in the Maryland High Performance Green Building Program of achieving either USGBCs LEED Silver, 2 Green Globes or compliance with the *International Green Construction Code*. Although most, but not all funding for these facilities may be from State of Maryland sources, they are exempt from the program requirements.

Notable projects that have either been initiated or completed during the past year are included here.

| University of Maryland Baltimore | IaCC | 20,000 GSF | Construction |
|-------------------------------------|------|--------------|--------------|
| Community Engagement Center | IgCC | \$ 9,000,000 | Complete |

The renovated 1917 building located within the university's bio science research park in Baltimore, contains a large event space, a dance and movement studio, private clinical rooms, and computer lab. The project preserves elements of the original architecture, in an open atmosphere. It is among the first state-Ofunded facilities to be constructed using the International Green Construction Code (IgCC) to achieve its sustainability goals.

| BaltimoreInfinition120,000 GSFSchool of Pharmacy &Silver (Minimum)\$ 78,400,000Allied HealthSilver (Minimum)\$ 78,400,000 | School of Pharmacy & | r \$ 78,400,000 |
|---|----------------------|-----------------|
|---|----------------------|-----------------|

The building will house the School of Pharmacy's Doctor of Pharmacy and Doctor of Pharmaceutical Sciences programs.





University of Maryland Baltimore Community Engagement Center IgCC Riparius Construction The University of Maryland has one of the most active facility programs among all state agencies and each is designed and constructed to meet sustainable program requirements.

FACILITIES COMPLETED IN 2020:

- Following HPGBP University at Shady Grove Biomedical Science and Engineering Educational Facility LEED Platinum Certified June 2020
- Independent of HPGBP University of Maryland Brendan Iribe Center for Computer Science and Engineering - constructed to MDGBC amended version of 2012 IgCC
- New projects under HPGBP:
- University of Maryland Center for Environmental Science Chesapeake Collaborative Building
- University of Maryland MFRI Western Maryland Training Center

FACILITIES IN PROGRESS UNDER HPGBP:

- University of Maryland Southern Maryland Building #3 (LEED Silver expected)
- Frostburg State University Education & Health Sciences Center (LEED Silver expected)
- University of Maryland Eastern Shore School of Pharmacy and Health Professions (LEED Silver expected)
- University of Maryland CMREC Headquarters (IgCC path)
- University of Maryland Chemistry Wing 1 Replacement (LEED Silver expected)
- Bowie State University New Communication Arts & Humanities Building (LEED Silver expected)

FACILITIES TO BE CERTIFIED INDEPENDENT OF HPGBP:

- University of Maryland New Cole Fieldhouse (LEED Silver expected)
- University of Maryland School of Public Policy (LEED Silver expected)
- University of Maryland New Dining Hall (LEED Silver expected)
- University of Maryland New Residence Hall (LEED Silver expected)



University at Shady Grove Biomedical Science and Engineering Educational Facility - LEED Platinum Certified June 2020



Baltimore City's First Net Zero Schools Graceland Park/O'Donnell Heights & Holabird Elementary/Middle School Grimm and Parker Architecture, Inc.

"Utilizing the sites as teaching tools, the schools will be equipped with student gardens, outdoor classrooms, rooftop solar labs, and vegetative roofs that further push innovation while intertwining sustainable concepts in education – staying true to their mission to nurture, engage, and empower the whole child for life-long excellence." G+P

MARYLAND GREEN SCHOOL BUILDINGS

Collectively, the Maryland public schools program implements the greatest number of high-performance facilities in the state. In 2019, notable projects initiated or completed in the state will seek or have achieved LEED Silver and Gold certifications. A few will achieve net zero status. A net zeroenergy building is a building with zero net energy consumption. This means the total amount of energy used by the building on an annual basis is roughly equal to the amount of renewable energy created within the facility and on the site. Efficiencies are being achieved through implementation of efficient plumbing systems, smart monitoring and controls, photovoltaic solar bioretention on site.

In some circumstances, the systems used to conserve resources are made visible for incorporation into educational programs at the schools.

GREEN SCHOOLS STARTED OR COMPLETED IN 2020

| PROJECT | RATING | LOCATION |
|--|---------------------------------|---------------------|
| Arnold Elementary School | Silver | Anne Arundel County |
| Baltimore City has started or completed 24 new facilities and major additions for high schools, elementary and middle schools. | Silver, Gold and Platinum | Baltimore City |
| Baltimore County has started or completed 16 new facilities and major additions for high schools, elementary and middle schools. | Silver and Gold | Baltimore County |
| Northern High School | Silver | Calvert County |
| Beach Elementary School | Silver | Calvert County |
| Career and Technology Center | Silver | Carroll County |
| Greensboro Elementary School | Silver | Caroline County |
| Gilpin Manor | Silver | Cecil County |

| New Chesapeake City Elementary School | Silver | Cecil County |
|---|-------------------------------|---------------------------|
| Charles County has started or completed 4 new facilities and major additions for high schools, elementary and middle schools. | Silver | Charles County |
| North Dorchester High School | Silver | Dorchester County |
| Frederick County has started or completed 6 new facilities and major additions for high schools, elementary and middle schools. | Silver | Frederick County |
| Youth Benefit ES | Silver | Harford County |
| Havre de Grace MS/HS | Silver | Harford County |
| Joppatown Elementary School | Silver | Harford County |
| Howard County has started or completed 5 new facilities and major additions for high schools, elementary and middle schools. | Silver (4) Platinum (1) | Howard County |
| Montgomery County has started or completed 13 new facilities and major additions for high schools, elementary and middle schools. | Silver | Montgomery County |
| Prince George's County has started or completed 6 new facilities and major additions for high schools, elementary and middle schools. | Silver | Prince George's County |
| J. M. Tawes Center | Silver | Somerset County |
| Easton ES | Silver | Talbot County |
| Urban Educational Campus - BOE component | * | Washington County |
| Sharpsburg ES | Silver | Washington County |
| West Salisbury Elementary | Silver | Wicomico County |
| Beaver Run ES | Silver | Wicomico County |





Graceland Park Elementary/Middle School Baltimore City's First Net Zero, LEED Platinum School PV Solar, Geothermal, Green Roof Grimm and Parker Architects CAM Construction (Construction Completed September 2020)

Maryland Green Building Council Membership

The council includes members with an exceptional array of talents and technical knowledge necessary to advance the state's mission of promoting efficient and responsible facility development and operation. The members are passionate about conservation of our state's and global resources and translate that passion to actions that advantage the state. Composition of the council membership is mandated by statute. It consists of the secretary of select State of Maryland agencies or their designee. Agencies represented include;

General Services, Budget and Management, Department of the Environment, Housing and Community Development, Natural Resources, Planning, Transportation, Maryland Energy Administration, Interagency Committee on Public School Construction, Chancellor of the University System of Maryland,

Six additional members of the council are appointed by the Governor to represent environmental, business, and citizen interests, one of whom has expertise in energy conservation or green building design standards. Terms of the governor-appointed members are two years and are staggered, with half of the terms up for renewal every other year.

In addition to council members, several individuals regularly attend meetings and provide essential, meaningful contributions.

2020 brought a few changes in membership to the council.

Ms. Nakita Reed has concluded her term as chair of the Council. The Maryland Department of General Services and the Governor have expressed their appreciation and thank her for her service.

Ms. Cherise Seals has been appointed chair and will have conducted three meetings by year's end.

Two vacancies have been filled by gubernatorial appointment: Mr. Marty Fischer and Mr. Scott Cameron.

Interagency Committee on Public School Construction replaced Mr. David Freese with Alex Donahue.

The Department of Natural Resources replaces Donald VanHassent with Ms. Britt Slattery.

The council welcomes all its new members and thanks those who have moved on for their contributions.

Gubernatorial Appointees



Cherise Y. Seals, Chair Maryland Green Building Council

Senior Business Development Manager

NORESCO

After serving as a member on the council for 4 years, Cherise Seals, a 25-year energy industry professional, assumed the Chairmanship for the MD Green Building Council in 2020. As Chair, my goal is threefold: 1) to serve as a resource for the Governor and MD Department of General Services 2) to provide a forum for State agencies to consider the value and impact of Green Building for their new and existing facilities and 3) to spark dialogue that moves us all closer to a more efficient, sustainable, and greener Maryland.

Cherise holds a BS in Electrical Engineering with Mathematics Minor from Virginia Tech, an MBA from Loyola University and has a Certified Energy Manager designation. A wife and mother of two, Cherise is a youth advisor and avid singer, plays tennis, writes plays, and serves as a mentor.



Michael Daly, Managing Principal

Architectural Support Group

As an architecture, engineering, and construction consultant Michael helps build better buildings. Buildings that are built using healthful materials that can be reused and remanufactured, that are designed to produce more energy than consumed, that have green roofs that create habitat, produce food and restore landscapes, that reclaim and filter storm water, integrate natural light and ventilation, and provide for a safe and comfortable environment. We've been doing this for over thirty years and are committed to a program and process that fosters creativity that is integrative and collaborative in nature, and that effectively engages all stakeholders in a process that is designed to produce the best possible outcome.



Marty Fischer

Preservation + Protection Systems, Inc.

Marty founded PPSI, an architectural rep agency, in 1985 and has spent the past 35 years working with the architectural design community promoting high performance building envelops. PPSI represents a full package of building envelop materials, including air barriers insulation strategies, Thermally broken sub-framing systems and rainscreen cladding systems, which have gained popularity the past 5 years on new construction. PPSI started promoting Air Barriers over 25 years ago, well before code adoption in IBC 2012. Air Barriers, Mass Wall Retrofit, Thermal Barriers and Cladding design all play a significant roll in high performance buildings. Our knowledge of integrated assemblies and sustainable product selection has aided many quality projects.

Gubernatorial Appointees



Ryan Schwabenbauer, MBA, LEED AP, Director of Sustainability

Saint John Properties

Ryan leads St. John Properties mission to implement sustainable business initiatives that positively impact 40+ ongoing new construction projects and 20 million square feet of existing commercial real estate under management. He oversees strategies resulting in operational cost reductions and assures all future projects are LEED Certified. Advocating for the health and wellness of our 2,200 clients, St. John Properties is the regional leader with over 65 LEED certified buildings. Ryan holds a BS in Finance from Penn State University, an MBA from University of Baltimore and is a LEED Accredited Professional.



Stuart Kaplow, Esquire Stuart D. Kaplow, P.A.

Sustainability & Green Real Estate Attorneys

Stuart represents a breadth of business interests in a varied law practice, concentrating in real estate and environmental law with focused experience in green building and sustainability.

Kaplow is a frequent speaker and lecturer on innovative solutions to the environmental issues of the day, including speaking to a wide variety of audiences on green building and sustainability. He has authored more than 700 articles centered on his philosophy of creating value.

Kaplow is a graduate of the University of Baltimore School of Law. He graduated with honors from the University of Maryland, Division of Behavioral & Social Sciences, with a Bachelor of Arts degree in land use planning.



Scott Cameron, President Cameron Group LLC

Scott represents the 4th generation in his family's company's 113-year history. Through his leadership, Cameron Group was recently named one of the nation's fastest growing construction companies by Inc. 5,000. Scott is considered an expert in the field of building envelopes and is passionate about saving energy.

Giving back to the communities he works and serves has always been an important goal. He and his team have worked on many houses for Habitat for Humanity, Christmas in April and many other charitable organizations.

Agency Representatives



Mark Beck, Director of Capital Planning and Sustainability

University System of Maryland

Mark coordinates capital budget, facilities and sustainability efforts of the System's twelve institutions.

Previously, Mark planned campus venues for the 2002 Winter Olympics at the University of Utah, and developed a capital facilities rebuilding program at Yale University. He has a master's degree in urban planning and was an adjunct professor of geography and urban economics.



Anne B. Raines, Deputy Director / Deputy State Historic Preservation Officer

Maryland Historical Trust (MHT), part of the Maryland Department of Planning

After earning her Bachelor of Architecture at North Carolina State University, she worked for several years as an architect in Baltimore and in the UK. She earned her MSc in Architectural Conservation with distinction from Edinburgh College of Art (University of Edinburgh) in 2009; returning to the US, she worked as Capital Grants and Loans Administrator at MHT until assuming her current position in 2017.

As the Deputy State Historic Preservation Officer, and as an architect, I have a strong interest in working with my colleagues on the Council on "greening" existing buildings while maintaining their historic integrity.

Alex Donahue, Deputy Director for Field Operations Interagency Committee on Public School Construction

Alex leads the Maryland IAC's field operations, coordinating the efforts of the IAC's regional facilities managers and school-facility assessment staff. Alex comes most recently from the National Council on School Facilities where he analyzed trends and best practices in school construction across the nation. He previously served as a principal and district administrator for a large public-school district.

Agency Representatives



Britt Slattery, Director of Conservation Education & Stewardship

Maryland Department of Natural Resources

Britt directs environmental education programs and commitments under the aquatic 'side' of the Department's mission. Programs include Aquatic Resources Education, Chesapeake Bay National Estuarine Research Reserve education, and Explore & Restore Maryland Streams".

She serves as state's representative on the Chesapeake Bay Program Mid-Atlantic Environmental Literacy Workgroup to shepherd state environmental literacy commitments under the Chesapeake Bay Watershed Agreement. She is coordinator of the Maryland Project Green Classrooms Initiative, a multi-agency/ organization public-private partnership advisory body formed by Governor's Executive Order, working to support and advance environmental literacy and children's connections to nature in Maryland.



Eddie Lukemire, Program Manager, The Secretary's Office

Maryland Department of Transportation

Eddie leads the environmental stewardship, sustainability, performance and energy policies and programs across all MDOT transportation business units and the Maryland Transportation Authority. He oversees and coordinates environmental management activities in transportation planning, design, construction, operations, and maintenance. Eddie received his bachelor's degree in Environmental Science and Policy from the University of Maryland, and his master's degree in Environmental Science and Policy from the John's Hopkins University.



Christopher Russell, Program Manager, State Buildings & Energy Codes

Maryland Energy Administration

Chris brings over 25 years of energy industry experience to the Maryland Energy Administration, where he is the program manager for State Buildings and Energy Codes. He holds an M.B.A. and a Master of Arts degree from the University of Maryland and a B.A. from McGill University.

Publications that Chris has authored include "Managing Energy from the Top Down" and "North American Energy Audit Program Best Practices."

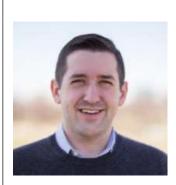
Agency Representatives



Laura Armstrong, LEED AP O+M Director, Sustainability Program

Maryland Department of the Environment

Laura promotes sustainable business practices through technical assistance programs, demonstration projects and recognition programs. Technical services include on-site energy, water and waste reduction assessments and Environmental Management System implementation. She also manages the Maryland Green Registry, a voluntary program of more than 500 organizations across the state, which encourages members to share their environmental best practices through online profiles that highlight their successes and inspire others.



Ted Walsh, Office of Capital Budgeting

Department of Budget and Management

Ted is a budget analyst in the Office of Capital Budgeting. Responsible for capital projects with the Maryland Department of General Services, Project types analyzed include Judiciary, Military, Department of IT and Maryland Public Television.

Past professional experience includes roles as Research Associate at Lockheed Martin and Finance and Operations Manager for National Immigration Forum. He holds a Master of Public Policy from the University of Maryland, College Park and a Bachelor of Arts in Political Science from the University of South Carolina, Columbia.

Agency Representatives



Norman Wang, RA, Director of Maryland Codes Administration

Department of Labor, Licensing and Regulation

Norman leads the Maryland Building Codes Administration to fulfill several Maryland statutes mandated responsibilities, including (i) adoption of State building codes, (ii) administration of Maryland Industrialized Building Program, Maryland Accessibility Code, Minimum Livability Code, and (iii) providing training on building codes for local government employees.

Norman also represents the Department in several state-wide councils/committees, including Green Building Council, Maryland Building Rehabilitation Council, Maryland Resiliency Partnership, and Maryland Building Officials Association.

Norman is a registered architect in several states in US, including Maryland. He holds a Masters of Architecture Degree from the Ohio State University.



Stephen Lauria, Architect & Landscape Architect, LEEDap

Chief of Design Services Green Building Council Staff Support

Department of General Services

Steve integrates facilities and infrastructure with their sites and communities through environmentally sensitive and sustainable solutions. For over thirty years, he has led facility and land-use design and construction projects for state government, mixed-use, higher education, water and wastewater, power generation, biomedical and pharmaceutical research, military facilities and healthcare.

Steve's relevant board service began with a role on the Alexandria, Virginia Environmental Policy Commission in 1986, continued as president of a National Trust historic district community in Baltimore and chair of the advisory committee of the Baltimore Regional Transportation Board.

Key Participants



Martha Shrader, LEED AP-BD&C, Sustainability Manager

University System of Maryland Facilities Management-P&C-Support

Ms. Shrader is a graduate of the University of Maryland College Park (UMD) with a BS in Natural Resource Management. She is currently the Sustainability Manager for the Facilities Management Planning and Construction Department at UMD where she provides technical support in the area of green design and construction. She has worked on multiple LEED certified projects in the University System of Maryland.

When not involved in green design and construction activities, Martha enjoys reading, walking, biking, yoga, and practicing and performing with Tagé on Steel, a steel drum band based in Hyattsville, MD.



Ellen Robertson, Legislative Liaison

Maryland Department of General Services, Office of the Secretary

Ms. Robertson assists in identifying and reviewing legislation that may impact the work of the Green Building Council, as well as considering and implementing relevant policy. She provides invaluable guidance for content of the council comments on legislation or action the council should consider.

