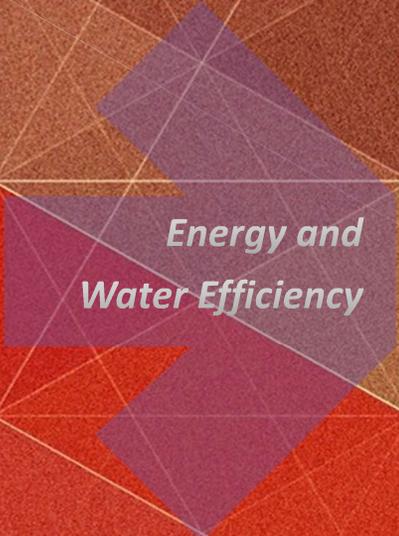


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Smart Growth

A purple arrow pointing to the left, containing the text "Energy and Water Efficiency".

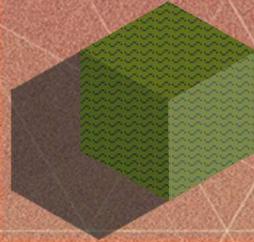
*Energy and
Water Efficiency*

A red arrow pointing to the right, containing the text "Sustainable Technologies".

*Sustainable
Technologies*

A brown arrow pointing downwards, containing the text "Conservation".

Conservation



**MARYLAND GREEN BUILDING COUNCIL
ANNUAL REPORT 2021**

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

University of Maryland, Universities at Shady Grove Biomedical Sciences and Engineering, Rockville
LEED Platinum
Cooper Carry with Lake|Flato Architects



Message from the Secretary

The Maryland Green Building Council and Department of General Services are pleased to submit this 2021 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 and promotes 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 2021, 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,

A handwritten signature in blue ink that reads "Ellington E. Churchill, Jr." The signature is written in a cursive style.

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

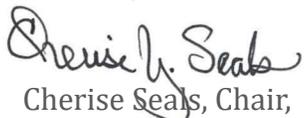
Message from the Chair

Now that it's been a year since I assumed the role as Chair, I am pleased to see that we are well on our way to achieving the goals I set at the beginning.

- 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.

Through the review and comment on various legislative proposals, we have offered valuable perspective, sparked lots of dialogue, improved our knowledge base with informative speakers each month and as we make improvements to the *High-Performance Green Building Program*, we hope to streamline processes for review so that we all can work towards the efficient, sustainable Maryland we desire.

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.

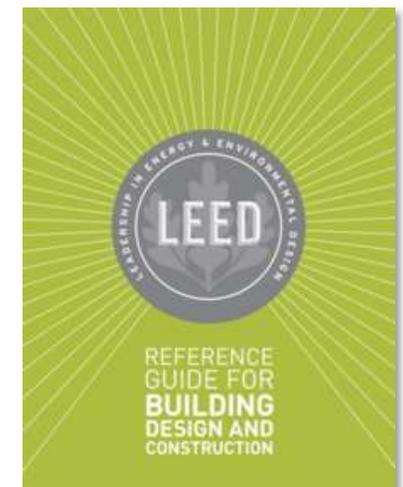
Maryland *State Finance and Procurement Article Code Ann. § 3-602.1* (2014) requires that the State employ green building technologies when constructing or renovating State-owned buildings that meet specific criteria. To promote the technologies, the council established the *High-Performance Green Building 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

The promotion of technologies and creation of energy efficient buildings throughout the State of Maryland remain priorities for the council. For state facilities, this includes achieving compliance with the *High-Performance Green Building Program*, promoting new green building technologies and developing criteria for high-performance buildings.

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
 - 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

Green building construction employs environmentally sustainable materials, assembly techniques and control technologies to create facilities that conserve water, energy and other resources and provide healthy living, education, and workspaces.

Sub-committee Activities

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 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's 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 promotes 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.

Ongoing efforts include delivery of presentations on the role of the council and application of green building programs and technologies in state-funded facilities projects. It was delivered at the Maryland Community College Facilities Planners Council. Other presentations describing how government policy initiatives promoting energy efficiency directly affect new facility design and promote resource conservation, have been 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.

UPDATE OF THE HIGH-PERFORMANCE GREEN BUILDING PROGRAM

The statutory guide for design of green buildings in Maryland is the High Performance Green Building Program. The program has been revised and updated to reference current codes and a clarified waiver process.



*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 2021 session, the council reviewed several bills and provided informal recommendations.



2021 Maryland Legislative Activities Related to the Maryland Green Building Council

<i>Bill</i>	<i>Name</i>	<i>Sponsor</i>	<i>Status</i>	<i>Maryland Green Building Council Response</i>
HB 164, SB 116	Dept of the Environment, Office of Recycling, Recycling Market Development	Stein, Lierman Kagan, West	Approved by the Governor - Chapters 289, 290	AMENDED (Senate):'20 HB 1452 ES: Requires MDE to develop markets for recycled content, to coordinate activities with DGS, Commerce, MDOT, MES,NE MD Waste Disposal Authority, Local Gov'ts & private orgs On or before 7/1/22 Commerce, DGS, MDOT, MES report to the Office of Reccyling in MDE on relevant programs, tools, training guides, campaigns, & technologies avialble for promoting the development of markets for recycled materials & recycled products in the State including efforts to increase the use, reuse & remanufacturing of recycled materials & the use of recycled products in St. gov't. DGS, Commerce & MDOT assist MDE Office of Recycling in the devlop of markets for recycled materials & recycled products. No impact to us, we can share our data and GPC can promote via specs.
	Procurement-Invasive & Nonnative Plant Species-Prohibition on Use of State Funds	Luedtke	Approved by the Governor - Chapters 224, 223	AMENDED: Only prohibits use of invasive & removes waiver process; LAL: No impact on Facilities Management, since DGS doesn't use invasives and cost difference of natives is minimal.
SB 483	Solid Waste Management-Organics Recycling & Waste Diversion-Food Residuals	Charkoudian	Enacted under Article II, Section 17(c) of the Maryland Constitution- Chapters 439, 440	AMENDED: LBD: no longer requires DGS to assess state property for use as organics recycling site, with amendments.
	Clean Cars Act of 2021	Fraser-Hidalgo	Enacted under Article II, Section 17(c) of the Maryland Constitution- Chapter 670	AMENDED: EV recharging equipment rebate program administered by MEA, FY 21-23 may apply to MEA for a rebate, funded at 1.8M each FY;ES: extends program, increases funds, changes distribution %s of the funds
SB 810	Renewable Energy Portfolio Standards & Geothermal Heating & Cooling Systems	Charkoudian Feldman	Approved by the Governor - Chapter 164	Creates a carve out for geothermal systems to Tier I of the RPS. Specifies that a percentage of the GSHP systems must be installed in certain buildings that serve LMI communities, such as multi-familay, schools and hospitals.

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)	130,000 GSF \$13,500,00	completed 2021
The facility located Rolling Cross Road Professional Park, Baltimore County			
St. Mary's College Academic Building and Auditorium	LEED Silver (Minimum)	52,300 GSF \$66,000,000	Construction underway anticipated completion 2022
Facility for the College's Music department, Educational Studies department, a learning commons study space, and a 700-seat auditorium.			



*Catonsville District Courthouse
LEED Silver
Bushey Feight
Morin Architects
(above)*

*St. Mary's College Academic Building and Auditorium
LEED Silver
GWWO Architects with Graham Gund and Holder Construction Company
(left)*

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.

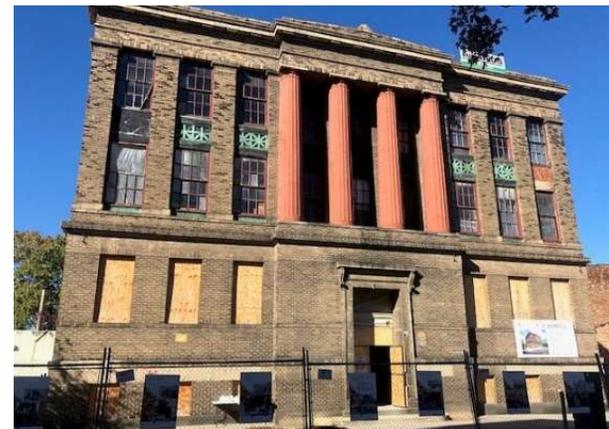
Notable projects that have either been initiated or completed during the past year are included here.

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

University of Maryland Baltimore School of Pharmacy & Allied Health	LEED Silver (Minimum)	120,000 GSF \$ 78,400,000	
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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 2021:

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 SEEKING CERTIFICATION 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 2021



*Baltimore City's First Net Zero Schools
 Graceland Park/O'Donnell Heights & Holabird Elementary/Middle School
 Grimm and Parker Architecture, Inc.
 Achieved LEED Platinum in 2021*

“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

MARYLAND GREEN SCHOOL BUILDINGS

Collectively, the Maryland public schools program implements the greatest number of high-performance facilities in the state. In 2021, 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 zero-energy 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 2021

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)
 Achieved LEED Platinum in 2021*

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.

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 each 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. Meetings comply with the Maryland Open Meetings Act and are open to all. Despite public health assembly restrictions, the Council met on-line and once in person, monthly throughout 2021.

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 (6/2022)

NORESCO, LLC.

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 (6/2021)

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 Fischer 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 envelopes. PPSI represents a full package of building envelope 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 role in high performance buildings. Our knowledge of integrated assemblies and sustainable product selection has aided many quality projects.

Gubernatorial Appointees

Timothy Blanch, PE, LEED AP
Director of Engineering

S.C. Herman & Associates, Inc.

Tim is a an Engineer with 37 years' experience in the mechanical industry in the Baltimore-Washington region. He worked alongside steamfitters and plumbers during high school summers and while earning his mechanical engineering degree at U.M.B.C. Tim became an owner's agent construction manager in highly technical design roles including Senior Mechanical/Electrical Program Manager for the \$3 billion Pentagon Renovation. Tim is currently the Director of Engineering for a Real Estate Developer/Property Management firm in Washington, D.C. and is focused on making the company's portfolio the highest efficiency buildings in the market. Tim's latest project, 1441 L Street, N.W., Washington, D.C. has achieved a better than net zero energy usage intensity of 17.4 kbtu/sf/yr while also providing 100% outdoor air to his tenants. At home,



Stuart Kaplow, Esquire
Stuart D. Kaplow, P.A. (6/2021)

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



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.



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.



Steven Allen, AICP

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

Steve Allan is a planner with the Maryland Historical Trust's Office of Planning Education and Outreach, where he works in hazard mitigation, technical assistance, comprehensive plan review and as staff to the Governor's Commission on Maryland Military Monuments. He previously served as point person for the LEED education program at the Maryland Department of Planning, having particular interest in green building practices in existing buildings.

Agency Representatives



Allan Fisher, Ph.D.

Deputy Secretary, Mission Support, Office of the Secretary

Maryland Department of Natural Resources

Fisher's experience includes guiding senior management teams throughout all business areas, including finance, human resources, management information systems, facilities, and project management.

In past roles, Fisher served as director of administration for the U.S. Nuclear Regulatory Commission, associate administrator for administration and chief financial officer of the U.S. Department of Transportation Federal Motor Carrier Safety Administration and chief financial officer and director of administrative services for the U.S. Equal Employment Opportunity Commission.



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 and 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 waste-water, 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.

