BUILDING GREEN IN MARYLAND
WITH THE HIGH-PERFORMANCE GREEN BUILDING PROGRAM
Maryland Community College’s Facilities Planner’s Council 7 June 2019

- Energy Efficiency, Renewable Energy
- Water Efficiency
- Smart Growth, Sustainable Development
- Sustainable Materials and Technologies
- Waste Reduction
- Toxics Reduction
## BUILDING GREEN IN MARYLAND

- HOW GREEN BUILDING FITS WITH MARYLAND
- MARYLAND GREEN BUILDING COUNCIL ROLE AND RESPONSIBILITY
- THE *HIGH PERFORMANCE GREEN BUILDING PROGRAM* – APPLICABILITY AND PATHS TO PERFORMANCE
- PROJECTS (REQUIRED TO COMPLY, NOT REQUIRED TO COMPLY)
- PROJECTS - MARYLAND GREEN SCHOOLS
- REPORTING
- RESOURCES
- MARYLAND GREEN BUILDING COUNCIL
Maryland Green Building Council’s mission is to protect and conserve our state’s resources through creation of resource-efficient facilities. This dovetails with other agencies.

- **Maryland Department of Agriculture** conservation to balance crop and livestock production with protection of natural resources,
- **Department of Planning** Water and Sewerage Plan Facilities planning to assure adequate resource protections associated with development,
- **Maryland Department of Natural Resources** Conservation and enhancement of 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 was established in 2007 with *House Bill 942 – Section 4-809* of the State Finance and Procurement Article. The council resides within the Maryland Department of General Services (DGS). Membership includes private-sector Governor gubernatorial appointees, representatives of state agencies and staff support from DGS. The council meets monthly and reports to the Governor and General Assembly annually.

Reports include the status of each of the state’s green building projects.

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 support the goal, the council established the *High Performance Green Building Program*. 
The High Performance Green Building Program (the Program) applies to all State of Maryland agencies and local educational agencies (LEAs) that program, design and build facilities.

The 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 Program requires use of one of three green building certification or rating programs in the design, construction and operation of facilities.

- Leadership in Energy and Environmental Design (LEED), a program of the U.S. Green Building Council
- International Green Construction Code (IgCC), one of the many codes of the International Code Council
- Two globes of Green Globes protocol of the Green Building Initiative.
The HPGBP has been modified for LEAs constructing K-12 schools.

In 2018, 21st Century Schools Facilities Act (Senate Bill 1243 and House Bill 1783) was passed by the legislature. It requires that the “Maryland Green Building Council develop guidelines for achieving the equivalent of LEED Silver standards without requiring LEED certification of new (K-12) school buildings, including some independent certification that school systems have achieved the required standards.”

The council anticipates having the alternate system in place by late 2019.
Projects that receive all their funding from the State of Maryland must meet the minimum *Program* requirements of either:

- USGBCs LEED Silver,
- 2 Green Globes or
- compliance with the *International Green Construction Code*. 
### Towson University, New Science Facility

| LEED Silver (Min.) | 316,000 GSF and $187,819,000 | Now in construction, anticipated complete by 2020 |

This project will align all departments and programs of the Fisher College of Science and Mathematics into two adjacent buildings. The facility will be the largest academic building on TU’s campus and will include:

- 50 teaching and 30 research laboratories
- 50 classrooms
- 10 collaborative student spaces
- 8 lecture halls
- 1 outdoor classroom leading into the Glen Arboretum
- Planetarium, observatory, rooftop greenhouse, museum and vivarium
- A rain garden for storm water control
Although not required to do so, these facilities meet the minimum requirements defined in the Program by 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.
GREEN BUILDINGS INDEPENDENT OF THE HIGH PERFORMANCE GREEN BUILDING ACT

University System of Maryland
A. James Clark Bioengineering Building

The facility is a new Bioengineering Building to house the Robert E. Fischell Department of Bioengineering and the Robert E. Fischell Institute for Biomedical Devices.

| University System of Maryland | LEED Silver (Min.) | 184,715 GSF and $155,430,000 | Construction complete |

Building Green in Maryland; Community College’s Facilities Planner’s Council
7 June 2019
The Maryland Public Schools Program implements the greatest number of high performance facilities in the state. In 2018, 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 and a platinum LEED certification. A net zero-energy building means the energy used by the building on an annual basis, is equal to or, exceeds the renewable energy created within the facility and on site. This is achieved with efficient plumbing systems, smart monitoring and controls, photovoltaic solar, geothermal heating and cooling, green roofs and stormwater bioretention on site.
<table>
<thead>
<tr>
<th>PROJECT</th>
<th>RATING</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allegany County High School</td>
<td>Silver</td>
<td>Allegany County</td>
</tr>
<tr>
<td>Crofton High School</td>
<td>Silver</td>
<td>Anne Arundel County</td>
</tr>
<tr>
<td>Baltimore City has started or completed 24 new facilities and major additions for high schools, elementary and middle schools.</td>
<td>Silver and Gold</td>
<td>Baltimore City</td>
</tr>
<tr>
<td>Baltimore County has started or completed 16 new facilities and major additions for high schools, elementary and middle schools.</td>
<td>Silver and Gold</td>
<td>Baltimore County</td>
</tr>
<tr>
<td>Northern High School</td>
<td>Silver</td>
<td>Calvert County</td>
</tr>
<tr>
<td>Beach Elementary School</td>
<td>Silver</td>
<td>Calvert County</td>
</tr>
<tr>
<td>Career and Technology Center</td>
<td>Silver</td>
<td>Carroll County</td>
</tr>
<tr>
<td>Greensboro Elementary School</td>
<td>Silver</td>
<td>Caroline County</td>
</tr>
<tr>
<td>Gilpin Manor</td>
<td>Silver</td>
<td>Cecil County</td>
</tr>
<tr>
<td>New Chesapeake City Elementary School</td>
<td>Silver</td>
<td>Cecil County</td>
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</table>

“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.”

Grimm and Parker Architecture, Inc.
<table>
<thead>
<tr>
<th>PROJECT</th>
<th>RATING</th>
<th>LOCATION</th>
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</thead>
<tbody>
<tr>
<td>Charles County has started or completed 4 new facilities and major additions for high schools, elementary and middle schools.</td>
<td>Silver</td>
<td>Charles County</td>
</tr>
<tr>
<td>North Dorchester High School</td>
<td>Silver</td>
<td>Dorchester County</td>
</tr>
<tr>
<td>Frederick County has started or completed 6 new facilities and major additions for high schools, elementary and middle schools.</td>
<td>Silver</td>
<td>Frederick County</td>
</tr>
<tr>
<td>Youth Benefit ES</td>
<td>Silver</td>
<td>Harford County</td>
</tr>
<tr>
<td>Havre de Grace MS/HS</td>
<td>Silver</td>
<td>Harford County</td>
</tr>
<tr>
<td>Joppatown Elementary School</td>
<td>Silver</td>
<td>Harford County</td>
</tr>
<tr>
<td>Howard County has started or completed 5 new facilities and major additions for high schools, elementary and middle schools.</td>
<td>Silver (4), Platinum (1)</td>
<td>Howard County</td>
</tr>
</tbody>
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<thead>
<tr>
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<th>LOCATION</th>
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<tbody>
<tr>
<td>Montgomery County has started or completed 13 new facilities and major additions for high schools, elementary and middle schools.</td>
<td>Silver</td>
<td>Montgomery County</td>
</tr>
<tr>
<td>Prince George's County has started or completed 6 new facilities and major additions for high schools, elementary and middle schools.</td>
<td>Silver</td>
<td>Prince George's County</td>
</tr>
<tr>
<td>J. M. Tawes Center</td>
<td>Silver</td>
<td>Somerset County</td>
</tr>
<tr>
<td>Easton ES</td>
<td>Silver</td>
<td>Talbot County</td>
</tr>
<tr>
<td>Urban Educational Campus - BOE component</td>
<td>*</td>
<td>Washington County</td>
</tr>
<tr>
<td>Sharpsburg ES</td>
<td>Silver</td>
<td>Washington County</td>
</tr>
<tr>
<td>West Salisbury Elementary</td>
<td>Silver</td>
<td>Wicomico County</td>
</tr>
<tr>
<td>Beaver Run ES</td>
<td>Silver</td>
<td>Wicomico County</td>
</tr>
<tr>
<td>Showell ES</td>
<td>Silver</td>
<td>Worcester County</td>
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REPORTING

What to Report?

For each project, the agency responsible for design and construction shall provide a brief narrative description of how green building principles were used in its design.

Provide an updated Scoresheet at completion of each phase of design and construction.

For LEED and Green Globe Projects: Provide the final LEED Scoresheet to the MDGBC at project completion.

For International Green Construction Code (IgCC) projects: Provide latest IgCC Compliance Form at completion of each phase of design.
**REPORTING**

What to Report?

| **Green Building Operations and Maintenance Manual** based on the green features and operations of each building. | A draft of the manual shall be submitted to the state project manager or LEA project manager at the 100% Construction Documents (CD) phase for review. |
| The manual is in addition to other operating and maintenance manuals for the facility. Its focus is on system maintenance required to keep green features operating as intended. | The final Green Building Operations and Maintenance Manual shall be **submitted to the project manager** at project Substantial Completion. |
| | The final energy model for all complying projects shall be submitted to the managers at the completion of 100% design documents. |
REPORTING
Where to Report?

**LEA Projects**
Robert A. Gorrell, Executive Director, Interagency Commission on School Construction
Maryland State Department of Education
200 West Baltimore Street, Baltimore, MD 21201
robert.gorrell@maryland.gov
(410) 767-0610

**University System Projects**
Mark Beck, Director of Capital Planning and Sustainability
University System of Maryland
701 East Pratt Street
Baltimore, MD 21202
mbeck@usmd.edu
(301) 445-1984

**Community College Projects**
Clarence Felder, Office of Facilities Planning, Design, Construction and Energy
Maryland Department of General Services
301 West Preston Street, Suite 1405
Baltimore, Maryland 21201-2388
clarence.felder@maryland.gov
(410) 767-3615

**All other State of Maryland Projects**
Steve Lauria, Architect, Landscape Architect, LEEDap
Capital Projects Manager & Green Building Council Support
Maryland Department of General Services
Facilities Planning, Design, Construction and Energy
301 West Preston Street, Suite 1405
Baltimore, Maryland 21201-2388
Steve.Lauria@maryland.gov
(410) 767-4163
The Contract allows Maryland County’s, municipalities, instrumentalities of the State, and other non-State of Maryland governments or government agencies and not for profit 501 (c) (3) organizations within the State of Maryland to purchase the Contractors’ services covered by the Master Services Agreement (MSA). All such purchases by instrumentalities of the State, non-State of Maryland governments, government agencies or not for profit organizations.

(Please refer to: http://www.mdot.maryland.gov/newMDOT/Planning/Environmental/Solar)
RESOURCES
Maryland Green Purchasing Committee

The Committee develops and implements statewide green purchasing policies, guidelines, programs, best practices, and regulations which will provide benefits to the health and well-being of Maryland citizens and environment.

(Please refer to: https://dgs.maryland.gov/Pages/GreenOperations/GreenPurchasing/index.aspx)
The database provides access, accountability, and tracking for 58 State entities. It is accessible to the public in a limited version, and with additional detail to over 300 registered users with login privileges.

(Please refer to https://dgs.maryland.gov/Pages/Energy/Database/Energy-Public-Database.aspx)

The Database supports energy efficiency initiatives and Energy Performance Contracts, energy reduction reporting, deregulated energy procurement, energy planning, and utility bill analysis.
Maryland Green Building Council
https://dgs.maryland.gov/Pages/GreenBuilding/index.aspx

Maryland Green Building Council Meetings
Monthly Meetings are held on the third Wednesday 10:00 AM to 12:00 PM at either;

Maryland Department of General Services
Facilities Planning, Design, Construction and Energy
301 West Preston Street, Suite 1405
Baltimore, Maryland 21201-2388

or

Maryland Historical Trust
100 Community Place, 3rd Floor
Crownsville, MD 21032-2023

Questions
Steve Lauria, Architect, Landscape Architect, LEEDap Capital Projects Manager & Green Building Council Support
Maryland Department of General Services
Facilities Planning, Design, Construction and Energy
301 West Preston Street, Suite 1405
Baltimore, Maryland 21201-2388
Steve.Lauria@maryland.gov
410-767-4163