



Benjamin Banneker HS, Perkins Eastman DC

# District of Columbia Public Schools

Designing for a School Community's Health, Well-Being, and Success

*Building Design + Construction, Schools*

In 2018, Andra Swiatocha, facilities manager at D.C. Public Schools (DCPS), worked with DCPS leadership to implement the use of the LEED Health Process pilot credit to guide school modernization projects throughout the DCPS portfolio. By applying the health process at the portfolio scale, DCPS was able to identify and work with members of their internal Facilities, Health Services, Health & P.E., and Food & Nutrition teams to promote student, staff, and community population health through the design, construction, and operations of multiple schools undergoing modernization.

This case study describes the initial four schools impacted by this portfolio-wide commitment.

The District of Columbia Public Schools (DCPS) is shaking up the green building movement. This school system, serving students of all academic levels, ranges of economic backgrounds, and neighborhood demographics, has already made impressive strides to promote sustainability within its school buildings, but DCPS leaders had loftier goals in mind for their new phase of renovations.

Understanding that the environments we live, work, and learn in have a massive impact on our health and well-being, Andrea Swiatocha, the Deputy Chief of Facilities at DCPS, advocated for the use of the LEED Integrative Process for Health Promotion (LEED Health Process) pilot credit to guide pursuit of LEED certification across four schools undergoing modernization.

In September 2018, DCPS released RFPs for the modernization of four schools which specified that projects must meet a minimum of LEED Gold certification and that design teams must utilize the LEED Health Process to guide the project's LEED strategy. It was a smooth transition for project teams already familiar with the LEED certification process, so when DCPS decided to formalize student and staff health and well-being as a top school priority, LEED's Health Process pilot credit was a natural first choice.

# LEED Integrative Process for Health Promotion

The Integrative Process for Health Promotion (**LEED Health Process**) is a pilot credit within the LEED certification system developed by the Green Health Partnership, an applied research initiative between the UVA School of Medicine and the U.S. Green Building Council.

It is a unique and innovative tool to help built environment project teams consider and promote human health and well-being as a formal part of their green building strategy.



## 1. Identify a Health Expert

Collaborate with health experts to help project teams identify and execute their health and well-being goals.



## 2. Assess Community Needs

Utilize public health data and community engagement to establish project health goals based on community needs and priorities.



## 3. Take Action

Prioritize design and programmatic strategies to address the project's population health and well-being goals.



## 4. Monitor Outcomes

Evaluate the impact of prioritized health strategies to assess impact and make any necessary adjustments to ongoing building operations or health programs.



“The opportunity to discuss modernization of our schools with a health lens really helped us think about how we can enhance the student experience as well as support students holistically.”

- Miriam Kenyon, Director of Health and Physical Education (DCPS)

West Elementary, Perkins Eastman DC

### Identifying a Health Expert.

Guided by the language of the LEED Health Process credit, DCPS assembled a group of internal school health professionals to serve as health champions with the design teams working on the modernization projects. The group consisted of the facilities and design teams, school nutritionists, health services, and physical education professionals.

Though interdisciplinary collaboration is challenging, even within the same organization, each member of the DCPS team brought a unique understanding of the needs of the community and student population. This diversity of perspective helped drive an innovative discussion on the best ways to promote the health of the school population.

### Engaging District Health Professionals

Schools have the unique ability to harness the wealth of existing knowledge and expertise of their district-level health staff. Professionals from both traditional and nontraditional health backgrounds - school district nurses, nutritionists, guidance counselors, social workers, and more - can help teams apply a health perspective to school facility decision-making.

## PROJECT STATISTICS

School	West Elementary	Eaton Elementary	Capitol Hill Montessori	Banneker High School
DC Ward	Ward 4	Ward 3	Ward 6	Ward 1
Number of Students	315 (current) 557 (expected)	467 (current) 490 (expected)	325 (current) 495 (expected)	523 (current) 800 (expected)
Number of Staff	60	80	50	95
Sq. Footage	88,680 sq. ft	~ 77,830 sq. ft	~ 54,000 sq. ft	~ 162,640 sq. ft
Architect	Perkins Eastman DC	Cox Graae + Spack Architects	R. McGhee & Associates	Perkins Eastman DC

## Assessing Community Needs.

The DCPS health champions and design teams had several collaborative workshop sessions to evaluate the needs of each unique school community and create multidimensional health goals tailored to serve both staff and students. The DCPS Facilities team recruited a public health graduate student to help coordinate outreach with the individual schools and develop community health profile assessments. The graduate intern visited the schools in question, conducted interviews, and helped the DCPS health champions determine which health needs were most pressing in each of the communities.

Pausing to consider the unique place and population based attributes of individual buildings helps project owners and design teams tailor their project's design, construction and operation to address local needs and priorities.

Based on the results of the school observations, the group chose to create a set of baseline goals to be applied to each school along with specific goals to prioritize at each individual school. The baseline health goals included physical activity, movement, and enhancements to the building environments (acoustics, thermal comfort, air quality, and social spaces). Promoting nutrition, drinking water, and access to mental health services were prioritized at the schools most in need.

### District-Wide Health Goals

- Promoting physical activity and movement.
- Encouraging health nutritional choices and improving access to drinking water stations.
- Increasing availability of mental and general health services.
- Making improvements to air quality, thermal comfort, acoustics, and collaborative social spaces within the school building (IEQ).

### School Sustainability Goals

- **WEST ELEMENTARY.** Net Zero Ready, LEED Gold, WELL Certified.
- **EATON ELEMENTARY.** Preserving green space, LEED Gold.
- **CAPITOL HILL MONTESSORI.** LEED Gold.
- **BANNEKER HIGH SCHOOL.** Net Zero Ready, LEED Gold.





Capitol Hill Montessori @ Logan, R. McChiee & Associates

## Taking Action.

After establishing baseline and school specific health goals, the DCPS team worked with each design team to prioritize specific actions in order to address the established goals. Some of the DCPS design strategies included creating collaborative spaces for students to connect, retrofitting an auditorium space for increased movement during assemblies, ensuring that clean drinking water fountains were readily available for student use, and making classroom spaces as acoustically and thermally comfortable as possible.

Beyond the obvious benefits of these design strategies, the LEED Health Process pilot credit also helps school systems create spaces that promote equal opportunity for student success.

The health partner collaborations helped design teams determine what previously-planned school modernizations could be potentially re-framed to achieve their health goals. Together, they finalized their designs for both health and sustainability and began construction.

### Health Need

### Health Solution

#### Encouraging Physical Activity

#### Stairways to Success

All four DCPS schools undergoing modernization prioritized the inclusion of prominent, open stairways. Stairs help make movement and circulation inviting, and with the addition of alcoves and library access (like the stair way at Banneker High School), students and staff will consistently choose to use them.

#### Drinking Water Promotion

#### Water, Water Everywhere

After some thoughtful conversations about the best placement of drinking fountains, DCPS decided to install spigots and bottle fillers where all staff and students would have access to them: gymnasiums, hallways, and other highly-trafficked areas.

#### Access to Mental Health Services

#### Help is —> Here

While the district has made general and mental health services *available* for their communities, their new goal is to make these services more *accessible*. Healthy design strategies helped DCPS choose more discreet locations for counseling services, but programmatic strategies will help the schools communicate not only that these resources are available, but also where to find them.



West Elementary, Perkins Eastman DC

### Monitoring Outcomes.

In order to monitor and evaluate the efficacy of their chosen health design and programmatic strategies, DCPS planned to issue a pre- and post-occupancy health and well-being survey for staff members and students, but the effort was derailed by the COVID-19 pandemic when the schools were emptied in the spring of 2020. Using surveys as a monitoring tool for a school project can reveal how the buildings influence perceptions about sustainability and health, as well as behaviors related to the school’s health goals. Once DCPS students re-enter their newly modernized schools, the facilities team will issue a post-occupancy survey which will help the school project team find the right strategies and programs to implement at the operations scale.

The DCPS team also considered monitoring and evaluation strategies throughout the project timeline, particularly during both goal-setting and design workshops, with the expectation that their intentional decisions will have a measurable impact on health and well-being when the schools re-open.

### Conclusion.

While the four DCPS schools will not open until August of 2021, the diverse team of professionals working on the modernization projects feel confident about the positive impact their actions will generate. By using an intentional process to promote health, DCPS is able to implement designs that support their targeted health goals, utilize the pre-existing wellness policies and programs from their Health Services team, and gain a greater understanding of how the built environment can influence the health and well-being of the school community. With guidance from the LEED Health Process credit and thoughtful decision-making, the process will not cost the school system any additional funding, nor will it delay the schedule of the modernization.

DCPS has shown that this feasible process to intentionally promote health and well-being is able to create value beyond what currently exists in standard practice. The LEED Health Process helps bring the power of public health research to individuals that have the capacity to create positive change for their communities and helps to serve a goal that everyone can stand behind.

# DCPS's Application of the LEED Health Process

## PROJECT TEAM

The interdisciplinary DCPS team included stakeholders from the following departments and disciplines:

- **INTERNAL TEAM.** DCPS Facilities, Health Services, Sustainability, Health & Physical Education, Food & Nutrition, and DCPS School Leadership.
- **PLANNING.** DC Department of General Services (DGS), DCPS Facilities.
- **DESIGN.** Perkins Eastman DC, Cox Graae + Spack Architects, and R. McGhee & Associates.

## The Impact of COVID-19

When the COVID-19 pandemic hit the US in March 2020, school districts had to quickly reconfigure their approach to delivering education and maintaining access to critical services such as free and reduced lunches. The demands of physical school facilities changed rapidly as buildings shut down and schools transitioned to online learning. When schools considered re-opening in the fall, facilities teams had to carefully consider how to manipulate the design and operation of school buildings to minimize the spread of COVID-19. Because of the connections formed between the DCPS facilities and health teams during the LEED Health Process pilot credit implementation process, the facilities team was able to more quickly and efficiently address these new COVID-related challenges.



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### 1. Identify a Health Expert

Leveraging the experience within their own organization, DCPS called upon an internal staff team of health & P.E., food & nutrition, and facilities professionals to serve as health experts.

### 2. Assess Community Needs

The project team set health and well-being goals for the DCPS schools based on the needs of students, staff and community members. Activity, nutrition, and mental health were priorities.

### 3. Take Action

The team selected school design and programmatic strategies - like accessible drinking fountains and convertible spaces for movement - that would address the health needs of the population.

### 4. Monitor Outcomes

The team at DCPS will continue to monitor the effectiveness of their chosen strategies when the students return to their schools. The health process will help them reassess their priorities in the face of new health challenges.

## TIMELINE OF EVENTS

2011, SEPTEMBER

LEED Gold mandate established after introduction of the DC Healthy Schools Act of 2010.

2018, SEPTEMBER

DCPS issues RFPs for modernization at four schools specifying use of the LEED Health Process pilot credit.

2018, NOVEMBER

DCPS hosts an internal health and design workshop to begin establishing health goals.

2019, APRIL

The design teams and DCPS health champions meet to discuss community and school-specific health goals and plans for health promotion.

2019, MAY

A DCPS health partner conducts visits, observation, and interviews with students and staff to complete community profiles.

2019, JUNE

Design and health champions workshop to discuss the needs of the community and choose design specific strategies for each health goal.

2019, NOVEMBER

Members of DCPS and health champions develop student and staff surveys to monitor and evaluate occupancy experience.

2020, JANUARY

School construction begins. Students will remain in swing spaces until the modernization process concludes in August of 2021.



## Who we are

Founded in 2013, the Green Health Partnership (GHP) is an academic research and development group between the University of Virginia School of Medicine and the U.S. Green Building Council with funding from the Robert Wood Johnson Foundation. GHP utilizes the green movement as a platform and blueprint for creating a self-sustaining, scalable market for health promotion within the real estate industry.

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