AQUALIS

MILWAUKEE, WIS
GREEN SCHOOLYARD REDEVELOPMENT PROJECTS

Through received grants, Milwaukee Public School's (MPS) project goal was to remove tens of thousands of square feet of asphalt to manage hundreds of thousands of gallons of stormwater runoff while providing significant opportunities for students to engage in Green Infrastructure and eco-literacy topics firsthand through STEAM (science, technology, engineering, arts and mathematics) curricular connections.

PROBLEM

Since re-development in the 1970's, Milwaukee Public School schoolyards are structured with hard, impervious surfaces and do not provide students with a connection to nature or shade. Milwaukee Public Schools alone account for over five-hundred acres of impervious surfaces in the city. Without vegetation or stormwater control measures (SCMs), these play areas do not provide water quality benefits and often flood.

RESULTS

AQUALIS's Engineering Services Division (formerly Stormwater Solutions Engineering) was the lead consultant for the Green Schoolyard Redevelopment Projects during Cohorts 2, 3, 4 and 5 for Milwaukee Public Schools. The AQUALIS Engineering Services team and landscape architects redeveloped a total of twenty schoolyards, which included removing asphalt and installing green infrastructure, outdoor classrooms, and natural play structures within the MPS's schoolyards for sustainable stormwater management and student engagement. These spaces include bioswales, native prairies and grasses, permeable pavers, underground cisterns, stormwater trees, outdoor classroom features, traditional tot-lots and pavilions.

AQUALIS Engineering Services provided construction documents including engineer's cost estimates, plans and construction specifications which were used to solicit bids from contractors and obtain permit reviews through the City of Milwaukee. AQUALIS worked closely with MPS facilities and Reflo, a nonprofit that focuses on sustainable water use. Together, the groups provided site inspections, reviewed construction documents and created punch lists for contractors.

During the construction, AQUALIS worked with MPS students and Arts@Large to ensure the new schoolyards would include educational components. The focus on education coined "no child left inside" included additional curriculum for the schools to utilize the spaces as an additional learning environment. The spaces and curriculum together teach children about "green collar jobs" in the environmental sector and educate students on the importance of stormwater management.

Our professional engineers provided technical expertise and optimal, tailored solutions for sustainable water design, consultation, construction and management. From concept to completion with lifetime preventative maintenance in mind, AQUALIS has completed this project over five years.

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