

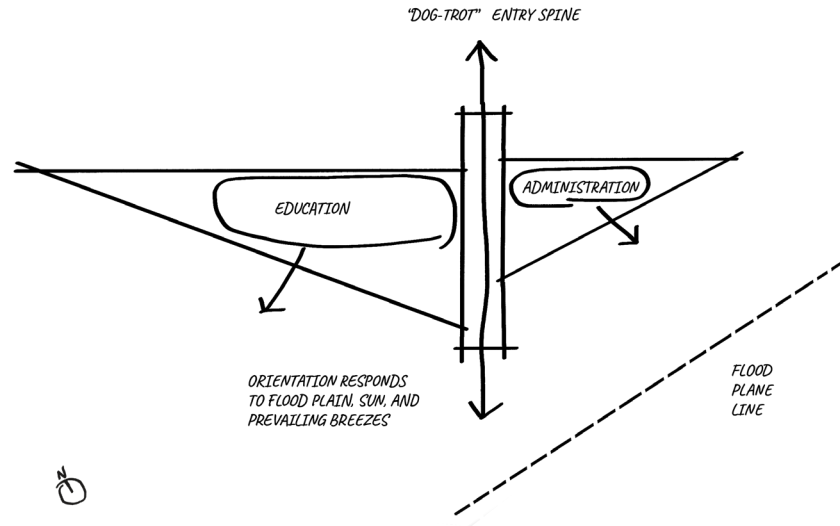
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Henrico County Public Schools
Center for Environmental Science and Sustainability



The First Living Building Public School in the U.S.

Offering a Sustainable, Regenerative
Learning Environment for K-12 Students.

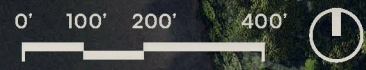
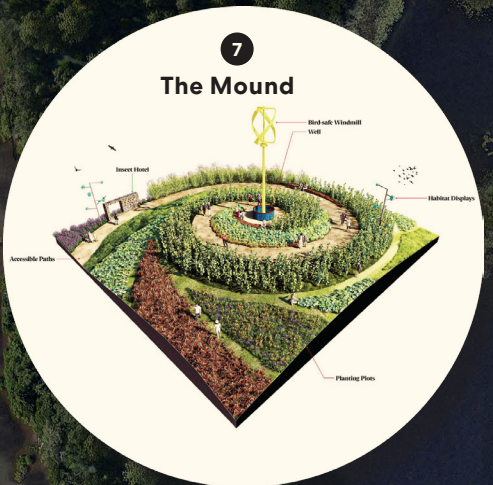


This groundbreaking project will be the first public school to pursue Living Building Challenge 4.1 certification. Located on a picturesque 1,193-acre site in Henrico County, the 11,000-square-foot facility will include classrooms, a kitchenette, a clinic, and administrative spaces, all designed with sustainability at the forefront to meet the Living Building Challenge, while respecting the site's rich cultural and environmental context. This innovative school will provide K-12 students in the Richmond and Henrico County area with hands-on learning experiences, equitable access to the outdoors, and opportunities for regenerative moments that promote environmental stewardship and sustainability.



Site Plan

- 1 Arrival Road
- 2 Historic Farmland
- 3 Drop-off & Parking
- 4 Reforestation
- 5 Trail to Center
- 6 Orchards
- 7 Wind Turbine & Mound
- 8 Agricultural Plots
- 9 Pollinator Garden & Meadows
- 10 Building Entry
- 11 Green Roof
- 12 Solar PV Roof
- 13 Outdoor Classroom / Event Lawn
- 14 Bioswale Filtration
- 15 Service Drive / Fire Access
- 16 Site History Station
- 17 Trail to Lake
- 18 Lake Station
- 19 Forest Station - Lowland
- 20 Creek Station
- 21 Forest Station - Upland
- 22 Urban Farming Plots
- 23 Historic Plantation Education Station





THE DOGTROT

ENTRANCE LOBBY

Inspired by historic Southern dogtrot houses with central breezeways for ventilation and connection, the building's entrance serves as a welcoming space, offering the first point of arrival and linking student and staff areas.



THE TOBACCO BARN

SALVAGED WOOD SIDING

7,500 SF of salvage wood from regional tobacco barns will be used as siding for the building, adding a warmth and patina that speaks to the site's and region's agricultural history.



THE SOUTHERN SCREEN PORCH

BUILDING EDGES

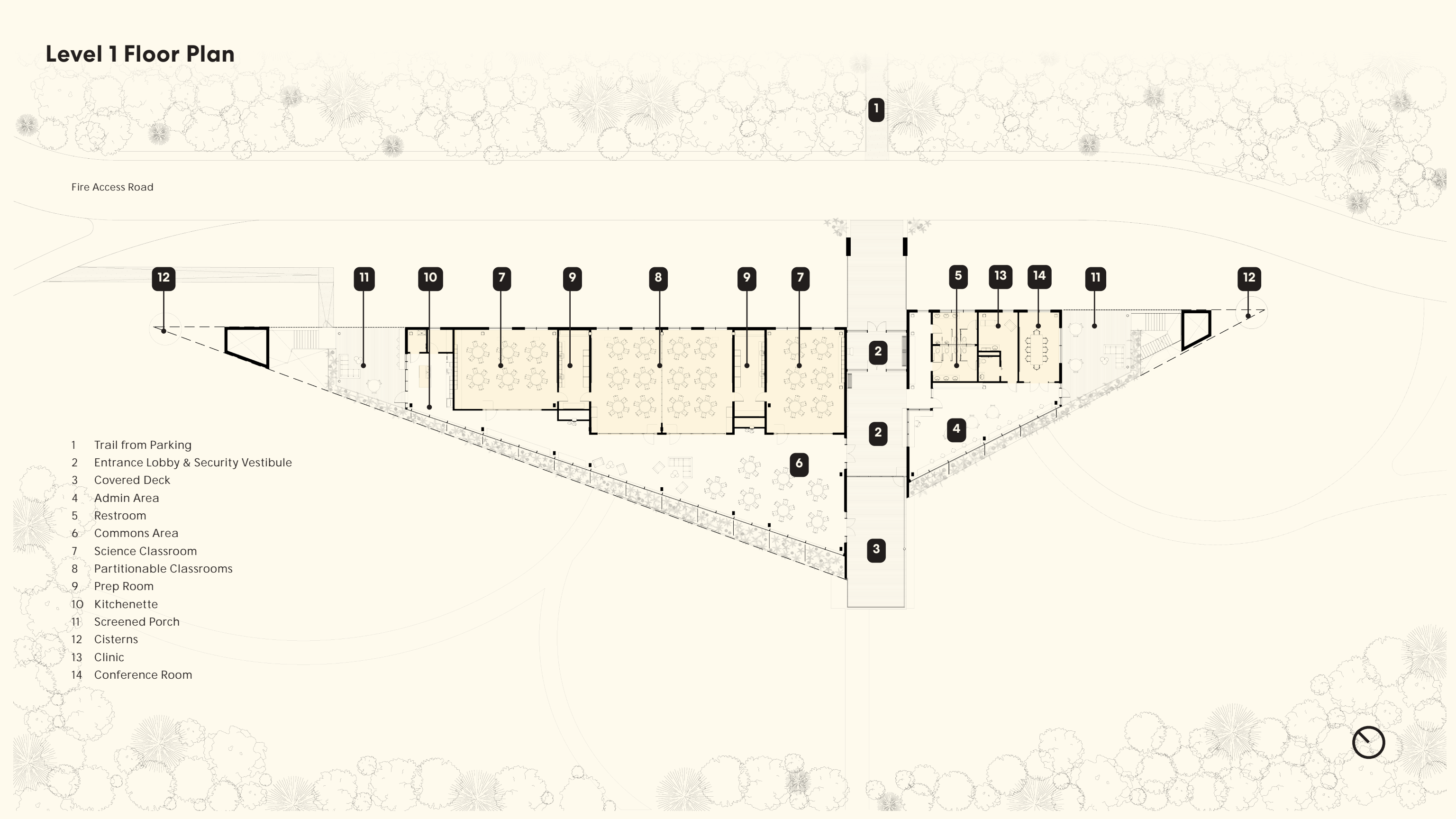
The building features screened porches at both ends, offering outdoor spaces for staff and students. The siding, inspired by the vernacular barn architecture, promotes airflow while honoring local construction traditions.

The north side of the building captivates with its striking form, draped in salvaged siding sourced from regional materials that pay homage to the timeless charm of traditional Southern architecture. Enter through a dogtrot-style lobby, which thoughtfully separates classrooms from staff offices with a sleek partition. As you approach, a winding trail through Eastern Virginia's forests leads to a moment of discovery, offering sweeping views of the historic agricultural fields, lake, and river beyond.

Level 1 Floor Plan

Fire Access Road

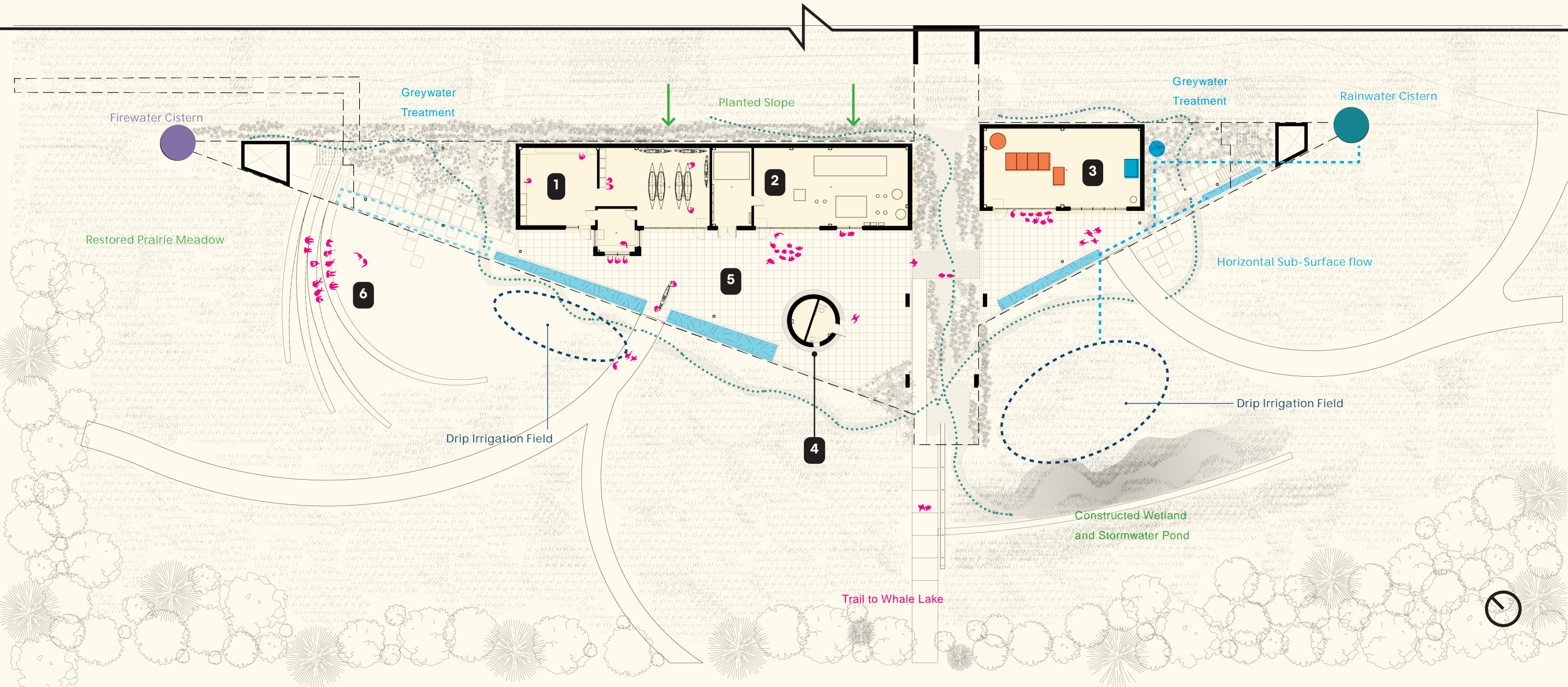
- 1 Trail from Parking
- 2 Entrance Lobby & Security Vestibule
- 3 Covered Deck
- 4 Admin Area
- 5 Restroom
- 6 Commons Area
- 7 Science Classroom
- 8 Partitionable Classrooms
- 9 Prep Room
- 10 Kitchenette
- 11 Screened Porch
- 12 Cisterns
- 13 Clinic
- 14 Conference Room



Lower Level Floor Plan

- 1 Gear Room
- 2 HVAC Room
- 3 Water Room
- 4 Restroom
- 5 Patio
- 6 Amphitheater

- Greywater
- Compost
- Stormwater Surface Flow



Commons & Classrooms



Section Through Classrooms



Cistern

Green Roof

Window Louvers

Stormwater Wetlands

Restored Prairie Meadow

Net Positive Water System & Quality

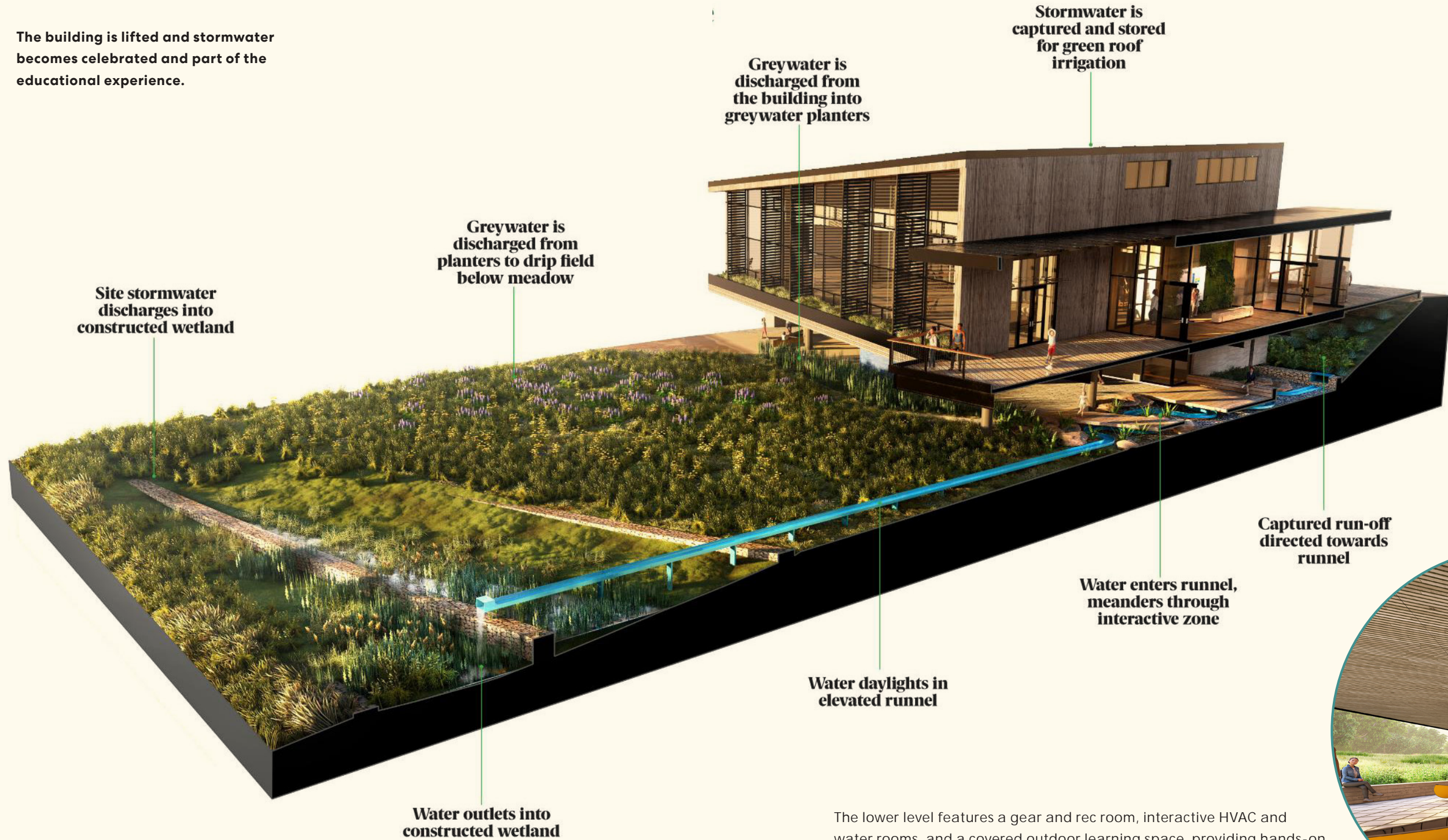
A 100% site sourced water system relying on a hybrid rainwater and well system, treated with carbon, UV, and filters, ensures superior water quality, supported by on-site greywater filtration and educational opportunities.

- 1 Entry Boardwalk
- 2 Classroom
- 3 Multi-Use Hall
- 4 Viewing Deck with Solar PV Roof

- 5 Gear Room & Systems Room
- 6 Covered Outdoor Classroom
- 7 Restroom
- 8 Trail to Lake



The building is lifted and stormwater becomes celebrated and part of the educational experience.



The lower level features a gear and rec room, interactive HVAC and water rooms, and a covered outdoor learning space, providing hands-on educational opportunities. Beneath the building, the landscape flows into a greywater treatment system, creating an engaging educational experience while supporting habitat and sustainability.



12.7 EUI!

100%

off the water grid!

105%+

of building energy and water
supplied by rooftop systems
that are visible to students
from ground level!

