

2025 Exhibition of School
Planning and Architecture
Northeast Region

Beach Elementary School
Calvert County Public Schools

Chesapeake Beach, Maryland

Beach Elementary School

Beach Babies: Honoring a Legacy, Embracing the Future



Project Introduction

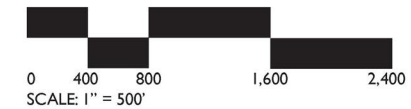
- **Location:** Chesapeake Beach, MD – a coastal town nestled on the shores of the Chesapeake Bay.
- **Proximity:** Just 28 miles from Washington, D.C.
- **Community:** Approximately 6,000 residents with strong ties to the town’s history and natural beauty.

- **Beach Elementary School (Est. 1954):**
 - Built on the site of a former schoolhouse, serving as the heart of the community.
 - Known for educating generations of "Beach Babies."
 - Deeply ingrained in local history, town pride, and the unique ecology of the Chesapeake Bay.
 - A central part of the community's cultural fabric.



LEGEND

- — — — — 1/2 MILE WALK RADIUS
- - - - - 1/4 MILE WALK RADIUS
- ARTERIAL ROAD
- LOCAL ROAD
- ● ● ● ● CHESAPEAKE BEACH RAILWAY TRAIL
- ● ● ● ● CHESAPEAKE BEACH BOARDWALK
- PROJECT SITE
- 🏛️ CHESAPEAKE BEACH TOWN HALL
- 🏛️ CHESAPEAKE BEACH RAILWAY MUSEUM
- 🛍️ CHESAPEAKE STATION SHOPPING CENTER
- 🌿 BAYFRONT PARK



Beach Elementary School



Collaborative Visioning & Educational Specification

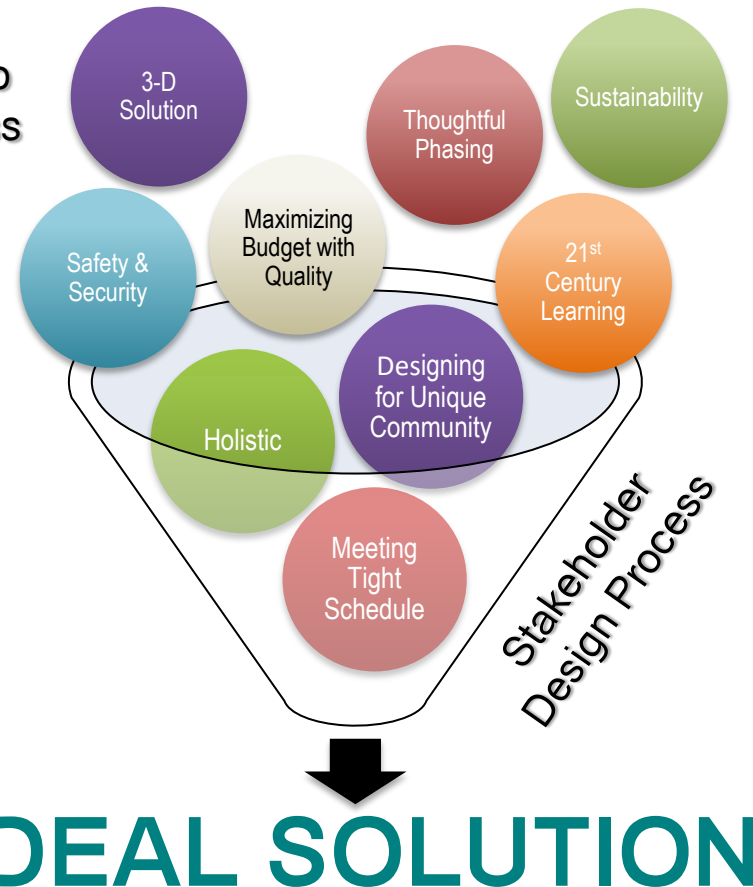
Planning Process

The planning process for Beach Elementary School began with the creation of a comprehensive Educational Specification (Ed Spec) by 17 diverse stakeholders, including Beach ES administrators, teachers, parents; the school district's curriculum supervisors; and representatives from Maryland State Department of Education (MSDE) and the Town of Chesapeake Beach.

The Ed Spec was developed collaboratively to define the school's vision, goals, and educational priorities.

The architect also provided key insights during a next-generation learning environments presentation, emphasizing how the built environment influences student outcomes and engagement.

Keys to Success

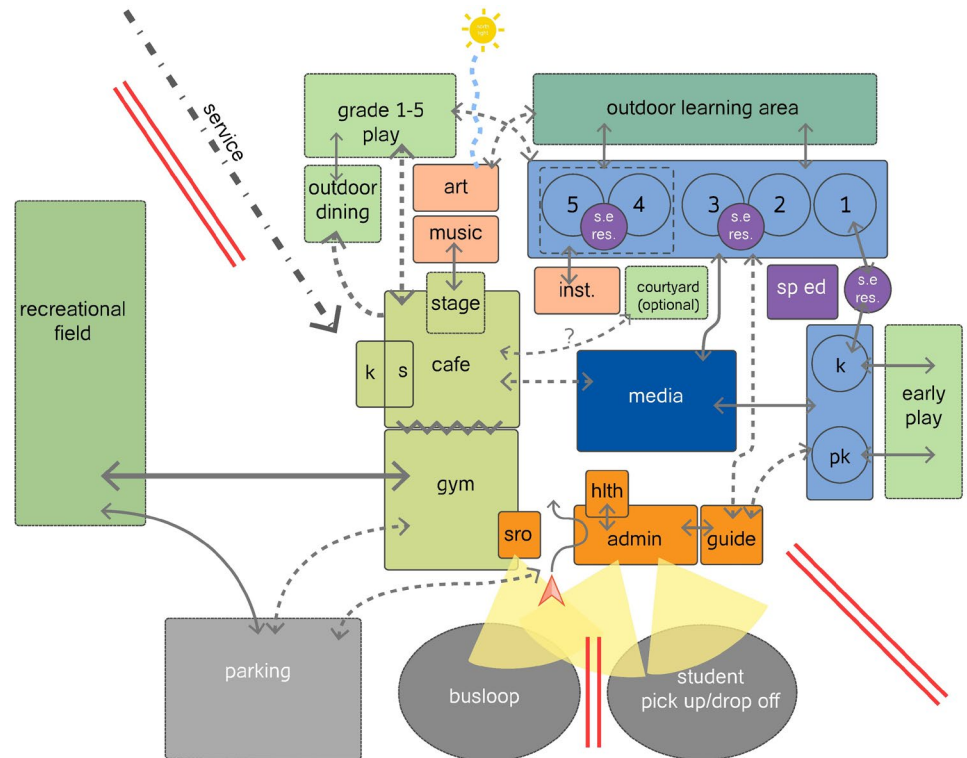


Stakeholder Engagement: Feasibility Study

Planning Process

A thorough Feasibility Study process gathered input from critical community stakeholders including the Beach ES Principal, Teachers and Parents as well as the school district's Directors and Supervisors of Construction, Operations and Transportation. Each stakeholder represented a broader constituent group and reported back throughout the process.

The group engaged in multiple interactive sessions at Beach Elementary School, reviewing existing conditions, exploring ideal adjacencies and defining the ultimate replacement approach. Through visioning sessions, feedback on design options, and refinements to plans, stakeholders shaped the concepts. The study results were presented to the Board of Education, ensuring that the community's needs were at the heart of the design process.



Adapting to Change: Virtual Collaboration during COVID-19

Planning Process

In early 2020, as the schematic design phase began, the stakeholder group reconvened to refine the selected replacement approach. With the onset of COVID-19, collaboration quickly transitioned to virtual, via Microsoft Teams, maintaining engagement despite the shift to remote work. The strong relationships established during the Feasibility Study ensured that stakeholder input remained robust and continuous.

Enhanced visual tools, including graphics and rating systems, were developed to gather detailed feedback and fine-tune the design in an online environment.

Chat

- SW Shuchita Warner 5/4 4:22 PM I think we should eliminate Option C
- CG Casey Grenier 5/4 4:22 PM I think I prefer option D
- SW Shuchita Warner 5/4 4:22 PM I like Option D the best
- G Gloria 5/4 4:23 PM Option D seems to solve most of the issues
- EC Ed Cassidy 5/4 4:23 PM I like D, then B, then A,
- DB Darrell Barricklow 5/4 4:23 PM Couldn't we deal with the cross traffic through the CLAs with low railings?
- MS Mike Shisher 5/4 4:23 PM I like D with the SE stairs and NW stairs. During drills all stairs would be exit stairs.
- JH Joel Helm 5/4 4:23 PM I am stuck between A and D from a 5th grade point of view

| | B-1 | B-2 | C-1 | C-2 |
|---|-----|-----|-----|-----|
| HOLISTIC | | | | |
| Public Green on Site | ✓ | ✓ | | ✓ |
| Public Green on Bayside Road | | ✓ | | ✓ |
| Transit Zone Creates Buffer between Public Green & School | | ✓ | | ✓ |
| SUSTAINABILITY | | | | |
| Ideal Solar Orientation | | | | ✓ |
| Smallest Footprint (limits impervious pavement) | | | | ✓ |
| 21ST CENTURY LEARNING | | | | |
| Collaboration Spaces with Natural Light & Views | | | ✓ | ✓ |
| Controlled Collaboration Spaces | | | ✓ | ✓ |
| Location Adjacent to Fishing Creek | | ✓ | ✓ | ✓ |
| Direct Adjacency of Interior & Outdoor Learning Spaces | ✓ | ✓ | ✓ | ✓ |
| Shortest Travel Distances | | | | ✓ |

Chat

- SW Shuchita Warner 4/6 4:54 PM Does anyone have any concerns with a 3 story ES option?
- JH Joel Helm 4/6 4:55 PM I like the 3 story option the best
- MS Mary Sterling 4/6 4:55 PM C2 - 3 Story makes the design more attractive in my opinion
- CG Casey Grenier 4/6 4:55 PM C2 While 3 story would be new, I think that with planning and organization it would not be a problem
- EC Ed Cassidy 4/6 4:56 PM As long as the youngest students were on the ground floor, so they don't have to evacuate during a fire drill
- G Gloria Mikolajczyk 4/6 4:58 PM Do we have enough square footage to make the stairs more attractive - wider/easier to navigate?

Ran Ilkovich

Ran Ilkovich

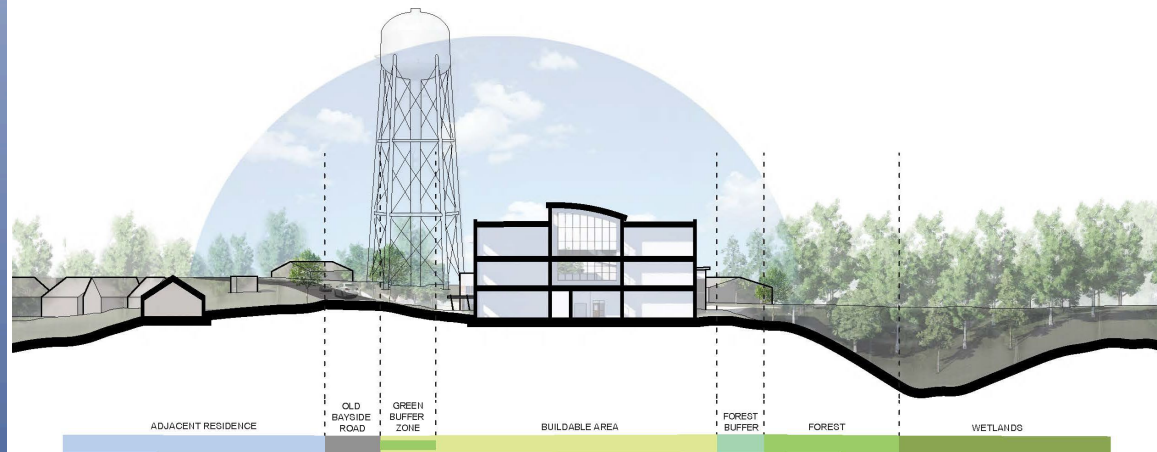
Cohesion with the Town of Chesapeake Beach

Planning Process

Research into the Town of Chesapeake Beach's 2040 Vision Statement identified five core themes that served as guiding principles during the design:

- Building an Interconnected Town
- Develop the Vibrancy of the Community
- Preserving & Enhancing the Small-Town Charm
- Innovative & Dedicated to Public Works & Places
- In Balance with the Environment

A key challenge in the planning process was the town's zoning ordinance. The design team engaged with the Town of Chesapeake Beach Planning Commission to secure a special exception and variances to permit an educational use in the residential zone and a building that exceeded the permitted 35 feet in height. Compelling graphics, well-supported arguments, and community wide collaboration harnessed support to ensure the design integrated the school's functional needs in a way that enhanced the town's vision.

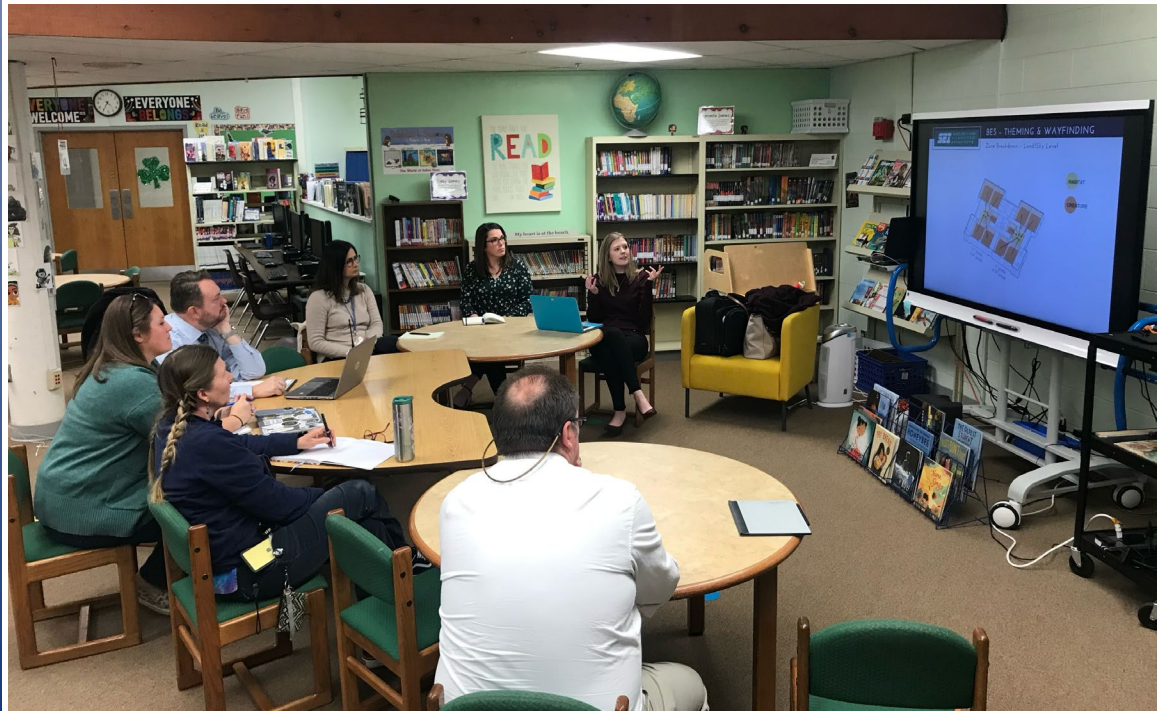
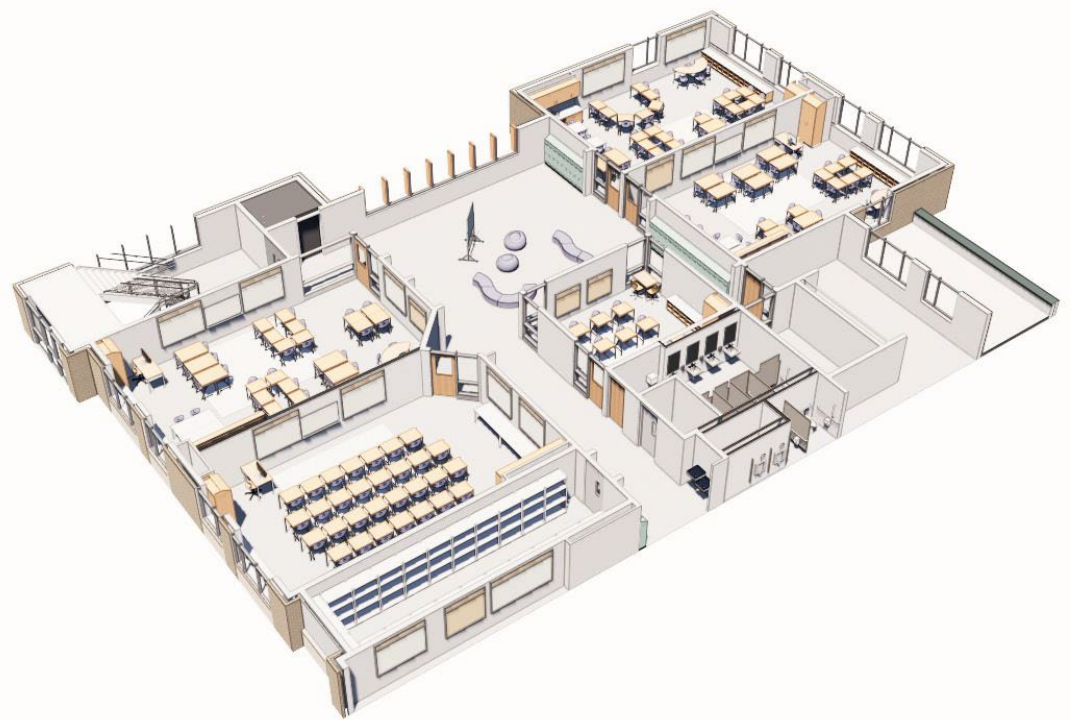


Design Implementation

Planning Process

During the design development phase, collaboration with curriculum stakeholders from each educational department resulted in tailored spaces that would support the school's evolving pedagogy, offering flexibility for next generation learning.

Close coordination with the school district's Facilities, Maintenance, and the construction team ensured that systemic decisions were aligned with the educational and sustainability goals.



Community Vision: Beach ES' Uniqueness

Community Environment

Research and community engagement led to an understanding of the community's unique character ensuring that its history, ecology, and spirit were deeply embedded in the project. The involvement of consistent project champions across all committees—education specifications, feasibility, and design—allowed ideas to evolve and adapt while maintaining a continuity of vision.

During the visioning session, stakeholders identified key elements they wanted to see reflected in the new Beach Elementary School design, as shown in the image to the right.

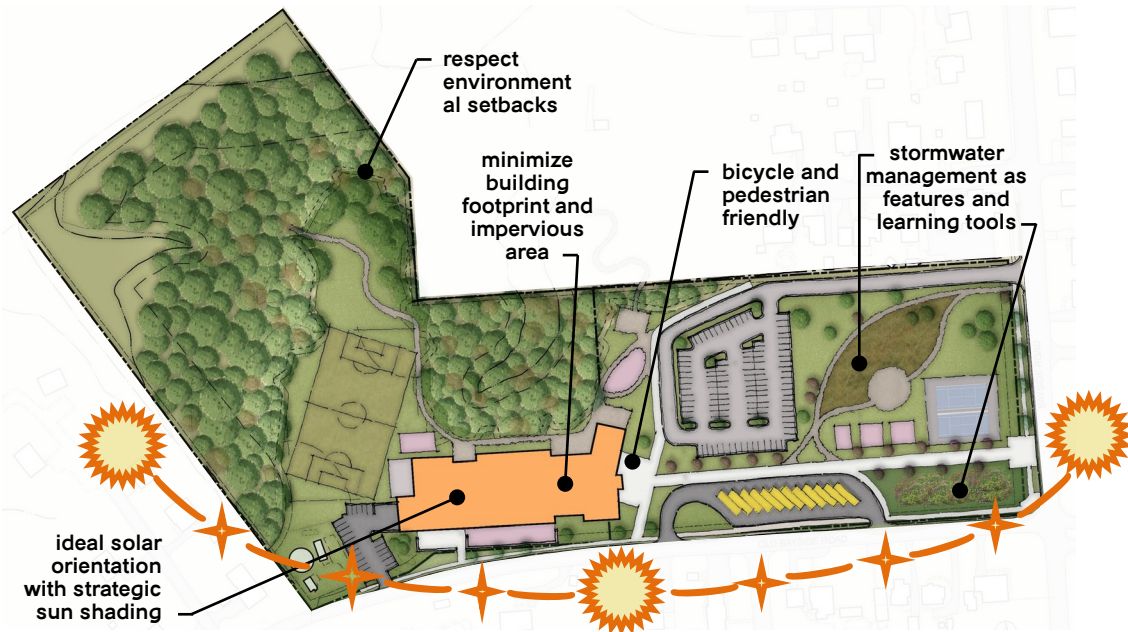
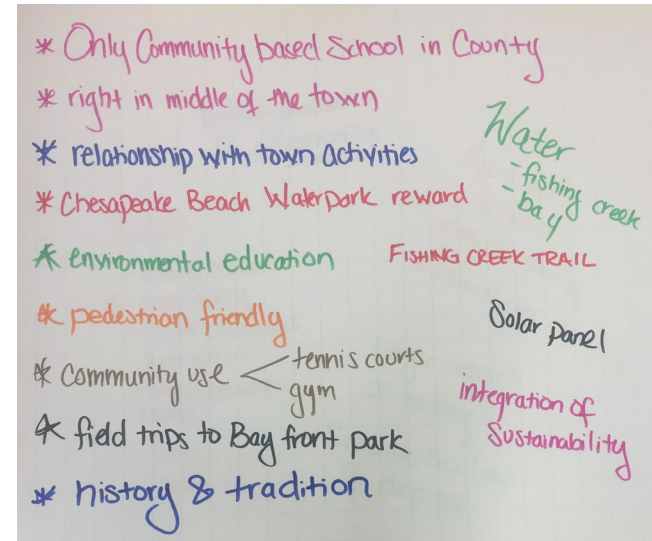
These stakeholder aspirations resulted in:

- LEED Silver certification, showcasing the school and community's commitment to sustainability

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Visioning Question #1:

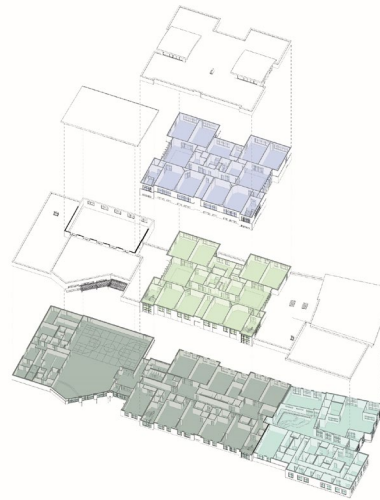
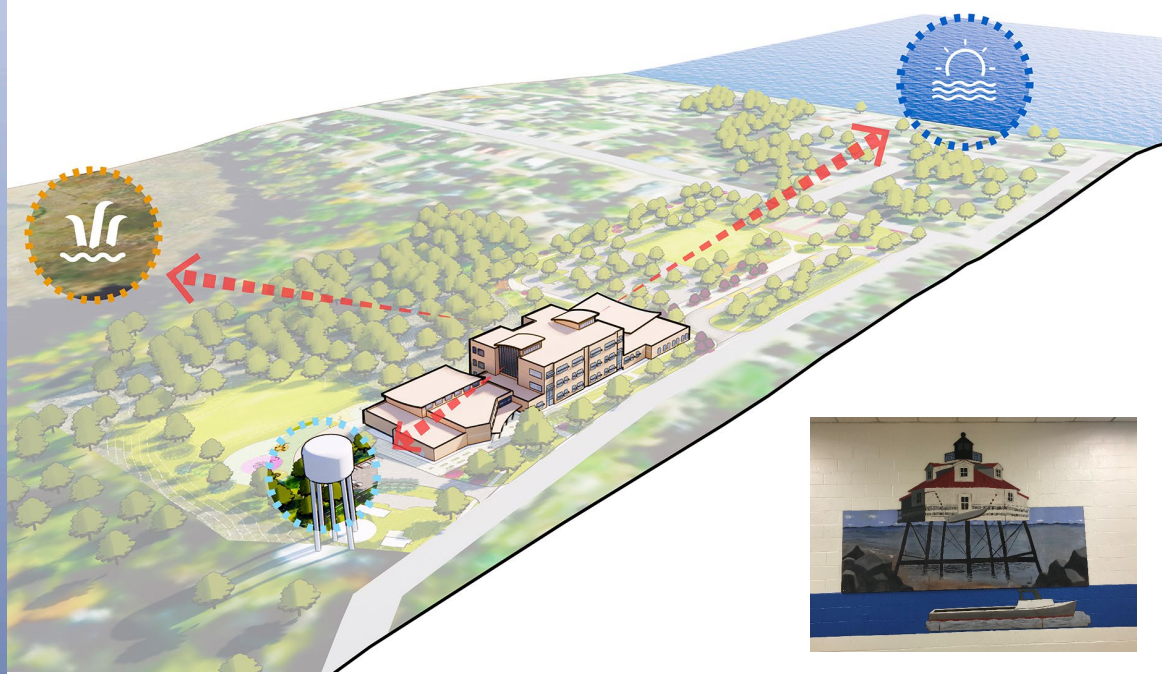
What is unique about Beach Elementary School that should be infused into the design?







Community Vision: Beach ES' Uniqueness

Community Environment *(continued from previous slide)*

- A three-story structure inspired by the shape of a lighthouse, with expansive views of the Chesapeake Bay from the third-floor collaboration area
- The building's "Landscape for Learning" theme, transforming the structure itself into an educational tool that highlights the local ecology
- The site design embraces a park-like atmosphere, complete with walking paths and community amenities, all thoughtfully integrated into the Town's pedestrian plan



LANDSCAPE FOR LEARNING

| | | |
|---|--|--|
| Sky Level | 5TH GRADE | 4TH GRADE |
|  | American Coot Bald Eagle Baltimore Oriole Barred Owl | Blue-Winged Teal Common Loon Great Blue Heron Bufflehead |
| Land Level | 3RD GRADE | 2ND GRADE |
|  | Deer Black Bear Bobcat Coyote | Red Fox Opossum Eastern Cottontail Fischer |
| Wetlands Level | 1ST GRADE | EARLY EDUCATION |
|  | River Otters Beavers Diamondback Terrapin Muskrat | Eastern Tiger Salamander American Black Duck Baltimore Checkerspot Green Treefrog |
| Bay Level | ADMIN | ART & MEDIA |
|  | Brown Bullhead Bottlenose Dolphin Atlantic Croaker Black Sea Bass | Blue Crab Bay Scallop Oysters Grass Shrimp |

Community Vision: Key Priorities

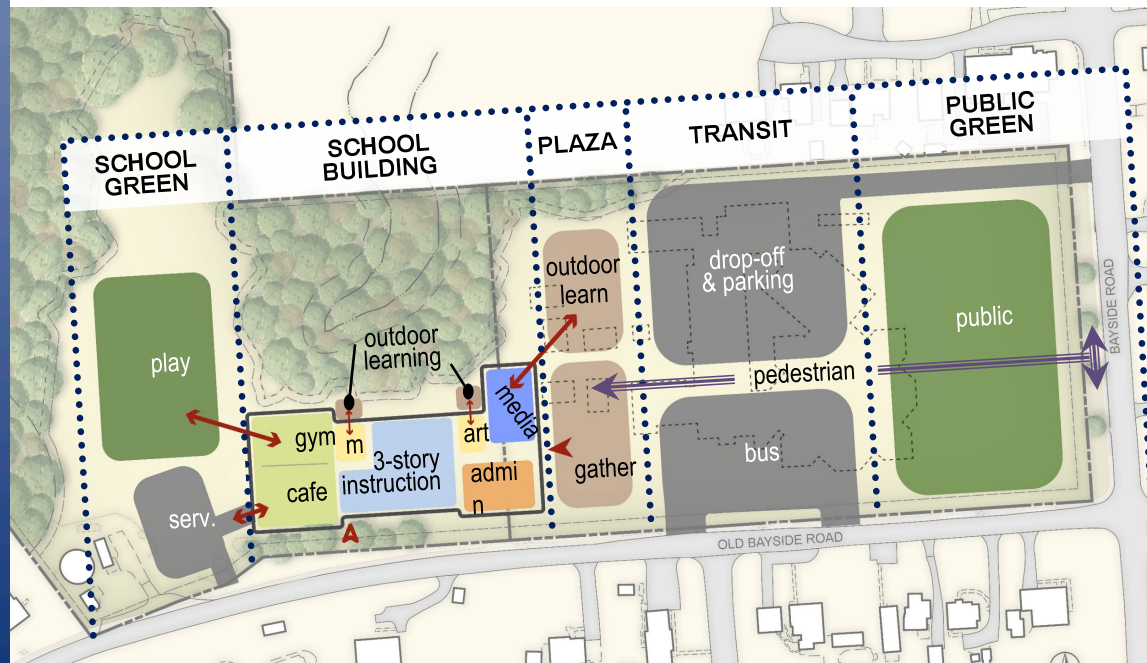
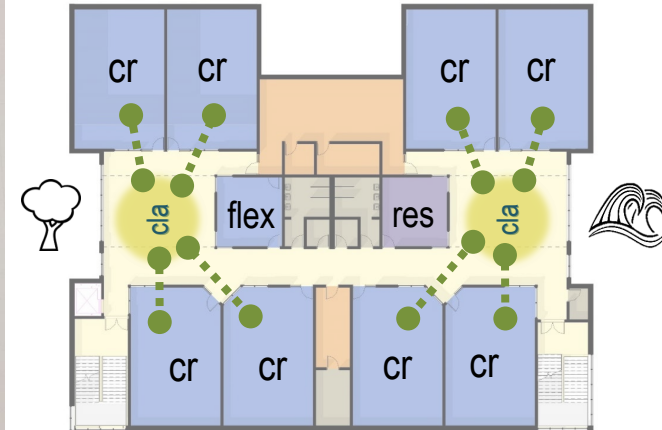
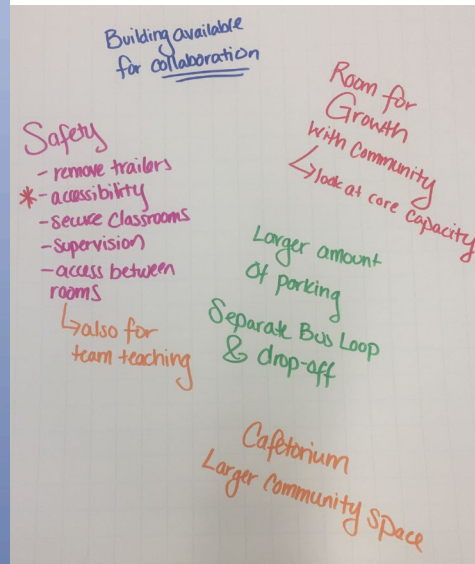
Community Environment

During the visioning session, the community emphasized several key priorities for the new Beach Elementary School directly resulting in:

- Collaborative spaces that are safe, adaptable, and accessible for all students
- Integrated safety and security features throughout the building, including secure zones for supervision and lockdown situations. These are complemented by calming colors and biophilic elements to enhance students' sense of security and well-being.
- A well-organized separation of bus loop, drop-off, and pedestrian traffic, ensuring smooth circulation without disrupting road traffic, while also accommodating both school operations and community events.

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Visioning Question #2: What are your key priorities for the new Beach Elementary School?



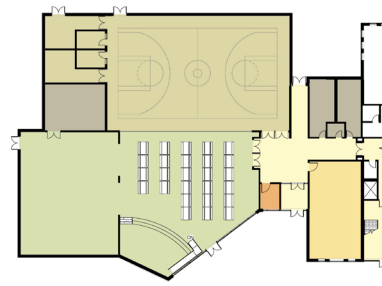
Community Vision: Key Priorities

Community Environment

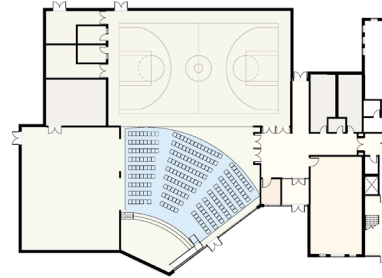
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- A flexible cafeteria/gymnasium design that allows for school day functions as well as large community events and performances.
 - The cafeteria was thoughtfully designed to accommodate the kitchen serving lines, stage, and a connection to the gymnasium, while allowing ample natural light and views.
 - A moveable partition between the cafeteria and gymnasium provides acoustical separation when closed and expanded seating capacity when open – all with excellent sightlines to the stage.
 - Community accessible spaces were compartmentalized from the learning environments for after hours security.

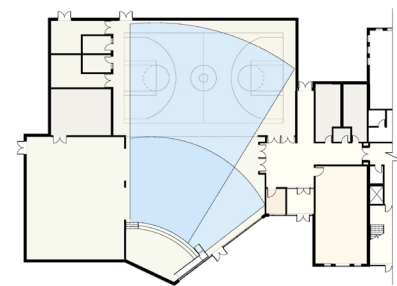
school day
configuration



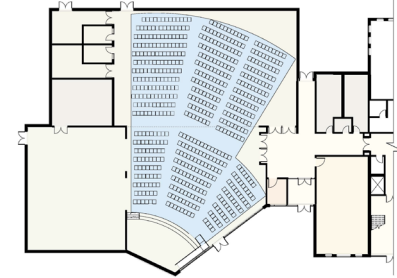
small performance
configuration



view lines



large performance
configuration



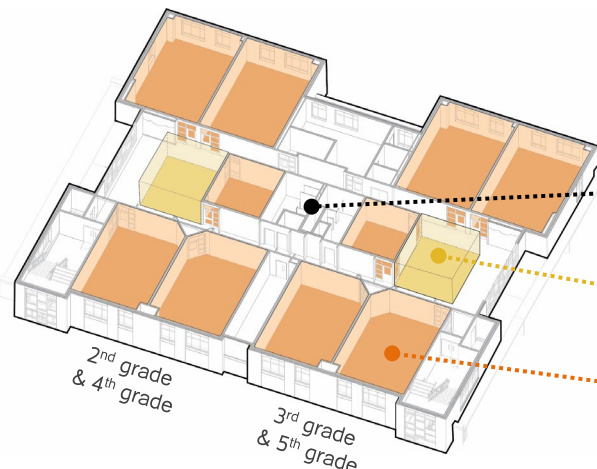
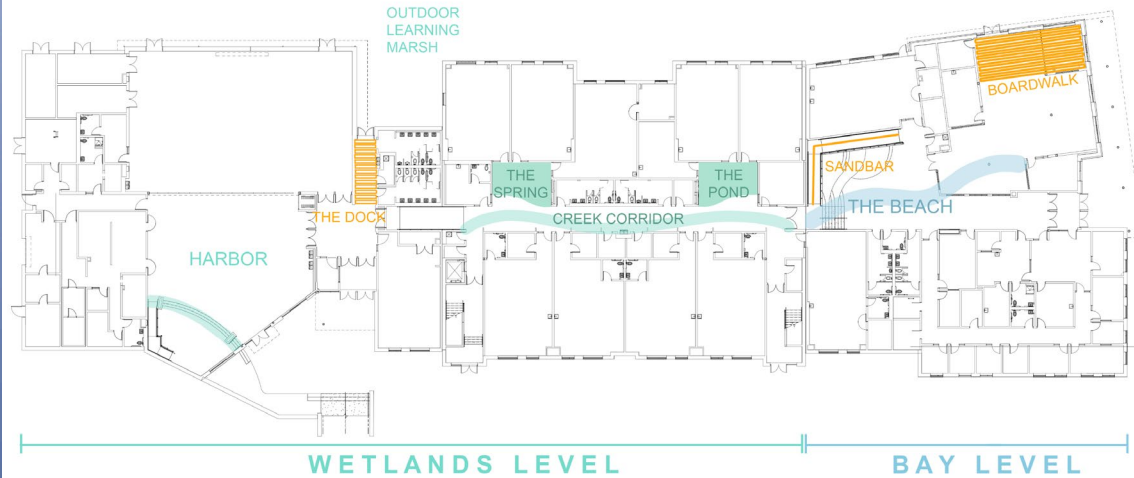
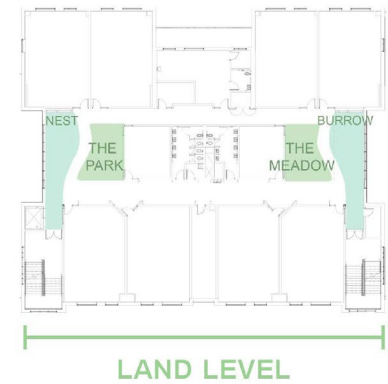
Landscape for Learning

Learning Environment

The “Landscape for Learning” theme, immerses students in the study of the Chesapeake Bay while also serving as a wayfinding tool to help them navigate the school with confidence. The interior design organizes the school into distinct environments by level:

- Ground Level: Bay (Entrance, Library, Art)
- 1st Level: Wetlands (Early Ed, 1st, Café, Gym)
- 2nd Level: Land (2nd & 3rd Grades)
- 3rd Level: Sky (4th & 5th Grade)

Within these environments, the design features Habitats (collaboration areas) and Creatures (classrooms). Each class can annually select and study their representative "creature" that inhabits the corresponding environment and habitat. Flexible signage allows the creatures to evolve each year, keeping the space dynamic and engaging for students.



LEVEL environments

COLLABORATION habitats

CLASSROOMS creatures



level signage



habitat signage



creature signage

Landscape Elements




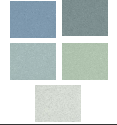


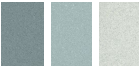




Learning Environment

The interior design incorporated biophilic elements—such as circles, waves, and linear shapes—to evoke the unique characteristics of the different environments (Bay, Wetlands, Land, and Sky).

The goal was to create a cohesive experience throughout the building while maintaining a cost-conscious approach. This was achieved by reusing materials and colors in various applications across the design.

A floor color palette of five complementary shades was developed, and by strategically mixing and matching these hues, different sensory experiences were created in each space.

Circular acoustical ceiling clouds, half-round wooden dowels, and paint colors were applied at each level in diverse shapes and patterns, reflecting the environment each space represented. Wave patterns were thoughtfully integrated into the floors, ceilings, and walls to mimic the natural forms found within these environments, further enhancing the biophilic connection and the overall design aesthetic.

| | Circles | Waves | Linear | Color | |
|--------------------|---|--|---|---|---|
| | | | | Floor | Paint |
| Inspiration |  |  |  |  | |
| BES Design | Lighting Acoustical Ceilings | Flooring Walls (paint) Learning Stairs | Walls (tactual elements) Ceilings Lighting |  |  |
| Bay | Bubbles Periscope Sun Glitter | Waves Sandbar | Boardwalk |  |  |
| Wetlands | Fireflies Insects | Waves Landscape | Reeds |  |  |
| Land | Tree Canopy Burrows/ Nests | Grass Pathways | Tree Trunk |  |  |
| Sky | Clouds | Wind Air | Precipitation |  |  |

Bay Level

Learning Environment

The entrance serves as a welcoming space, beginning with students submerged beneath the water in the Bay and guiding them toward the sandbar. Darker hues and wave patterns on the ceiling and floor reflect this immersive experience, setting the tone for the journey ahead.

The sandbar was designed to address the site's topographical changes, featuring both steps and a ramp that create a central gathering space for students to learn, socialize, regulate, and celebrate. The elevated plateaus are carpeted in a color that mimics sand, offering students a tactile, comforting experience as they transition through the space.

Accessed from the sandbar, the library features an early education reading area, a full classroom, a space for book stacks, a makerspace, and a production room—unlocking multiple intelligences in a single, dynamic environment.



Wetlands & Land Levels

Learning Environment

As you walk up the sandbar, you enter the “Wetlands,” where the color palette shifts from deep blues to soothing blue-greens. The half-round dowels echo the reeds found in the Chesapeake Bay’s wetlands, creating a visual and tactile connection to the environment.

Moving upstairs to the next level, you enter “Land,” where controlled collaborative learning areas (CLAs) are strategically integrated within the 2nd and 3rd grade clusters. These areas are designed to offer visibility into classrooms, fostering an open and interconnected learning environment. The CLAs are flanked by whiteboards, clear floor markings, and flexible furnishings that encourage active learning throughout the space. Resource rooms are thoughtfully positioned next to the CLAs, providing acoustically separated spaces for pull-out sessions while maintaining visibility in their corners.

The “Land” level also offers views of the surrounding forested areas. The interior design mirrors this natural landscape, incorporating green hues that evoke the forest. Here, the half-round dowels transform into tree trunks, with green acoustic panels representing the tree canopy, further immersing students in the natural world.



Sky Level

Learning Environment

The third level, “Sky,” offers breathtaking views of the Chesapeake Bay from the CLA for 4th and 5th graders. The soaring ceilings, paired with a light blue and white color palette, create an airy, uplifting atmosphere. White acoustical panels are designed to resemble clouds, effectively controlling sound and defining space to support various learning styles. The half-round dowels now symbolize precipitation, adding to the sky-inspired theme.

Each classroom is thoughtfully designed to support differentiated learning, with a main teaching wall, guided learning area, wet area, and small group learning spaces. The flexible layout allows teachers to easily adapt the room to suit different activities. Large windows invite ample natural light and offer sweeping views of the surrounding landscape, further enhancing the connection to the outdoors.



Connection to Outdoors

Learning Environments

Outdoor learning environments seamlessly complement the interior educational spaces.

The beloved former Principal, of over 30 years, championed a robust chess program. This cherished program inspired the development of a full-sized chessboard on the school grounds - offering students a unique, hands-on, kinesthetic learning experience.

An outdoor learning area was thoughtfully placed outside the media center and art room, providing a space for outdoor reading and messy projects, fostering a deeper connection to nature.

The playgrounds, located adjacent to the cafeteria and gymnasium, are surrounded by the forest and mirror the circular design elements found within the school's interior.

Finally, a community gathering plaza with outdoor performance space was designed adjacent to the cafeteria, offering easy access to community amenities after school hours, reinforcing the school's connection to the surrounding neighborhood.



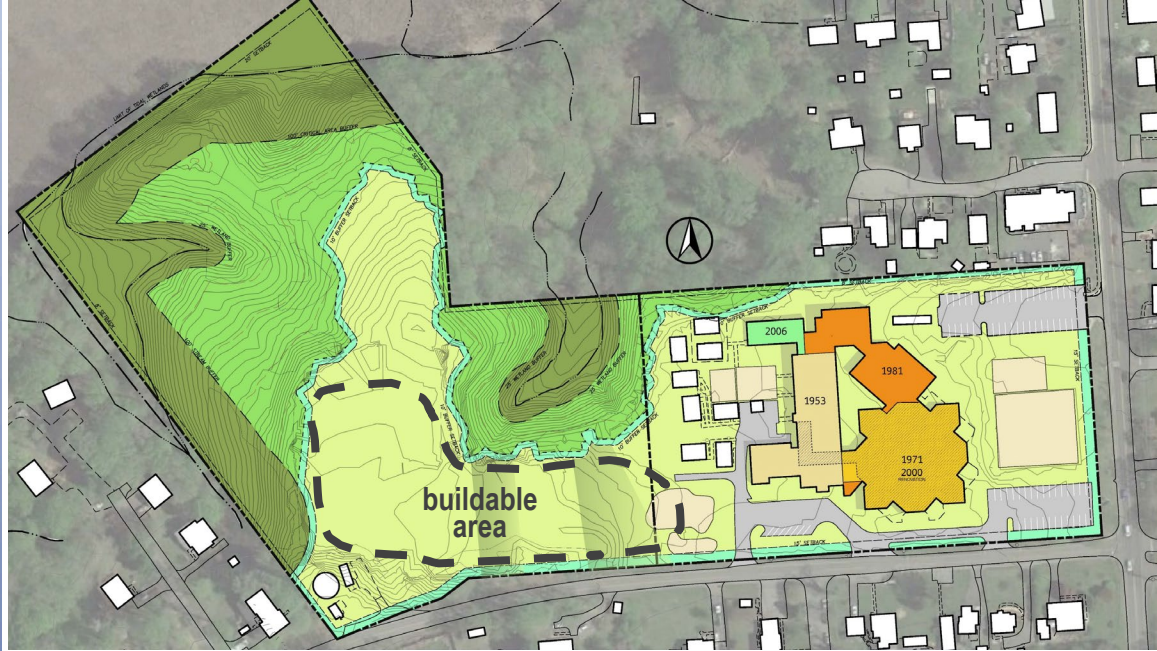
Three-Dimensional Solution

Physical Environment

While a three-story elementary school is atypical for rural Calvert County and this size population, the constraints of a phased while-occupied site with challenging topography left little remaining buildable area for the new school.

The replacement philosophy on the occupied site ensured that the new building feels as though it always belonged in that location. Blending seamlessly with its surroundings, the building reads as a school within a park.

During a winter survey of the existing school's roof, the architects noticed a faint glimpse of the Chesapeake Bay just a block away. This exciting potential became the inspiration for the design of the building's massing. By positioning the three-story structure on the site's highest plateau, the design would not only make the most of the available space but also offer breathtaking views of the Bay for both students and staff.

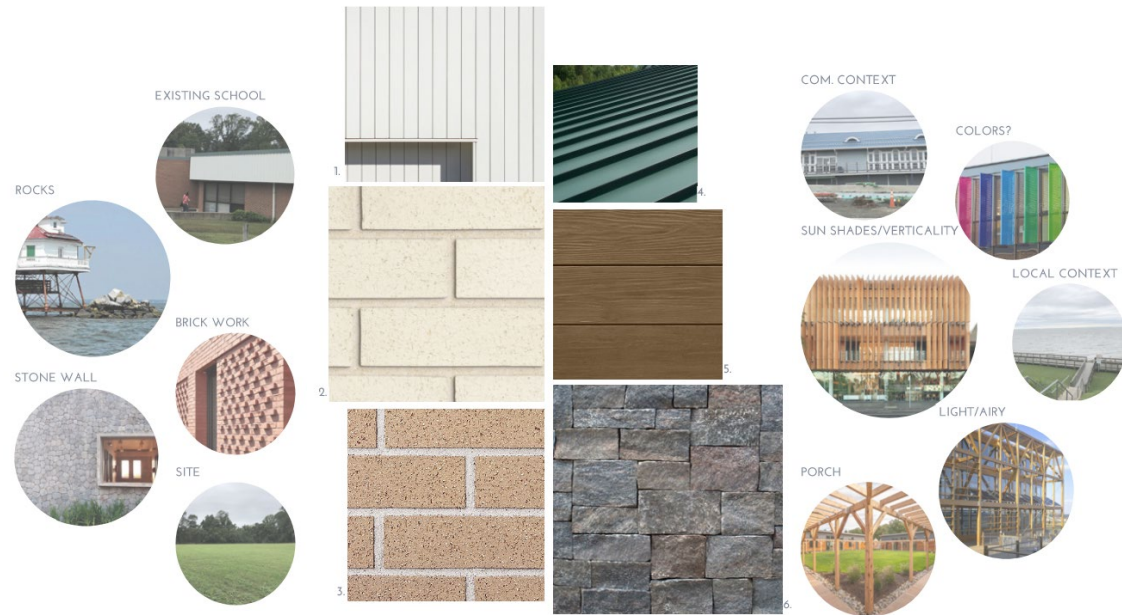


Lighthouse Inspiration

Physical Environment

Drawing inspiration from the town's iconic "lighthouse" architecture, the design team crafted a building that respects the town's architectural character.

The building's massing, a series of local symmetries, and thoughtful material choices work together to break down the scale of the structure, evoking a nautical theme. As the building rises, the materials transition in color, becoming lighter as the eye moves upward, tying the design to the surrounding maritime landscape.



Nautical Influence

Physical Environment

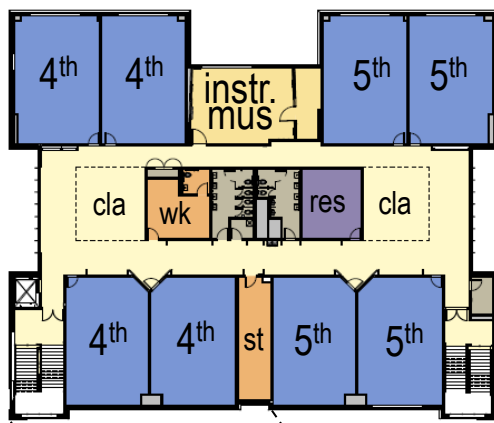
The sweeping roofs, crafted with durable metal panels that mimic the texture of wood, evoke the graceful lines of local sail boats.

Expansive windows along the central collaboration areas are adorned with colored glass, offering a homage to the sea glass found along the nearby beaches.

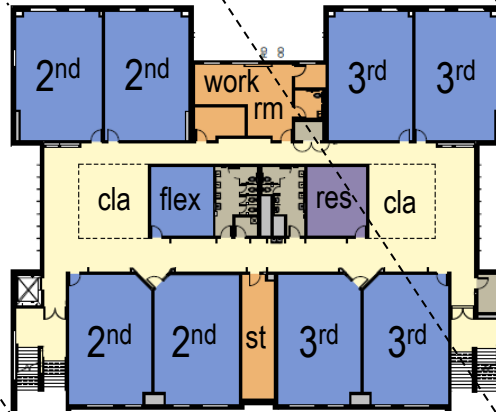


Floor plan

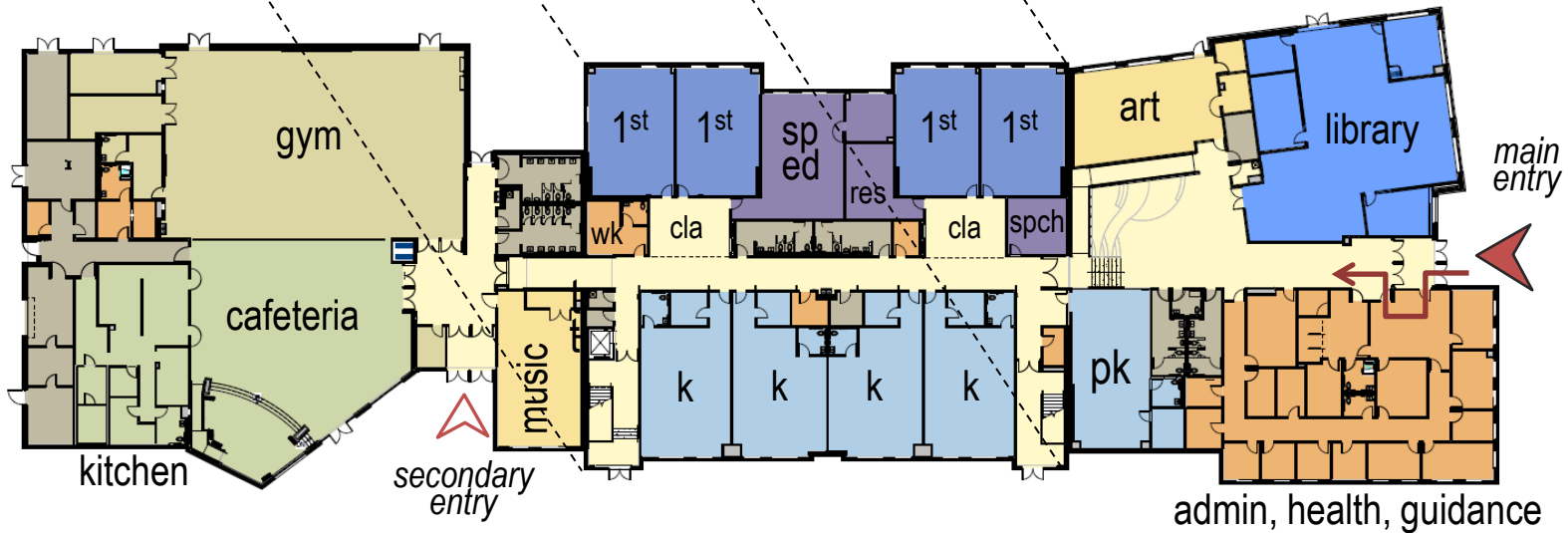
Third Floor



Second Floor



First Floor



Exhibition of School Planning and Architecture

Project Data

| | |
|----------------------------------|---------------------------------|
| Submitting Firm : | Smolen Emr Ilkovitch Architects |
| Project Role | Architect |
| Project Contact | Ran Ilkovitch, NCARB, AIA |
| Title | President |
| Address | 9211 Corporate Blvd, Suite 340 |
| City, State or Province, Country | Rockville, MD 20850 |
| Phone | 301-770-0177 |

| | |
|----------------------------------|--|
| Joint Partner Firm: | |
| Project Role | |
| Project Contact | |
| Title | |
| Address | |
| City, State or Province, Country | |

| | |
|----------------------------------|---------------------------------|
| Phone | |
| Planner on Record: | Smolen Emr Ilkovitch Architects |
| Name | Krystal McGee, ALEP |
| Address | 9211 Corporate Blvd, Suite 340 |
| City, State or Province, Country | Rockville, MD 20850 |
| Phone | 301-770-0177 |
| Email | kmcgee@seairch.com |

| | |
|----------------------------------|------------------------------|
| Construction Firm: | Oak Contracting |
| Project Role | Construction Manager at Risk |
| Project Contact | Chris Marschhauser, CCM |
| Title | Vice President |
| Address | 1000 Cromwell Bridge Rd |
| City, State or Province, Country | Towson, MD 21286 |
| Phone | 410-828-1000 |

Exhibition of School Planning and Architecture

Project Details

| | |
|----------------------------------|--|
| Project Name | Beach Elementary School |
| City | Chesapeake Beach |
| State | Maryland |
| District Name | Calvert County Public Schools |
| Supt/President | Dr. Andrae Townsel |
| Occupancy Date | Building: August 2023 |
| Grades Housed | Pre-Kindergarten – Grade 5 |
| | |
| Capacity(Students) | 578 students |
| Site Size (acres) | 17.99 acres |
| Gross Area (sq. ft.) | 74,444 SF |
| Per Occupant(pupil) | 129 SF/student |
| gross/net please indicate | |
| | |
| Design and Build? | Construction Management at Risk |
| If yes, Total Cost: | \$31,750,095 |
| Includes: | CM fees, all trade costs, site development |
| Project Costs | |
| If no, | |
| Site Development: | |
| Building Construction: | |
| Fixed Equipment: | |
| Other: | |
| | |
| Total: | |