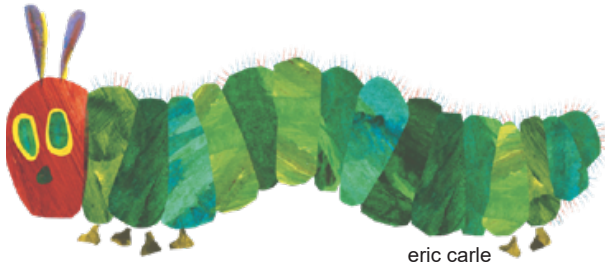




MILLBROOK EARLY LEARNING CENTER
WAKE COUNTY PUBLIC SCHOOL SYSTEM

the caterpillars at millbrook
we grow, learn, and transform...



eric carle



1 | EXECUTIVE SUMMARY

Co-located on the existing Millbrook Elementary School campus, this Early Learning Center is the first freestanding public preschool for the Wake County Public School System (WCPSS). Eight classrooms filled with natural light surround a shared, dynamic play space to create safe and nurturing indoor and outdoor learning environments. This building addresses the needs identified by the North Carolina Governor's Early Childhood Action Plan to provide access to high quality early education, food security, emotional support, and academic support. Designed to exceed the standards for pre-k education spaces in the County, this building also meets the Five Star Daycare rating requirements.

The eight classroom spaces and administrative services wrap around an outdoor-play landscape, blurring the line between indoor and outdoor learning. The program creates a safe and nurturing learning environment, builds racial and cultural equity, and provides affordable access to early learning. This building is designed to enhance the work of early childhood educators and early learning students and will have an impact for the children many years beyond the foundations of their pre-k education.

This project provides multiple benefits across the triple bottom line. This building provides access to high quality early education, food security, emotional support, and academic support. This building is designed to enhance the work of early childhood educators and early learning students, and will have an impact for the children many years beyond the foundations of their pre-k education.

As part of the Wake County Public School System, the Early Learning Center strives to make high quality early education accessible to the entire county. The location of the building was determined by a thorough study to identify the highest area of need in the county - providing early education to Title 1 and special needs students. The center serves multiple needs beyond early education which include providing food, emotional support, early identification of additional support to students and a safe nurturing environment.



QUICK SPECS

OWNER	WAKE COUNTY PUBLIC SCHOOLS
AGES SERVED	3-5
COST TO FAMILIESS	\$0
DAYLIT CLASSROOMS	8
STUDENTS SERVED	132
BUILDING FOOTPRINT	25,730 SQ FT
AREA PER STUDENT	189 SQ FT
OUTDOOR PLAY AREA	31,000 SQ FT
RESTORED WETLAND	40,000 SQ FT

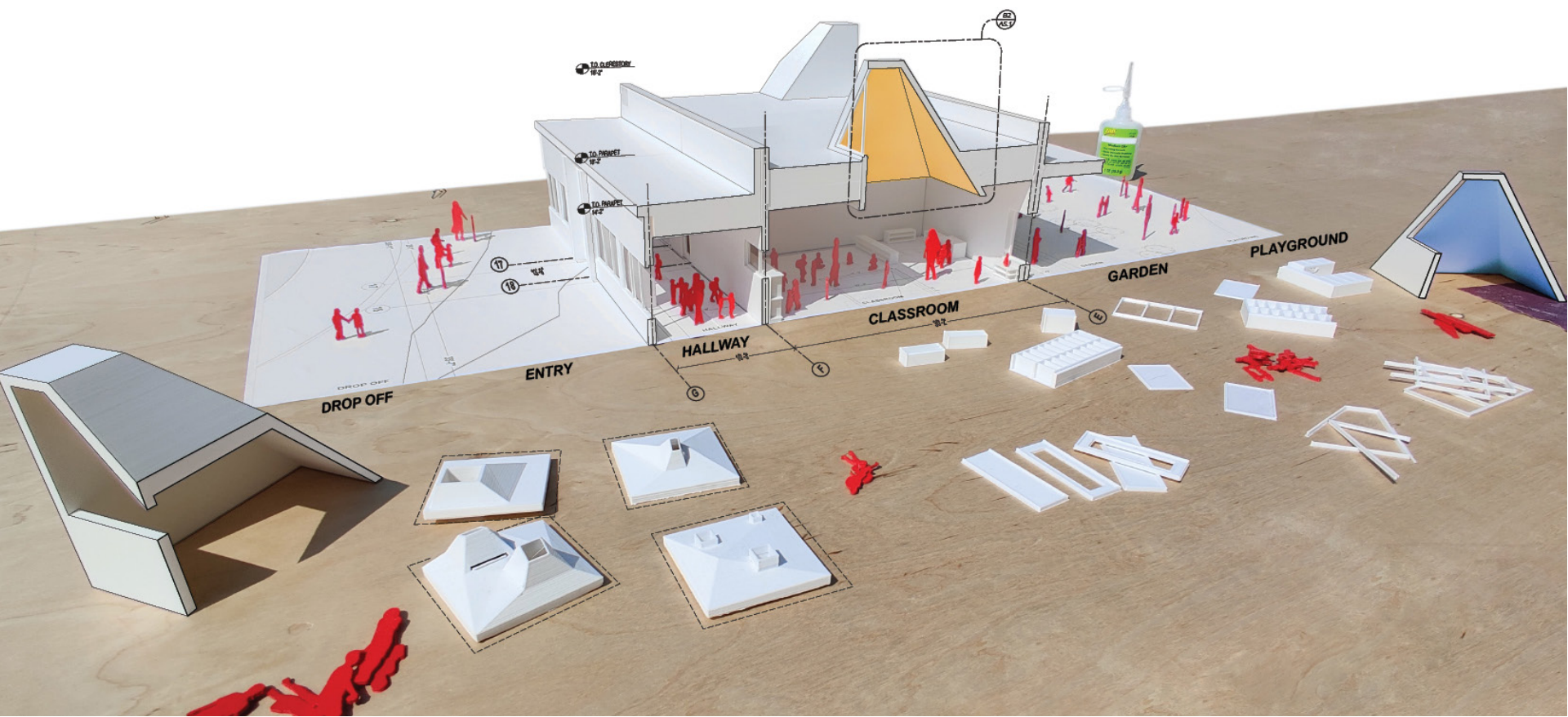
1 | EXECUTIVE SUMMARY

The design team worked closely with the head of early learning, teaching staff, and stakeholders to design a new prototype for the county that is tailored to early learning instructional needs. In addition to the classrooms, there are evaluation rooms, spaces for speech therapists and teaching specialists, and a movement room for indoor active play. Vibrant apertures emerge from the roof to provide access to ample natural light- allowing each classroom to change throughout the day. Shared learning spaces build community by allowing children to engage, learn, and discover the beauty and lessons of nature.

The plan form is generated by the requirement that each classroom have direct access to the outdoor play area. This allows the teachers and students to spend ample time outdoors and encourages the early learning pedagogy to extend to the landscape and nature. The classrooms are designed in pods, each with a bathroom and a shared observation room, a key program component. A ninth classroom space is used as an evaluation room for new students to be evaluated in a classroom environment so the teachers and staff can identify any additional needs and support for the student to succeed.

Each space is unique, yet part of a community where children engage, learn and discover the beauty and lessons of nature. A distinctive skylight forms the fifth façade of each classroom - informed by the need to maximize wall space for learning materials. The uniquely colored apertures emerge from the roof to provide access to ample natural light. Every classroom will change throughout the day - reflecting the movement of time and nature and enhancing the learning environment.

Another project goal was to enhance the existing campus and improve the existing spaces for elementary school students. The new Early Learning Center construction improved the campus overall. Contaminated buildings were removed from the site, new playgrounds and playfields were constructed, and a new wetland was installed on the campus to manage stormwater and provide opportunities for environmental education.





2 | SCOPE OF WORK AND BUDGET

The Early Learning Center construction included 8 classrooms with direct outdoor access to an age-appropriate play area, a 9th classroom for new student evaluation, and the first on-site pre-k staff offices in Wake County.

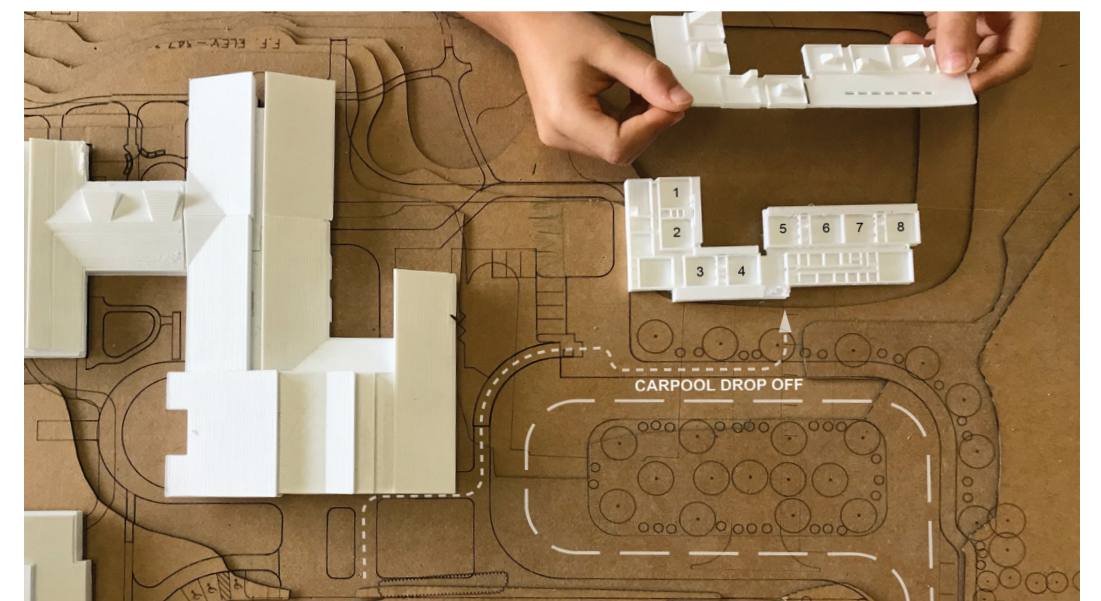
The building was integrated into Millbrook Magnet Elementary's existing campus. The project scope included demolishing and removing two contaminated and unoccupied buildings.

In their place, a new playfield and wetland areas were installed, and the Early Learning Center was sited on more suitable land, with no addition to the total impervious surface on the campus. It was also sited to take advantage of existing bus and carpool lanes, requiring no new vehicle circulation.

The construction scope included new playground spaces and play fields for the existing school, as well as the installation of the wetland area and new stormwater control measures. The design team worked with school staff to include a learning pathway and outdoor classroom as part of the wetland scheme, tailored to Millbrook Elementary's environmental focus.

Each classroom includes an attached observation room and a unique skylight. The classrooms are arranged in pods of two, each with a window seat, individual bathrooms, and outdoor storage. Every classroom has a unique skylight, enhancing the learning environment and creating a sense of place for students to connect with educators.

The project budget was \$14,600,000. It was publicly bid and awarded to the lowest-bid construction manager. The elementary school campus remained active during construction, so the design team was required to carefully plan the sequence of project areas so that the existing students would still have a place to play.

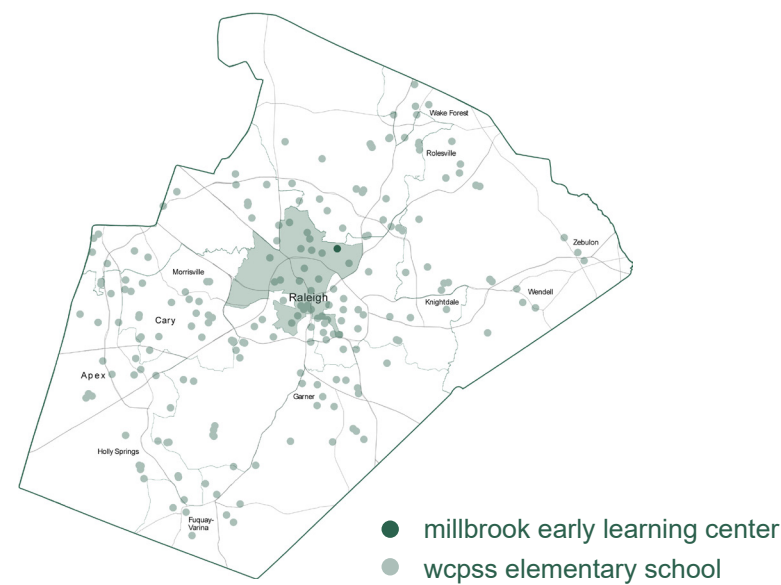


“The vision of the Early Learning Center is to be recognized as a high-quality, collaborative early learning environment that empowers each individual student to thrive and achieve their full potential through data-driven decision-making, hands-on developmentally appropriate experiences, and meaningful engagement.”

Wake County Public Schools



WAKE COUNTY



WAKE COUNTY

- no freestanding pre-k
- 127 pre-k classrooms distributed amongst wcpss elementary schools
- only 36 public pre-k sites
- class size: 28 students
- less than 50% public pre-k need met

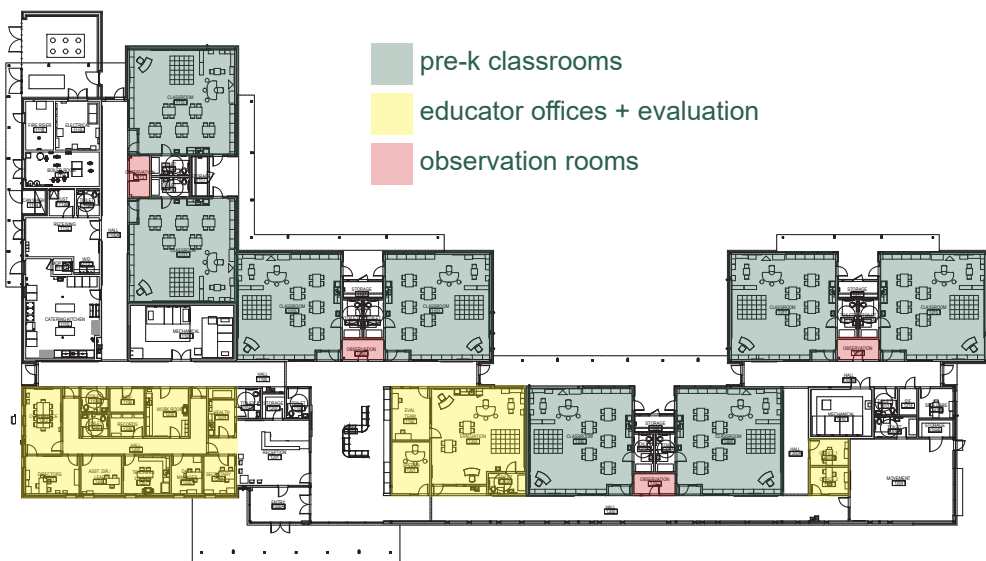
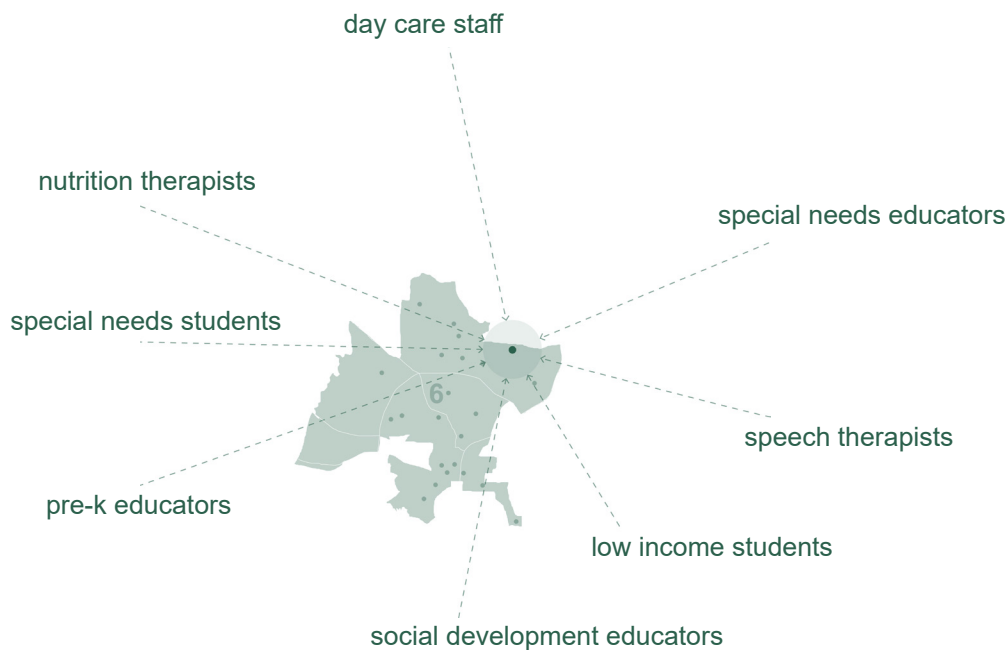
WCPSS SCHOOL DISTRICT 6

- first standalone pre-k
- demonstrated pre-k and daycare need
- existing centrally located site
- census block demographics include high number of low income families

MILLBROOK EARLY LEARNING CENTER

- median income 20% below raleigh average
- + 8 additional classrooms (+22%)
- class size: 16 students
- offices and observation space for specialized early learning educators

WCPSS SCHOOL DISTRICT 6



3 | SCHOOL + COMMUNITY RESEARCH AND ENGAGEMENT: CONTEXT

Previous pre-k care and education were divided between all elementary schools in the county, meaning effective and specialized care was not possible. Over 3,500 pre-k students were served at 67 schools in 127 total classrooms. Special needs children could not be served with only two classrooms per school, and additional student needs became hard to identify and support. Children with emotional and speech therapy, daycare, and academic needs were not introduced into their first learning environment with the appropriate care level. Special needs staff were required to travel throughout the county to provide care, limiting student potential.

Early learning staff in North Carolina worked to create a plan of action to overcome hurdles with critical early learning in the state. The plan for freestanding pre-k education emerged as the result of years of feedback from educators. The agenda explicitly engages Title 1 funding to serve low income and special needs students who may have been left behind by the current early learning system.

The goal of the Early Learning educators was to provide an exceptional educational experience for all children in an inclusive, safe, and stimulating learning environment that builds a foundation for lifelong learning and effectively supports the diverse needs of the children and families served by the building. The design team was charged with creating a positive, safe, welcoming, and inclusive building to foster a sense of belonging for all children. The building was also designed to exceed the requirements of the Five-Star Daycare program.

The Center’s location on the site of Millbrook Elementary was strategically chosen due to its high concentration of at-need children and proximity to working families. Millbrook Elementary is located in central Raleigh, surrounded by a mix of multi-family housing and commercial development. As the first of 4 planned early learning centers, this location is a case study for other regional areas with high pre-k needs. The Wake County Public School System currently includes over 200 schools and many dedicated educators willing to take advantage of new agendas to increase learning potential—essential as the county population rapidly increases. This Early Learning Center is the first Wake County project to put early learners first and represents a collaborative project for WCPSS leaders, educators, families, and young learners.

Early learning staff were critical to the design process, as their knowledge of child development and needs would directly influence the design of the building and future early learning centers.

The Early Learning Center already serves its maximum of 132 students, demonstrating the need for programs critical to children’s long-term learning potential.



high-quality early learning



food equity



safe & nurtured



natural play + learning



Source: *ncdhhs*



VICINITY PLAN

3 | SCHOOL + COMMUNITY RESEARCH AND ENGAGEMENT: VISIONING

The North Carolina Early Childhood Action Plan centers on three themes: that North Carolina’s young children are healthy, grow up safe and nurtured, and are well-supported to learn and succeed. It provides a framework for galvanizing coordinated action across public and private stakeholders throughout North Carolina and centers around making measurable changes in early childhood outcomes. It includes 10 data-informed goals and will continue to grow and develop over time.

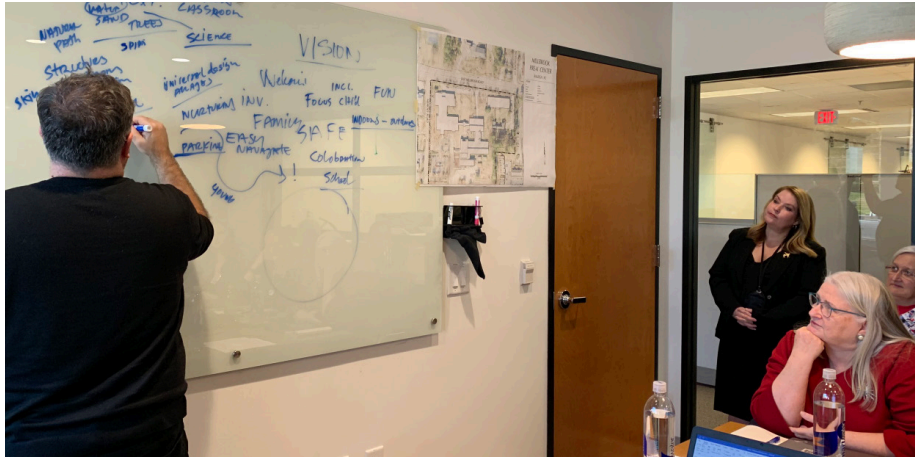
The Early Childhood Action Plan ensures that North Carolina schools develop with equitable learning in mind. This project, in particular, was essential to WCPSS as it will inform the future of early childhood education. As a new early childhood school typology, the Millbrook Early Learning Center aligns with the Early Childhood Action Plan Framework by addressing the following themes through design:

- Goal 3: Food Security
- Goal 5: Safe and Secure Relationships
- Goal 7: Social-Emotional Health and Resilience
- Goal 8: High Quality Learning
- Goal 9: On Track for School Success
- Goal 10: Reading at Grade Level

DIVERSITY, EQUITY, + INCLUSION

The design process was a true collaboration between the design team, early learning educators, WCPSS Planners, and the Head of Early Learning. To achieve maximum results with the given constraints, the design process was participatory and inclusive. The design team facilitated many meetings with the teachers, staff, and principals to develop a shared list of goals through a transparent process. The head of Design and construction at WCPSS and the Head of Early Learning at WCPSS were two figures who were especially critical in the design process.

There were many choices involved in working with existing conditions, and all users of the project needed to be enrolled in the decision-making process so everyone understood why design choices were made. The design team made presentations and received feedback from the teachers, staff, planners, and the school PTA so that all project stakeholders could hear good ideas. The pre-k staff were involved from the beginning of the process, from site selection to classroom construction. This is a new school type for Wake County, so building innovation into the walls of each classroom was critical for future developments of the typology. The inclusion of all user groups in key decision processes guaranteed representation and advocacy for all students and educators.



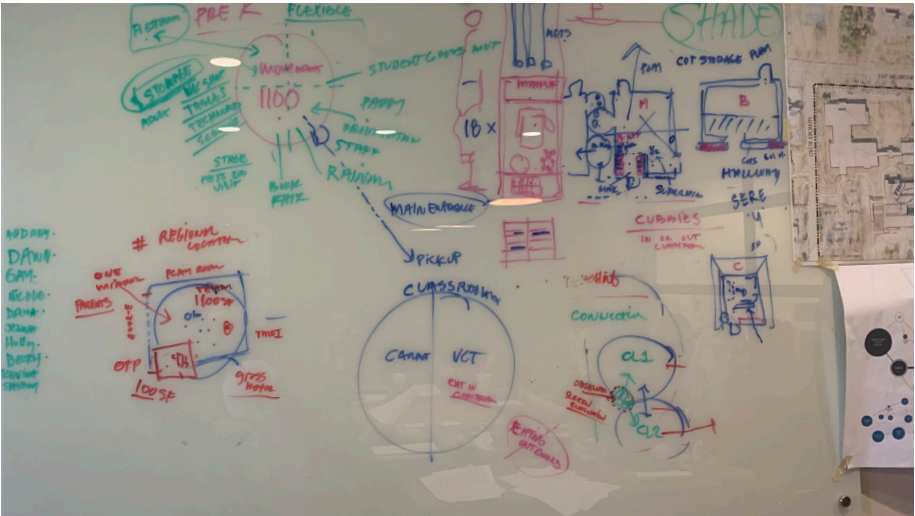
Early learning vision board is created with educators



Early plans were adjusted for site and organizational feedback with county planning staff.



Pre-k educators provide feedback on material palette



Necessary program and amenities are discussed + diagrammed



On site with current educators and board members - Understanding the assets of the site and sharing potential building locations. Aligning the new building to the learning focus of Millbrook Elementary was another influence on the new construction.



Educators and administrators weigh in on building location

3 | SCHOOL + COMMUNITY RESEARCH AND ENGAGEMENT: EXHIBITS



Educators and WCPSS department heads become acquainted with newly constructed spaces and skylights



School leaders and educators comment on finished skylight with building contractors present.

“This project is setting a new standard for educational design. What was once a simple parking lot has been transformed into a vibrant pre-kindergarten facility, complete with outdoor classrooms that seamlessly integrate with the natural landscape. This project beautifully demonstrates what is possible when creating an inviting and inspiring space for our youngest learners while prioritizing both safety and transparency.”

Sir Walter Raleigh Awards Jury
2024



4 | PHYSICAL ENVIRONMENT:
CONTEXT

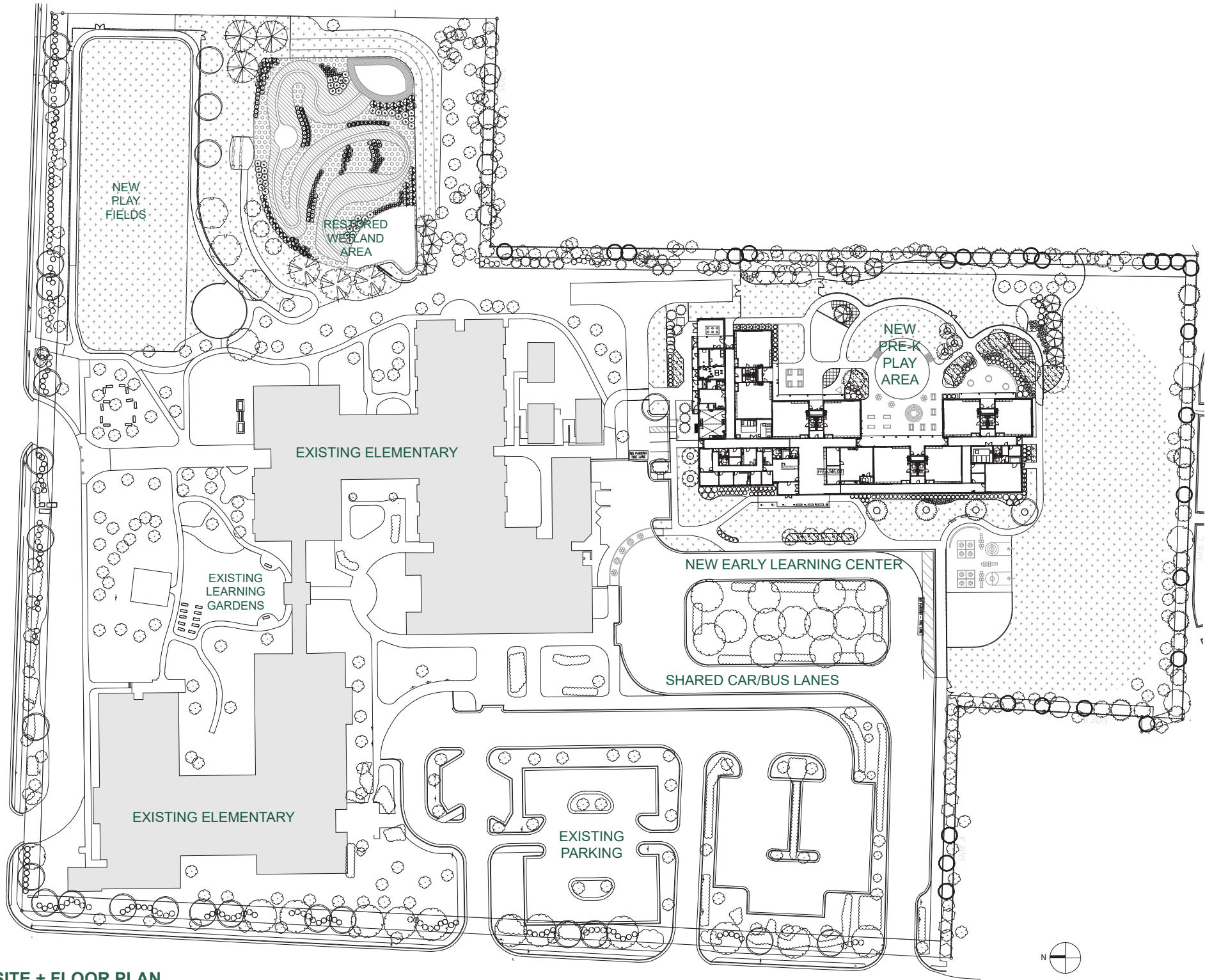
Millbrook Magnet Elementary is an environmentally focused magnet school in central Raleigh. It consists of two main educational buildings, with learning gardens, sensory gardens, and two pre-k classrooms.

Millbrook Magnet Elementary lacked a separate pre-k center, meaning these two classrooms had to serve all early learning students in the area, regardless of special income, emotional, daycare, and academic needs. This scenario is common amongst all public elementary schools in Wake County.

The new pre-k fits into the Millbrook campus, which is located in a growing area bounded by a mix of multifamily housing and businesses. The area is largely populated by working families with a critical need for daycare and afterschool care and is centrally located within the city of Raleigh and Wake County. The new Early Learning Center replaces two unoccupiable buildings, which were removed and replaced by a wetland area open for environmental educational opportunities.

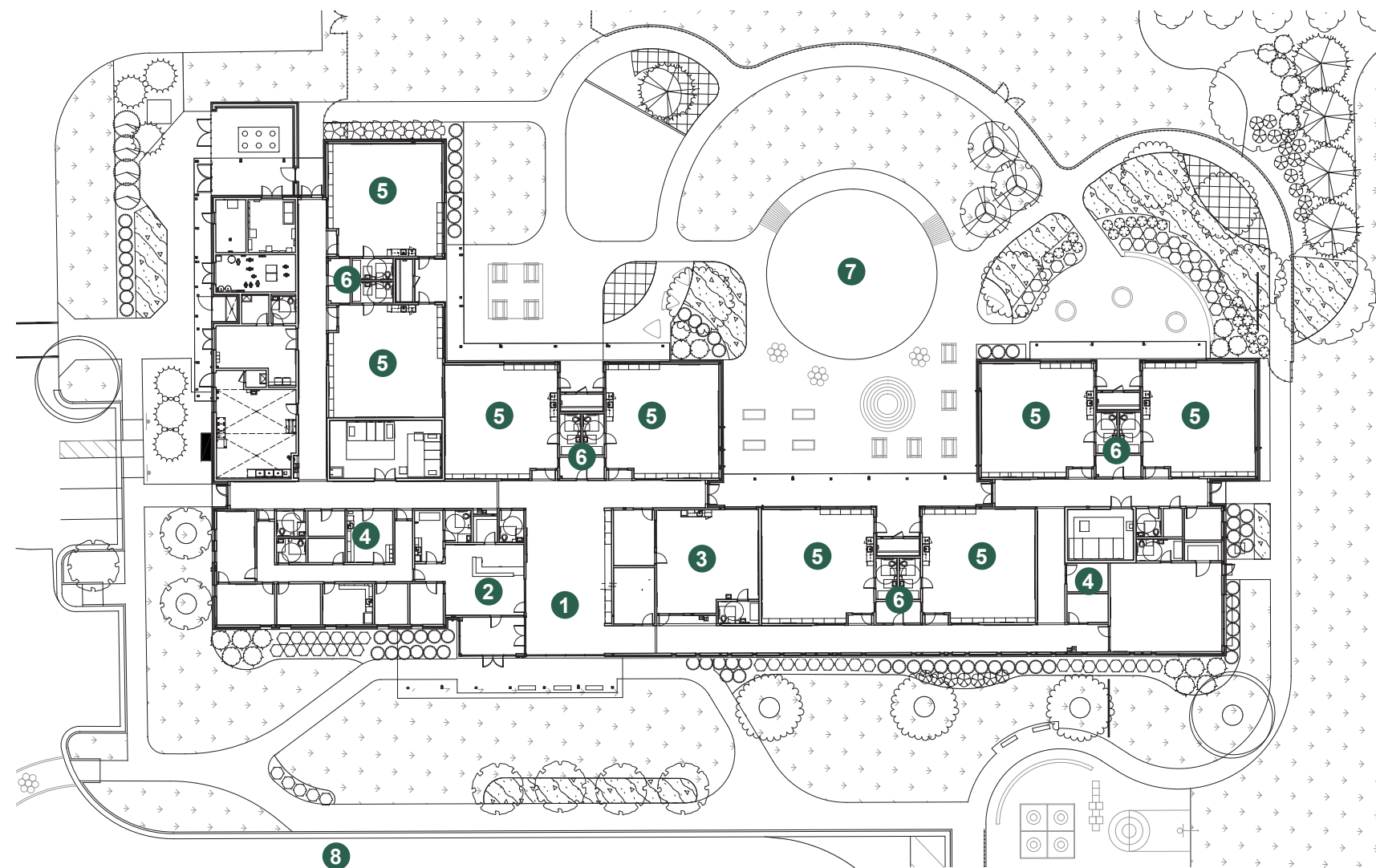
The new building is located on a flat site for seamless outdoor learning opportunities. It is placed to take advantage of existing nutrition services in the elementary school. Food is prepared and distributed to a small warming kitchen and then to each Pre-K classroom for breakfast and lunch. The siting also allows the Early Learning Center to take advantage of existing bus and car drop off lines and leaves all existing parking in place.

The building's plan allows all classrooms to share a singular large garden and play area. This creates a sense of community among students and a sense of security and care in which students can learn and grow. The play area is bounded by quiet residential streets, which are separated from the campus by a mature vegetated buffer zone.



SITE + FLOOR PLAN





- 1 | Lobby
- 2 | Reception
- 3 | Evaluation Room
- 4 | Early Learning Offices
- 5 | Classrooms
- 6 | Observation Rooms
- 7 | Outdoor Play Area
- 8 | Approach + Carpool



0 25 50 100ft

FLOOR PLAN



TRANSVERSE SECTION THROUGH LOBBY, CLASSROOM, AND PLAY AREA



4 | PHYSICAL ENVIRONMENT: RESPONSE INSPIRATION, MOTIVATION + INNOVATION

The entry sequence of the learning center is designed to invite early learners as they engage in learning outside of home, and away from their parents for the first time. The multicolored facade greets students from the car and bus approach, while a skylight creates a welcoming lobby for students to greet teachers and classmates, and eases the difficulty of leaving home for students with emotional needs.

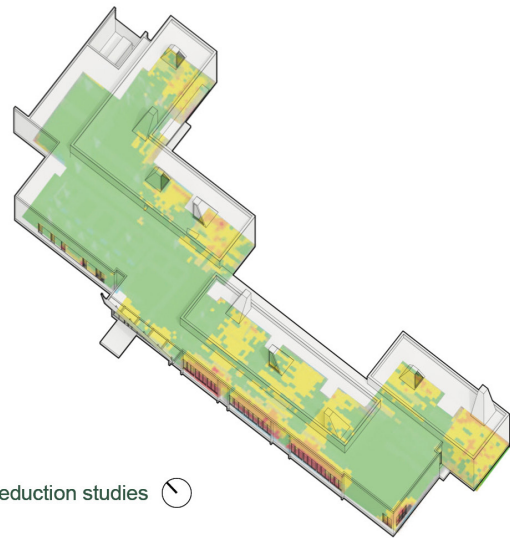
The apertures in classrooms create a sense of center, bringing together all members in the classroom. The unique appearance of each room creates a sense of belonging and a tie to the children's first learning space. On darker mornings and evenings, the apertures glow from within, signaling the safe space within to students who have the most need for daycare services.

DIVERSITY, EQUITY, + INCLUSION

By placing the building on a flat grade, all classrooms share the same ground plane, making access between inside and out seamless for children of all abilities, including special education. The proximity to the existing bus dropoff also means that some children can ride the bus with siblings, increasing flexibility for students with unique home situations. This also makes early learning possible for students needing the transportation network typical of the public school system. By the same hand, affordable daycare and afterschool care are available, critical in an area with a high density of Title 1 families.

The inclusion of offices for special needs, speech, academic, and social therapists into the program boosts the learning potential for a greater range of students than possible with the typical dispersed pre-k model. Additionally, softly curving furniture, both inside and out contributes to a safe and comfortable environment for students needing greater social comfort in a new environment.





4 | PHYSICAL ENVIRONMENT: RESPONSE SUSTAINABILITY + WELLNESS

The project included wellness measures for Millbrook Elementary, such as new playground equipment, a new playfield, and a wetland education area with an outdoor classroom that can be used by students from any grade level. The Early Learning Center's age-appropriate play areas, specialized care facilities, and access to daylight create an ideal learning environment for pre-k education. Didactic education about our planet - tracking of solar movement and a direct, safe connection to the outdoors are both critical tools in preparing the next generation of learners for a sustainable future. Glare reduction studies were performed to ensure that students have a positive connection to the daylighting in the classrooms.

Nutritious meals are prepared in the Millbrook Elementary cafeteria and distributed to the Early Learning Center, reducing environmental impact from the construction and operation of an additional kitchen at the Early Learning Center.

Low-flow water closets were installed in the bathrooms, and an air-cooled chiller was installed to reduce water usage, both important to the project's sustainability goals as no rainwater collection is present on the campus.





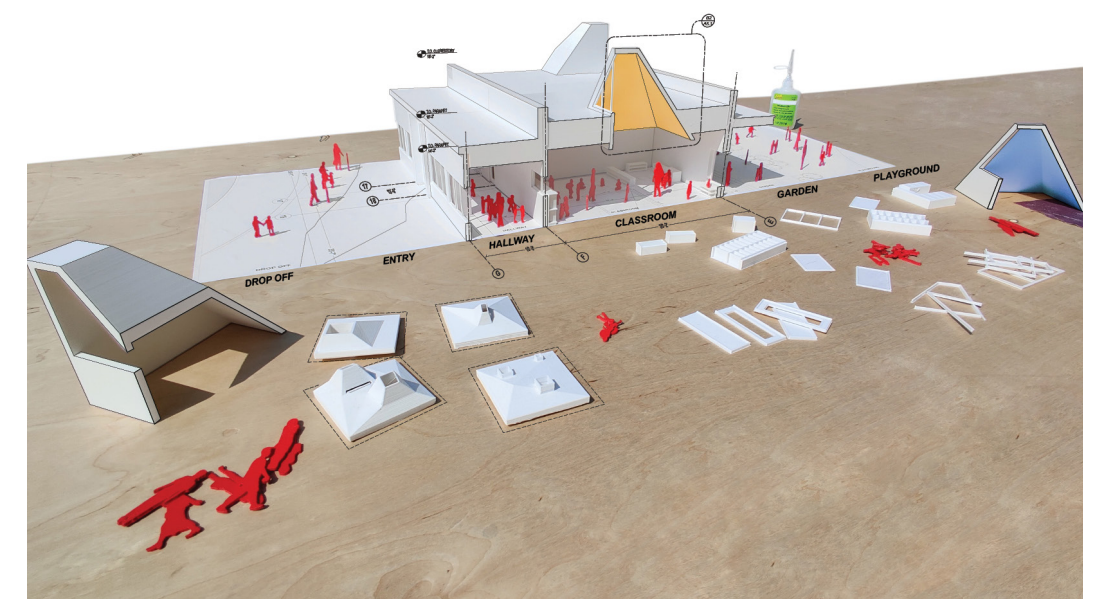


5| EDUCATIONAL ENVIRONMENT: CONTEXT

The early learning center responds to the increasing need for special education in early learning, which has increased by over 30% since 2019. The early learning center is located to serve the highest number of low income and special needs children as possible, and to serve as a model for future early learning in a growing public school system. Securing and utilizing Title 1 funding was a key component of the school's location and student base.

The center also aims to address staff commuting issues caused by the distribution of pre-k centers at elementary schools throughout the county. By consolidating more pre-k students into one location, children with varying needs can be served, and affordable daycare services can be provided without spreading educators thinly across the county.

The Early Learning Center is designed to work towards the goals of the NC Governors Early Childhood Action Plan, from its siting, plan form, program, and individual classroom design.





5| EDUCATIONAL ENVIRONMENT: RESPONSE

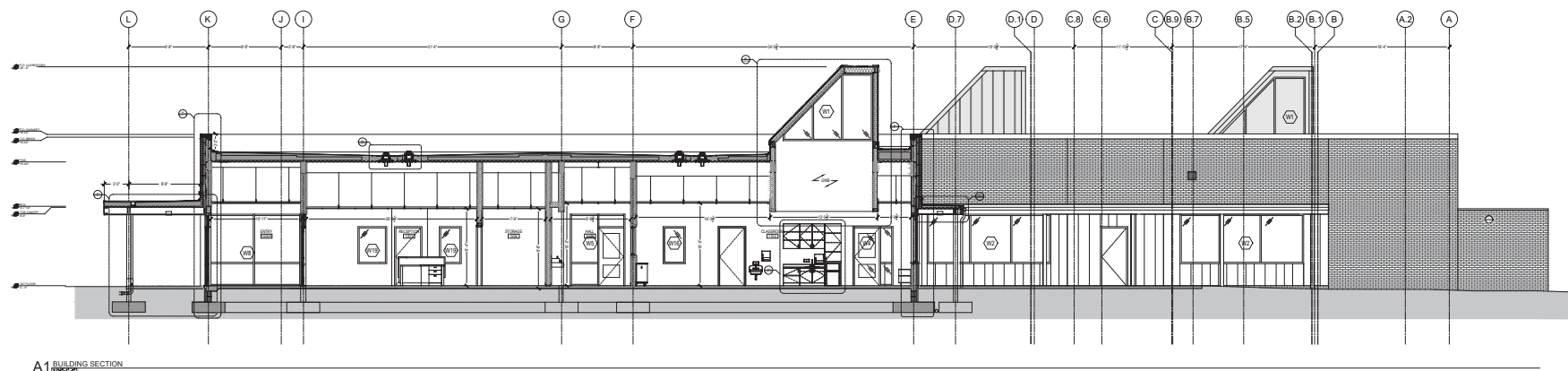
The goal of the Early Learning educators was to provide an exceptional educational experience for all children in an inclusive, safe, and stimulating learning environment that builds a foundation for lifelong learning and effectively supports the diverse needs of the children and families served by the building. The design team was charged with creating a positive, safe, welcoming, and inclusive building to foster a sense of belonging for all children. The building was designed to exceed the requirements of the Five-Star Daycare program.

A clear building plan creates a sense of security; as children move into the space, each layer increases their ability to learn and socialize successfully. The recognizable facade welcomes early learners, and then a single hallway simplifies navigating to each classroom. Each classroom feels special, with a unique skylight orientation and color. Finally, all the students share a large outdoor space, wrapped by familiar classrooms and clear indicators of entry.

The building integrates teaching and observation spaces, allowing for the identification of student needs—something that was not possible in previous pre-k facilities in the county. The Early Learning Center is poised to meet special needs if they are identified.

Teachers have permanent spaces to prepare their lessons. Classrooms are tailored for Title 1 students, special needs students, and a mix of both groups. Interior spaces have been adapted to include bright places for indoor play and socialization when outdoor play is unavailable. The roof apertures reflect outdoor conditions in the classrooms, creating a sense of security and awareness. This connection to nature parallels the curriculum of Millbrook Elementary.

The educational spaces are innovative because they are grouped in pods and share an observation room amenity. The observation room allows parents and early learning staff to evaluate students without disturbing the students in the classroom. The teachers can teach in a team or as a separate classroom. This layout allows for flexibility. Each classroom provides 50% more natural light than the NC Department of Public Instruction requires. Natural light in the early learning classroom was a highly desired characteristic of the early learning staff.



TRANSVERSE SECTION THROUGH LOBBY, CLASSROOM, AND PLAY AREA

“The Early Learning Center is an inviting environment for families and children. This is a wonderful way to introduce families to the school system so they can be an active partner in their child’s educational journey.”

Sherry Williams
Director, Millbrook Early Learning Center

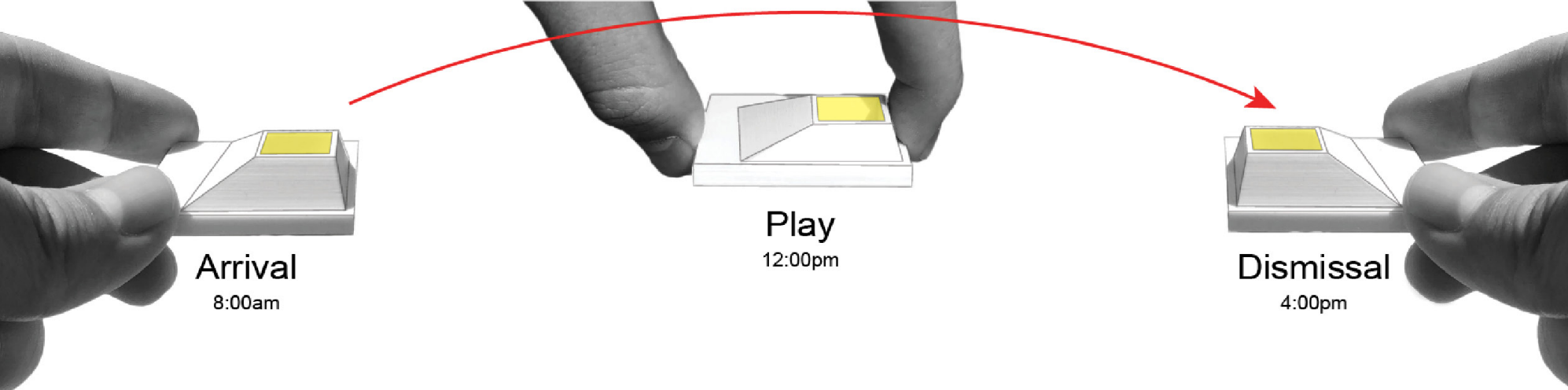


5| EDUCATIONAL ENVIRONMENT:
A PLACE OF WELCOME

Students and educators are greeted by a bright, multicolored facade that is inspired by the school’s mascot. In winter months, colorful glows from the apertures join the facade in signaling a safe space within - especially for students with the greatest need for early or afterschool care. This also creates a recognizable beacon for individual classrooms, teaching students orientational skills and creating a sense of place.

The lobby was specifically designed to be more than an entry point. It is a place where students learn social skills and independence as they leave home for the first time. It performs as a welcoming space, a library, and a place for collaboration. It creates a sense of wonder as students get a second look at the apertures - this time from within their school. Durable yet smooth furniture is placed both inside and outside of the entrance, allowing for a multistep approach to the school, necessary for students with greater emotional needs.





5| EDUCATIONAL ENVIRONMENT: DAYLIGHTING

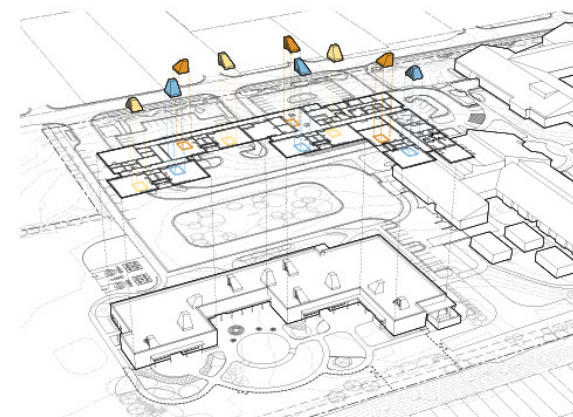
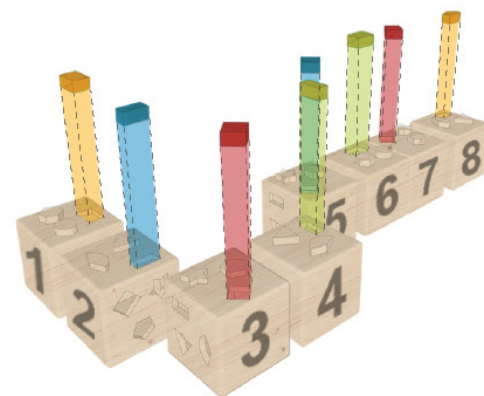
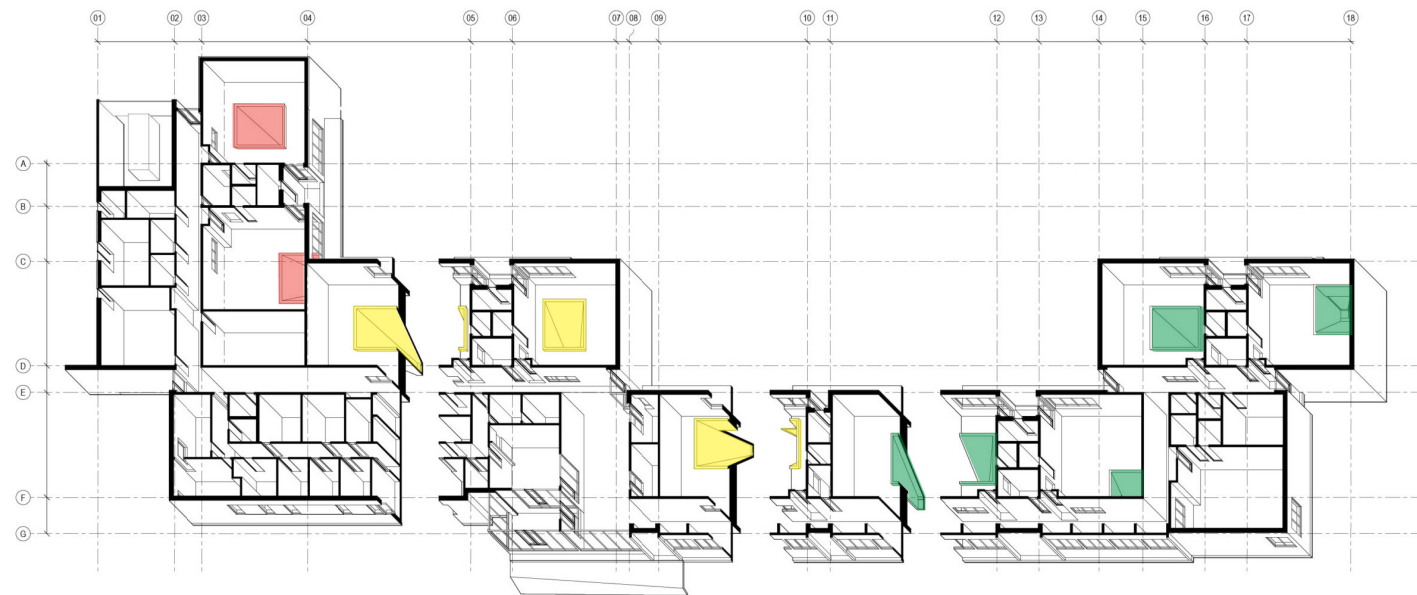
Despite the low budget for the project and pushback from the school board, pre-k educators involved in the development of the Early Learning Center championed for the apertures and presented research to ensure their implementation.

The colorful apertures within each classroom bring in a greater amount of daylight while maximizing learning display space. They also contribute to each classroom's uniqueness, creating a sense of place and belonging for students as they learn outside of their homes for the first time.

Additionally, students are exposed to didactic education through the sun's motion—daylight changes with the time of day and the seasons. The orientation of each aperture prevents glare on learning surfaces.

Each skylight creates a gathering space within the classroom, bringing teachers and students closer together and centering the group.

Just as the lobby skylight celebrates arrival at school, each classroom's unique skylight celebrates the beginning of the individualized learning session.



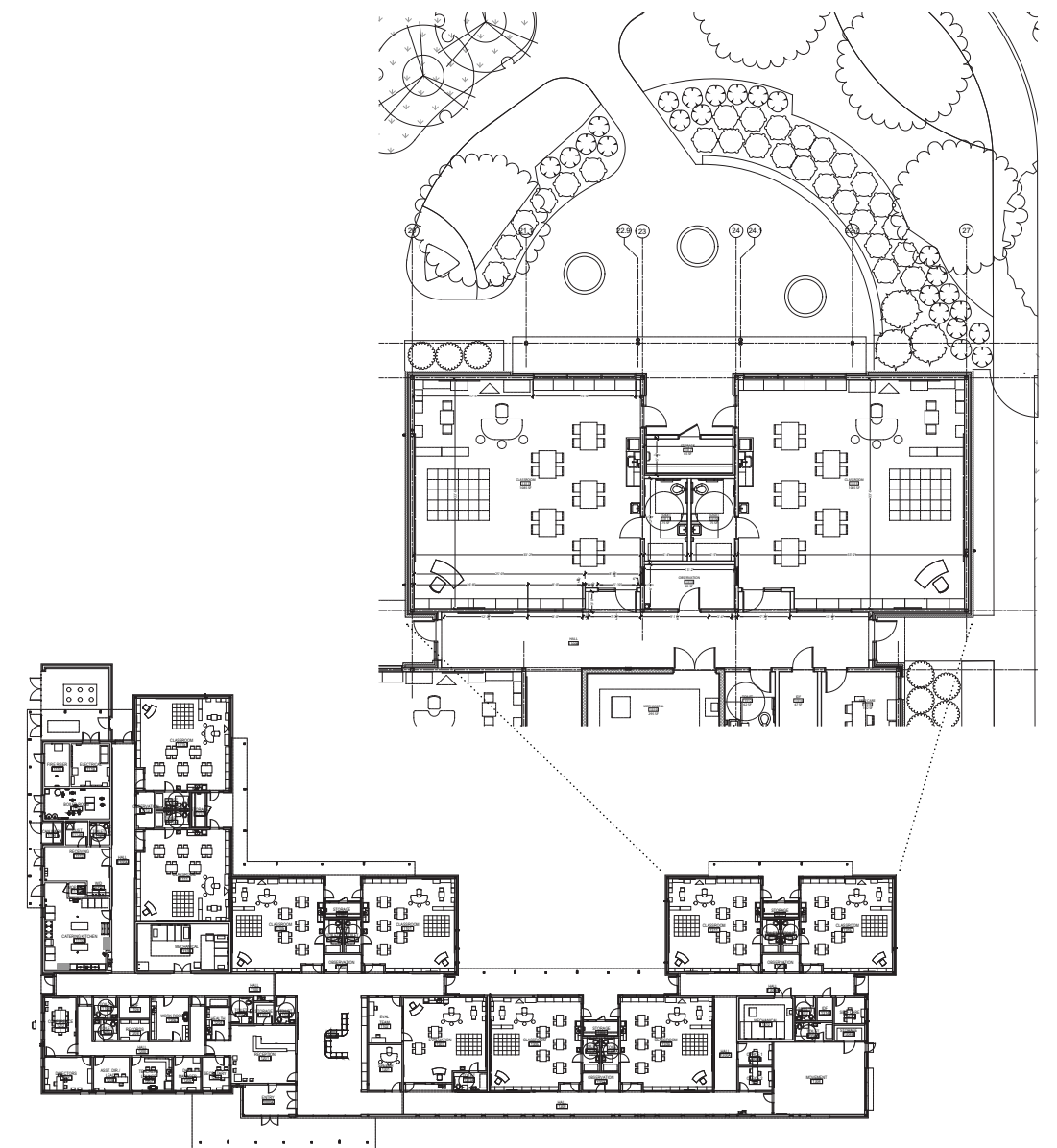


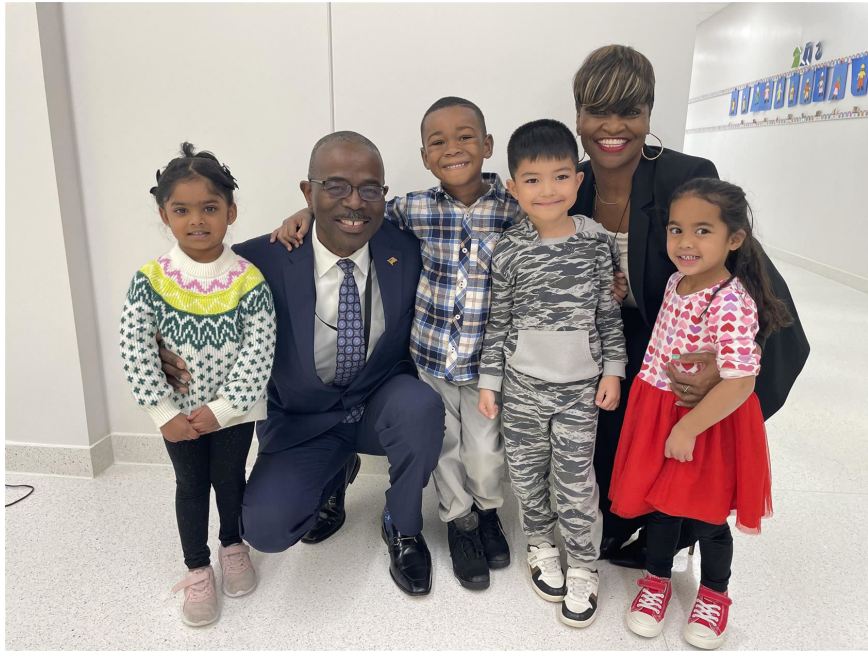


5 | EDUCATIONAL ENVIRONMENT: CONNECTIONS

The building meets early learners with special needs by respecting their need for outdoor space and shared spaces. Each classroom has its own skylight, large window seat, and bathroom. At the Early Learning Center, a single loaded scheme was used to create a sense of enclosure around a single, larger outdoor space. This would not be possible with a more efficient double loaded plan, which would have led to separation amongst students, limiting potential development of social skills.

Classrooms are grouped in pods of two, creating proximity between groups of students, especially as they move between learning and play spaces. Pods also share an observation space - critical for needs assessment.





6 | RESULTS:

ACHIEVEMENT OF EDUCATIONAL GOALS

The Early Learning Center was created to serve 3-5 year-olds with greater needs than the existing system of public pre-k classrooms could serve. Parents have seen their children's academic and social skills grow since their time at the Center. The goal of creating an "equal playing field" has been achieved, as students with Title 1 financial need have access to after-school care, speech therapy, emotional support, and academic support. The Center is specifically designed to serve these early learners, giving them a long-term learning impact they would otherwise have been left out of. Early learning provides a foundation for kindergarten learning, so welcoming all students is critical.

This project successfully completed the first prototype for this project type and set an example and a standard for early learning centers in the county.

ACHIEVEMENT OF STATE EDUCATION GOALS

The Millbrook Early Learning Center works towards a number of the Early Childhood Action Plan's goals:

Goal 3: Food Security:

Free breakfast and lunch are distributed to students' classrooms each day

Goal 5: Safe and Secure Relationships:

Full time early learning and special needs educators create a sense of security and permanence amongst students, leading to strong relationships.

Goal 7: Social-Emotional Health and Resilience:

Collaborative social lobby, shared outdoor play area, grouped classrooms, access to emotional and behavior therapists on site ensure safe social and emotional development.

Goal 8: High Quality Learning:

Dedicated office space for pre-k staff at a single location, eliminating travel time for educators and providing a high-quality working environment that aligns with WCPSS recruitment efforts for the best early educators. Classroom size is half the county pre-k average.

Goal 9: On Track for School Success:

Students's needs can be clearly identified and served at the Early Learning Center, ensuring that no child is left behind in this critical developmental stage. Affordable daycare programs on site mean that more students of working families are able to be served by early learning.

Goal 10: Reading at Grade Level:

Student needs can be identified before students fall behind.



STUDENTS AND EDUCATORS AT THE EARLY LEARNING CENTER





6 | RESULTS: ACHIEVEMENT OF SCHOOL DISTRICT GOALS

County Commissioners, Board Members, and WCPSS facilities staff gathered at the Early Learning Center ribbon-cutting ceremony. Many were impressed by the space, discussed the future of early learning in the county, and emphasized the long-term impacts of Pre-K education on all of these students. The impact will be exponential.

WCPSS and the architect have already led multiple tours of the building at the request of surrounding Public School systems that are eager to start or are in the process of building their own Early Learning Centers. This building is a model and prototype for the growth of Early Learning in our State.

ACHIEVEMENT OF COMMUNITY GOALS

The demand for Wake County's public school enrollment is the highest in North Carolina and growing rapidly. The need for special services at the pre-k level has grown by over 30% in the last 5 years. Wake County has succeeded in aligning this project with the goals of the Governors Early Learning Agenda while adding to the total enrollment of pre-k students and efficiently redistributing early learning resources through the addition of 8 pre-k classrooms and dedicated office space centrally located for pre-k specialized instructors that serve special needs students at the Millbrook Early Learning Center in addition to students throughout the county.

6 | UNINTENDED RESULTS: WCPSS DESIGN FEEDBACK

Elizabeth Sharpe, Head of Design and Construction at the Wake County Public School System, was influential in the entire design process for the Early Learning Center. Her feedback regarding the design of the spaces clearly impacted the creation of a successful project. She serves as just one of many inside voices testifying to the reception of the Center by early learning educators, families, and early learners.

NC STATE ARCHITECTURE STUDIO

The planning process was completed partially alongside a Design Studio at NC State's College of Design. 30 architecture students learned about the collaborative process, cost-effective design with public funding, the bidding process, and siting strategies. This studio exposed Wake County's future planning goals and gave students a look into the realities of architecture, planning, and construction. These students now have a successful project with which to view their work and a model for the design of future early learning centers.



**How this new Raleigh center
'equalizes the playing field'
for pre-K students**
The News Observer

Oh wow, this is a great article. You and your team were a huge part of its success. Thank you for the creativity, patience and love you and your team bring to every project. This is what it's all about!!!! 🥰🥰🥰🥰

Oh my, this fills my heart!! This just reminded me why I do what I do everyday!! I hate I missed this. Looking at all the smiles in that room is so special. You did great guys. This is a space is so special. The day before the ribbon cutting Dawn was telling me how she loved the way it makes her feel driving up to the front door of your building. She said it was warm and inviting, which is what these kids need. She also told me how she absolutely LOVES the lobby, she loves the light in the rooms, how visible it is through out the building and the connection from the inside to the outside. KHA is going places and I love what you are doing for WCPSS. You are putting a mark in our school system and I appreciate everything you do for us!!!! Thank you and I can't wait to be having this very same conversation at the Fuquay Varina completion. 🥰🥰🥰

Elizabeth Sharpe
WCPSS Head of Design and Construction





6 | RESULTS: FINANCIAL RESOURCEFULNESS

This project was completed for the Wake County Public School System and was bid through a public bid, awarded to the lowest bidding contractor. In addition to the cost of a new building, the project budget included many site upgrades specifically designed to enhance and provide additional environmental educational opportunities to the existing magnet elementary school.

A cost-saving advantage was sharing the existing cafeteria space within Millbrook Magnet Elementary. This measure allowed for more instructional space in the Early Learning Center. The food is prepared in the elementary school kitchen and distributed to all of the Pre-K classrooms for breakfast and lunch.

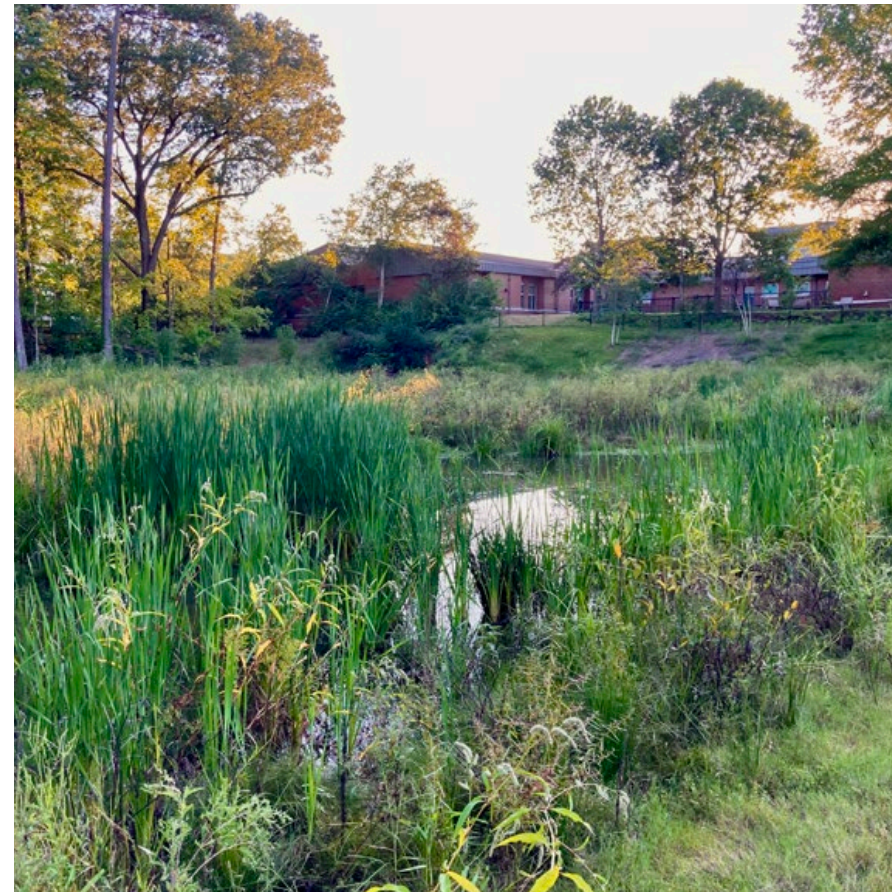
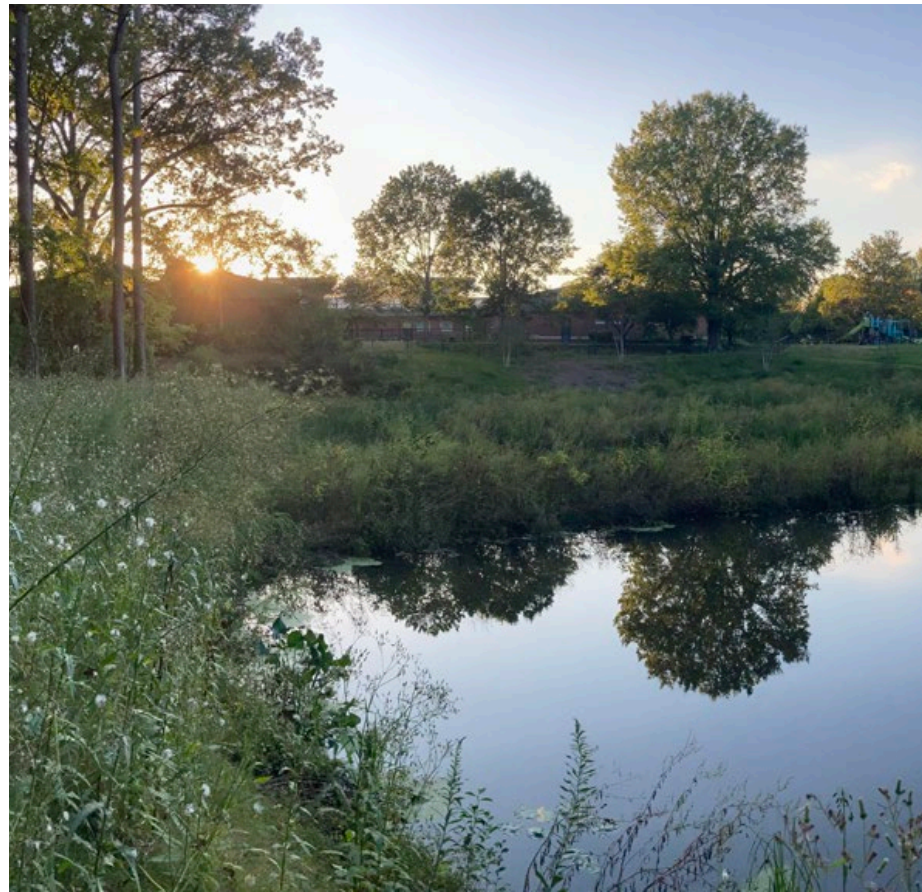
Color was used as a design tool, avoiding costly and complex detailing. The simplicity of the building envelope and siting allowed for the implementation of a light monitor in each classroom and the lobby. Exterior materials were cost-effective and placed with the highest impact possible, creating a welcoming facade for students being dropped off.

WELLNESS

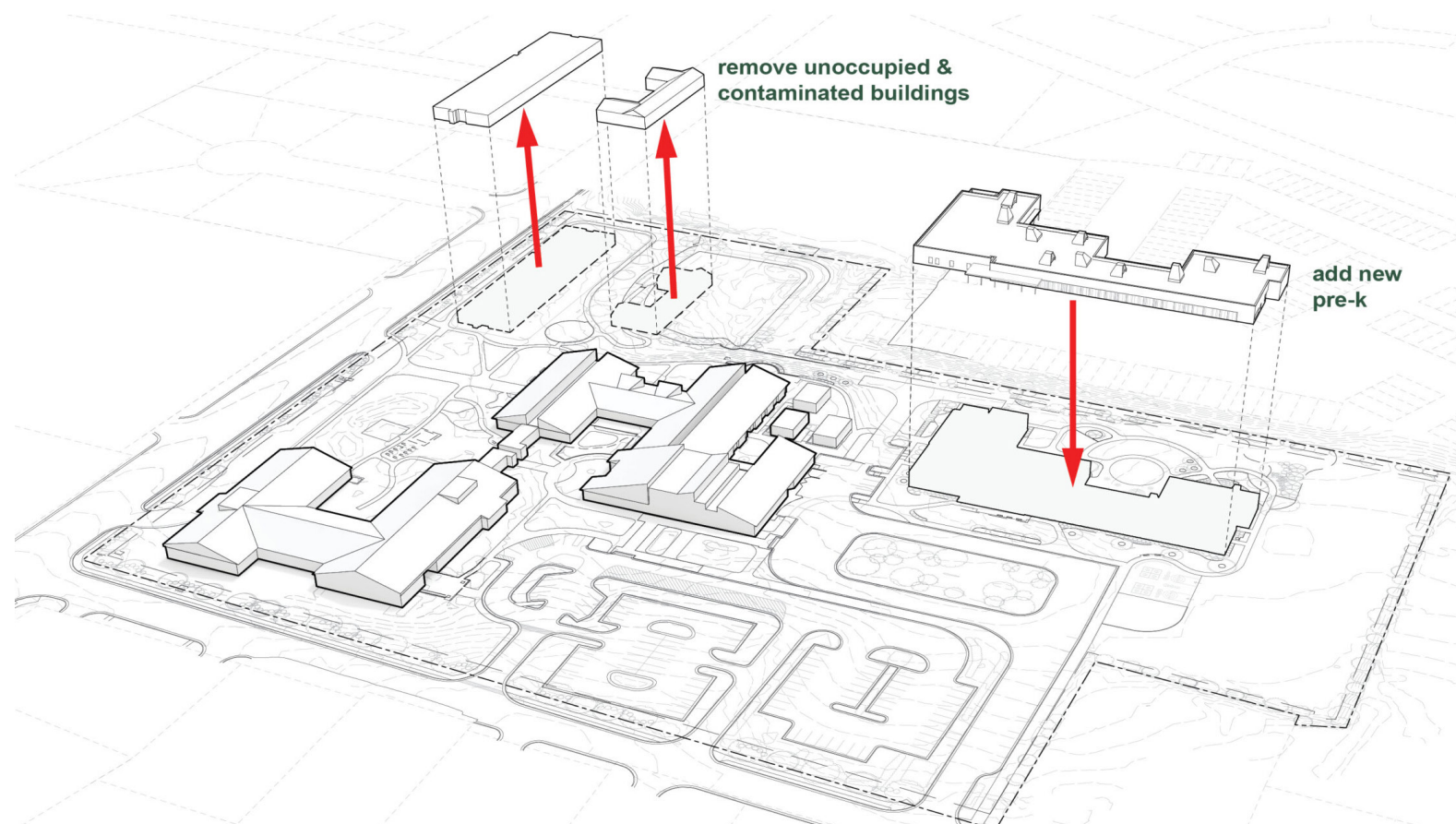
This project serves an identified need for early childhood education and related support systems. This building is designed for the public school system and strives to make high-quality early education accessible to the entire county. Physical aspects of this include access to natural light and green space, age-appropriate play areas, and the provision of specialized spaces for needs assessment. A welcoming skylight is present in the building lobby, easing the transition into learning away from home. This project included upgrades to Millbrook Elementary's outdoor play areas and expanded their environmental learning capacity to include the wetlands on the site. This was done by constructing learning pathways and a new outdoor classroom.

Emotional attributes of the building's wellness measures include its ability to serve staff as they provide academic, emotional, speech, and special needs care to the youngest learners, creating a lifelong impact for underserved children. Staff wellness is addressed by providing permanent on-site offices and limiting the travel to individual pre-k centers across the county that was necessary before the early learning center was constructed.

The design was completed in accordance with Five-Star Daycare standards and the NC Governors' Early Learning Agenda. Access to after school care was especially important for the Early Learning Center due to its focus on serving Title 1 families.



100% of the Millbrook Elementary site now drains to and is filtered by a new wetland area with educational opportunities



NO INCREASE IN
IMPERVIOUS SURFACE
ON CAMPUS

DEMOLITION
26,091 SF

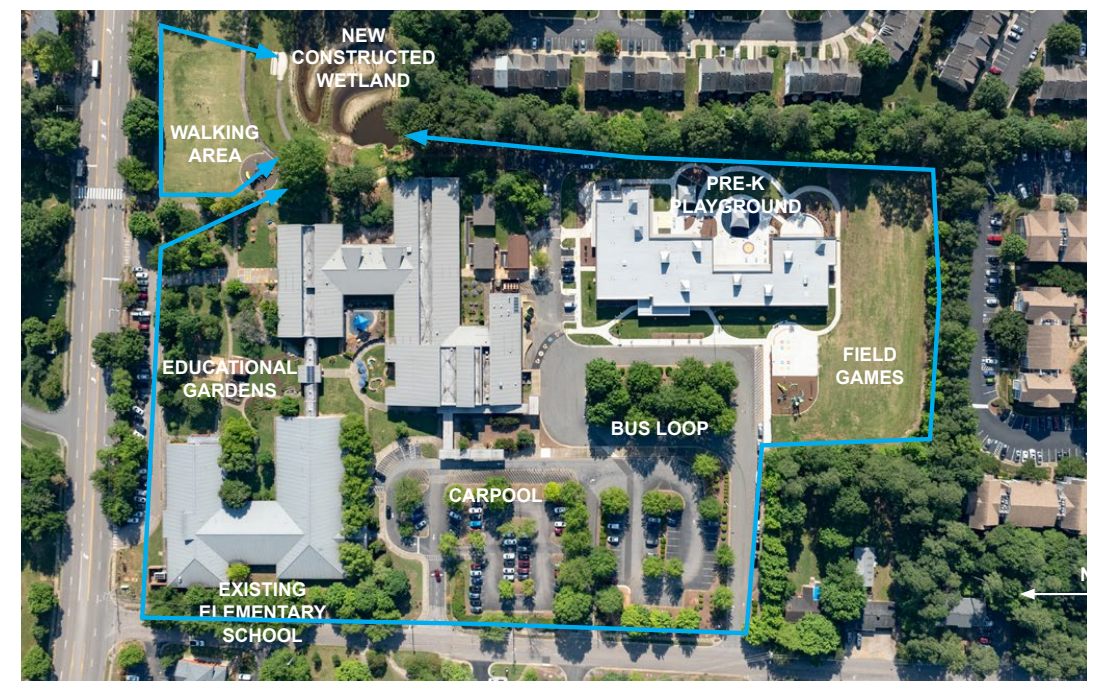
NEW CONSTRUCTION
25,730 SF

6 | RESULTS: SUSTAINABILITY

This project is located on an existing elementary school campus. Trading off impervious surfaces by removing buildings that were deemed uninhabitable, this new structure shares the site's carpool, bus loop, and parking resources. The building ties into existing campus resources, such as nutrition services and playgrounds, greatly reducing the impact of new construction.

The stormwater control measures were upgraded with a wetland area and stormwater retention pond, a marked improvement considering no additional runoff area was created with the new building construction. The wetland construction benefits the early environmental education provided to students at the Millbrook campus. In parallel with the long-term learning impact of early learning services, the environmental impact of providing opportunities for wonder and learning with nature is equally impactful at the pre-k level.

The design of this project focused on water conservation within the boundaries of a public school budget. As such, low-flow fixtures (e.g., 1.28 GPF water closets) were utilized throughout the project, and while this may seem mainstream, it does show the intentional nature of the design. Additionally, a chiller was needed for space temperature control, and a high-efficiency, air-cooled chiller was used. The selection of an air-cooled machine allows for substantial freshwater savings (especially in an area with no reclaimed water service) as the design does not have the water losses associated with a cooling tower.





“[Millbrook Early Learning Center] gives me a lot of hope for not only my child but for other children that are going to be entering preschool and entering the public school system in our county”

Ms. Aaron
Millbrook Early Learning Parent