

The Parish School: Margaret Noecker Nature Center **Outdoor Play and Learning Environments**

Design Program and Conceptual Master Plan

August 2015





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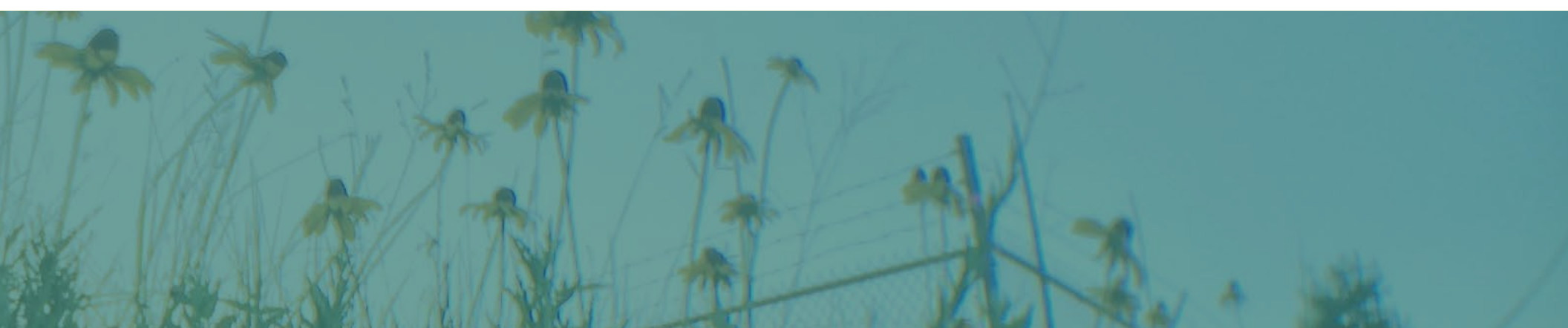
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Terri Garth – Chair, MNNC; drama teacher; Fine Arts Coordinator

Nick Noecker – Founder, MNNC

Nancy Bewley – Head of School, MAT, CCC-SLP

Tom Scott – Chair of Building and Grounds Committee

Amy Richard – Director of Elementary, MS, CCC-SLP, CALT

Wendy Airlie – CFO Parish School, oversees Grounds and Maintenance

Cindy Hornsby – Occupational Therapist, Carruth Center at The Parish School

Stephanie Landis – Preschool teacher, MS, CCC-SLP

Jill Wood – Librarian, Director of Adventure Play, “all things nature” on campus

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Jeff Wallace – Grounds and Maintenance

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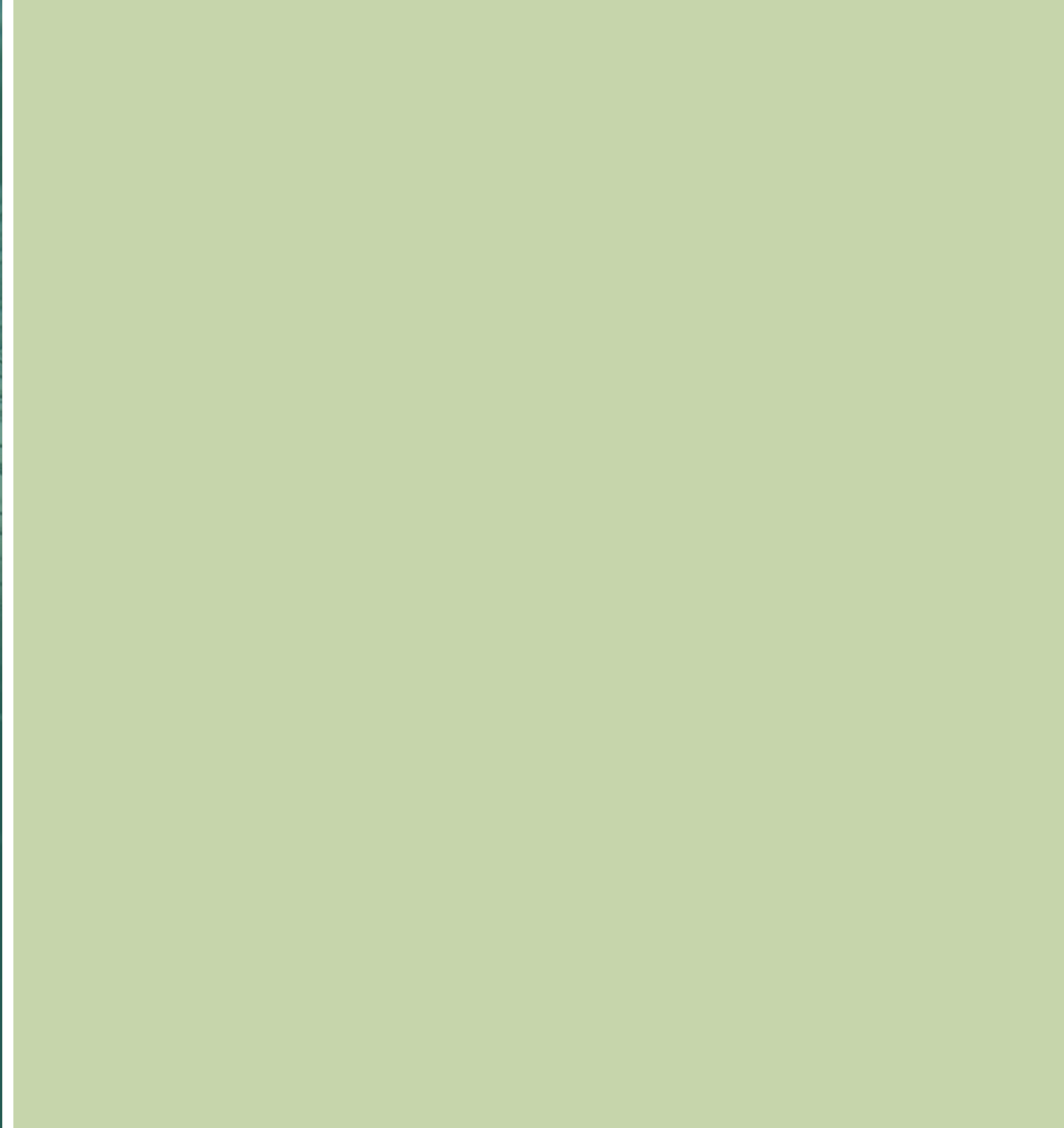


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Introduction

Planning and design of the Margaret Noecker Nature Center was initiated over a two-day period, June 11-12, 2014, including a site visit and full-day stakeholder workshop facilitated by NLI. The site visit began with a brief tour of the school grounds and discussion with members of the stakeholder group. Day One ended with an al fresco meal and informal discussion at the school.

The purpose of the Day Two stakeholder workshop was to share perceptions of the site from the previous day's visit, share individual perceptions of what the Margaret Noecker Nature Center could be, create a mission statement, determine the goals and objectives to guide development, discuss who future users might be, and describe activity settings that could serve their needs. The Parish School students who had participated in a children's design workshop also made a presentation.

The Design Program and Conceptual Master Plan presented here are based on the Stakeholder Workshop Report (August 2014). Additional content has been added by NLI describing the physical improvements proposed, with illustrative photographs to support implementation of the Margaret Noecker Nature Center.





Design Program

At the Stakeholder Workshop, Nick Noecker summarized the concept and vision for the Margaret Noecker Nature Center (MNNC):

"The nature center concept comes from ideas discussed long ago with Margaret Noecker, but were not completed. The overall concept was landscape design to enrich the entire 17 acres, developed over time and integrated into the learning process. Integrated learning, particularly for children with unique learning abilities is a key reflection of the mission of the school, that supports the whole child by discovering the strengths of each individual."

"The goal is to create a center that serves the faculty, students, and all interested parties, using a system of best practices, exemplifying concepts that work and can be replicated elsewhere. The primary approach is to infuse nature learning into the basic activities of the Parish School by taking advantage of the conditions that the site has to offer. A Nature Council has been established to ensure that donated funds are used effectively. To do this, a design program and conceptual master plan are needed that take account for the optimal initiatives that can work for the property. Unlike buildings, nature continues to grow and develop. It is important that the design accounts for this and leaves ample room for discovery."

"The Parish School hopes to "write the book" on nature learning for our type of student population. Progress has already been observed after the first year of our own implementation. A master plan that is integrated with the overall strategic plan for the school would be beneficial and help make the MNNC as effective as possible."




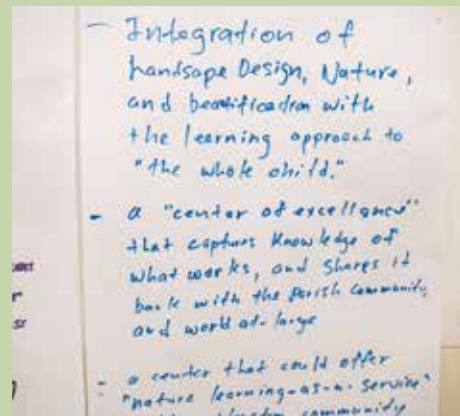
Rollable stones, under which a thousand secrets lie

Personal Images of the MNNC

Using markers and plain paper, workshop participants expressed free-form personal statements in drawings and words of the future MNNC to share with the group. See Appendix A for the complete record.

Overall themes expressed in the 11 stakeholder statements:

1. The MNNC embraces the entire property, where children spend more time outdoors exploring, building forts, playing with found objects such as sticks and rocks, discovering bugs, learning about water, turtles, and frogs.
2. The MNNC supports indoor-outdoor activity that makes it easy for teachers to integrate nature learning into their day by providing an evolving, changeable, multi-purpose place for hands-on learning across all subjects, not just science.
3. The MNNC is a flexible, experimental lab for exploring, observing, measuring, and learning through nature where teachers can set up their own activities (e.g. learning math using sticks and stones).
4. The MNNC is a stimulating, joyful place for play and fun, where children get muddy and feel like they are going to “camp” everyday and learn by doing with others in a stimulating, hands-on environment.
5. The MNNC has a nature trail with signs identifying plants as a memorial to the ideas of Margaret Noecker.
6. The MNNC is inspiring, unique, organic, joyful, an ever-changing safe place for team building.
7. The MNNC has lots of safe places for children, a wisteria arch, a sunflower house, hide-and-seek in a cornfield maze, a hedge maze, hills, weeping willows, a bent cedar to hide in; it contains a pond and many species of plants and animals.
8. The MNNC is a place for horticultural therapy.
9. The MNNC is like a farm where kids grow their own food, and experience the full cycle of garden activities including commercial aspects. A farmers market will be established so children sell what they have grown, to close the loop and demonstrate Margaret’s concept of “end-to-end” learning processes. She always wanted a little store selling vegetables, pottery, and art.
10. The MNNC is designed with settings that are tightly focused, defined and enclosed, to avoid children being distracted in wide, open spaces.
11. The MNNC integrates design, nature, and environmental stewardship as a center of excellence, demonstrating best practices to support the whole child, offering nature as a domain and service to the wider Houston community.



Users

Participants recognized both current and possible future users of the MNNC as:

- Students at The Parish School
- Teachers and staff
- Parents and families
- Alumni
- Homeschooled children
- Professional therapists (occupational, speech-language, play, counselors)
- Outside educators (private schools, special schools, public schools)
- Local community groups



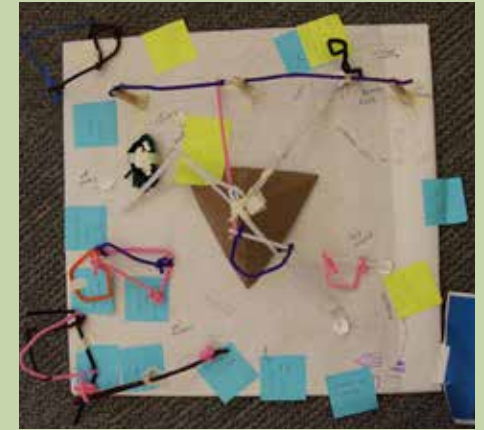
Students share their MNNC designs



Discussion meeting with students



Examples of student MNNC designs



10



0' 20' 40' 80' 160'

SCALE: 1"=40'



North

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Not to scale

Master Plan Use Zones

For ease of communication, the MNNC master plan has been developed around identified Parish School use zones:

- Entrance, Parking, and Boundaries
- Pedestrian Pathway Network
- Classroom Crescent
- Amphitheater
- Community Garden and Store
- Margaret Noecker Nature Center Hub
- Natural Construction Area
- Multi-Purpose Court and Field
- Woodland Preserve
- Elementary Playground
- Contemplation Garden
- Science Center
- Adventure Playground
- Toddler Playground
- Preschool Playground
- Orchard
- Marsh
- Prairie/Rough Ground Area

In the following pages, each is described with details of proposed additional settings and physical enhancements.



View across Margaret Noecker Nature Center Hub site, located between the Administrative building and the Woodland Preserve

Entrance, Parking, and Boundaries

A looped driveway from the street enters and exits the site, providing drop-off and pick-up for children and access to the Administration Center, but otherwise is separated from the bulk of the site. The Carruth Center is directly accessible from the parking area. The driveway defines a central “green” reservation where the current nature center is located.

Welcoming Entrance

At the main vehicular entrance from the street, an inviting arch and border of trees and flowering plants give definition to the entrance. A sculptural element provides the opportunity to express the mission of The Parish School.

Expanded Parking

Additional parking is installed to replace the current east overflow parking in order to serve school growth and special events.

Northern Boundary

Along the northern boundary with Hammerly Boulevard, hardy evergreen and flowering shrubs and trees hide the parking lot from the street and give a more natural feel to passers-by.

Southern Boundary

Hardy, evergreen trees are planted along the chain link fence bordering the southern boundary of the Parish School. The trees create a green screen buffer to the large warehouse beyond the fence.

Eastern Boundary

Along the eastern boundary, between the Woodland preserve and Brittmore Road, a new sturdy fence is installed to prevent access onto the Parish School property from passers-by, and to define the boundary aesthetic of the campus. The fence is gated and locked for maintenance access.



Luscious planting along school boundary fences

Pedestrian Pathway Network

An established primary pathway network connects classrooms with each other and outdoor activity settings.

Short Pathway Internal Circulation Network

Short pathways connect the classroom crescent to activity centers, including the elementary playground, science center, adventure playground and prairie/rough ground. These pathways are built to allow access to the back building doors by maintenance vehicles for trash removal and other tasks.

The Margaret Noecker Nature Trail

The Margaret Noecker Nature Trail serves as a memorial to the ideas of Margaret Noecker, celebrating her passion for nature, and provides an informal, extended trail close to the school site boundary, connecting all outdoor settings. Its focal area is the woodland preserve, where it connects outdoor gathering and interpretive elements along the trail.



Existing classroom crescent walkway



Existing narrow pathway around preschool playground



Example of curvy, wide, concrete, primary pathway



Example of mulch-covered secondary pathway



Example of curvy, wide, decomposed granite, primary pathway



Raised planting bed integrated into wide, primary pathway

Classroom Crescent

Four classroom buildings form a semi-crescent connected by a covered walkway terminating at the library and preschool playground at the west end. A developed courtyard and small garden are located facing south between the administration and library buildings. The current building plan calls for extension of the crescent with addition of two classroom buildings and a Multi-Purpose Building at the east end. Because of the semi-circular form, each classroom has a different orientation to the sun across a range of cardinal and ordinal points. Each offers a different pattern of light throughout the day and by season.



View along crossing between administration building and future MNNC site



View along driveway between administration building (center) and future MNNC (right)



Existing classroom crescent

Amphitheater

The amphitheater is designed to accommodate a substantial audience size for large gatherings and performances, but also feels comfortable for a single class gathering. The stage is located north of the seating so that the southern angle of the sun is to the back of the audience.



Example of semi-formal amphitheater using native limestone seating

Community Garden and Store

The community garden and store, part of Margaret Noecker's original vision for the school, are located in the grassy swath in front of the Post Oak building. The garden provides opportunities for Parish School students, teachers, and their families to engage in growing fruit and vegetables together. The store is a place for children to sell produce from the garden, artwork, crafts, and other school projects to their parents and community members.

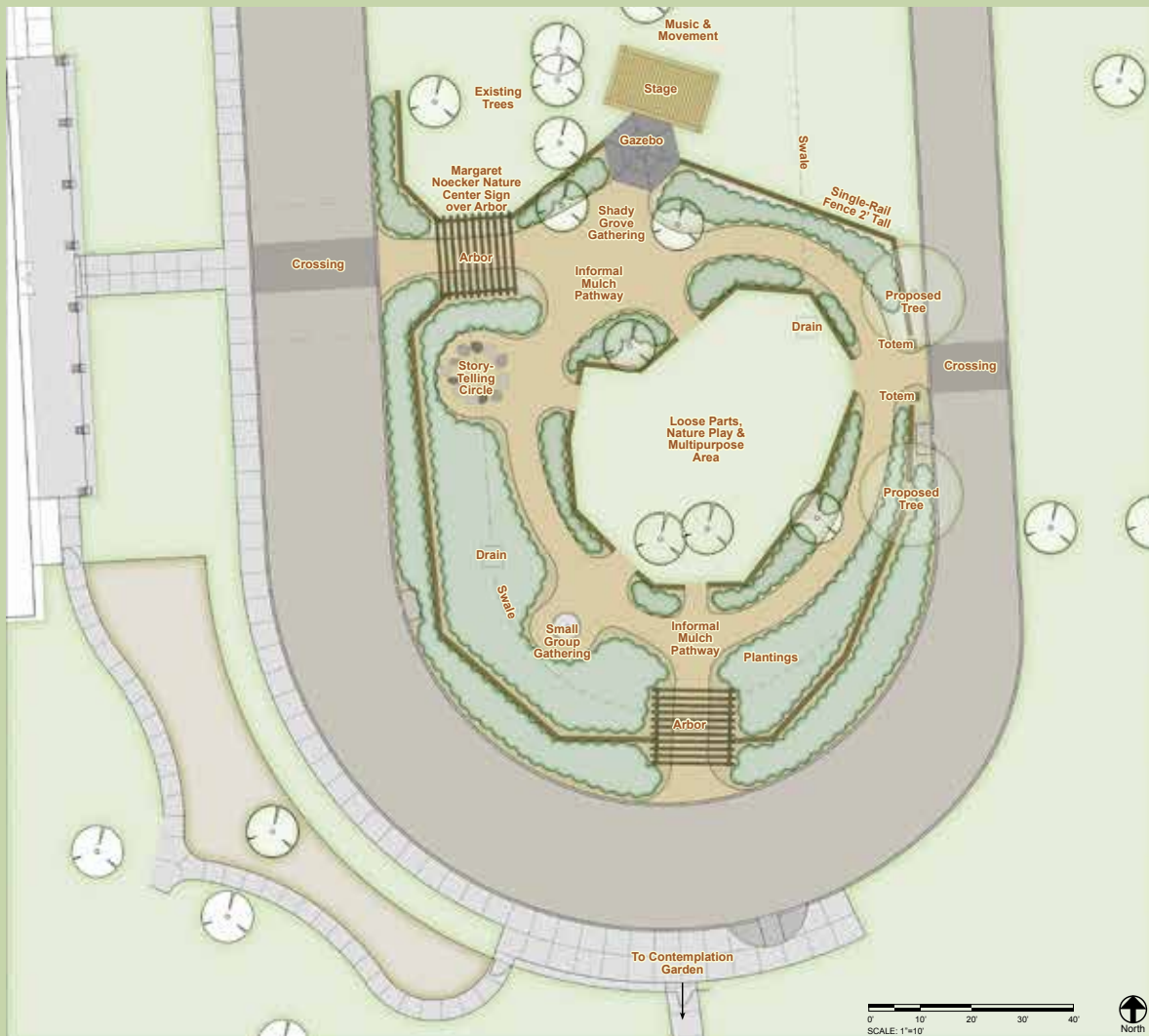


Community garden



Child-managed market stand

Margaret Noecker Nature Center Hub



The Parish School
Margaret Noecker Nature Center Hub
Houston, TX

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Not to scale



Example of a rectangular outdoor classroom with translucent roof



Example of a hexagonal gazebo outdoor classroom

Detailed layout of the Margaret Noecker Nature Center Hub

The Margaret Noecker Nature Center Hub is a place for outdoor gatherings and exploration. Several comfortable, shady places accommodate groups for teacher/parent conferences, outdoor therapy sessions, outdoor class lessons, and small group meetings.

To strengthen the identity and functionality of the existing gathering space, the main entrance to the west, facing the administration building, is furnished with a stone and wood arbor and signs commemorating Margaret Noecker and her Parish School legacy. It also provides an opportunity for donor recognition using engraved stone pavers. A second, similar arbor terminates the Hub at the south end, opposite the proposed Contemplation Garden. On the north side of the MNNC Hub a low, accessible deck/stage connected to the Gazebo provides an anchor to the music and movement area.



Example of a welcoming vine-covered arbor entrance

A gazebo or similar covered meeting place for groups overlooks the gathering space. A worktable, shelving, child-friendly seating, and storage, provide for outdoor classroom activity. To reinforce identity, the MNNC Hub perimeter is defined with a low railing fence and buffer of native plants. A looped pathway on the inside of the perimeter buffer connects the gathering space to a series of small activity stations, including a story-telling chair, worktables, and small group meeting spaces. All pathways are accessible to wheelchairs and wagons from the classroom buildings.

On the inside of the accessible, looped pathway, a multiuse area enclosed by a low rail and prairie flowers contains natural materials for loose parts play, a messy play area, an art and creation station with worktables and storage, and a block building area.



Example of a sculptural storyteller's chair/throne

Natural Construction Area

The natural construction area, located in the shaded area across from the nature center hub and beside the community garden and store, is a central zone for all kinds of natural loose parts and building materials. Logs, branches, rocks, tree cookies, and other natural elements are gathered in a defined area with open-sided child-scale storage. The bounded area is surrounded by a planting of mosquito-repelling herbs, such as thyme and citronella, and some informal bench seating for teachers and parents.



Natural enclosure (rot-resistant black locust) with tree cookies



Permanent enclosure using vertical logs with children using natural, loose parts to make a "club house"

Multi-Purpose Court and Field

The covered multi-purpose hard-surface play area creates a shady place for sports and games and provides a base for activities in the adjacent elementary playground, multi-purpose field, and woodland preserve.

The multi-purpose field south of the covered court will replace the existing field north of the court as a base for field sports and games when the future classrooms are built.



Existing covered multi-purpose court



Active free-play using portable equipment in a multi-purpose field

Woodland Preserve

Located along the eastern boundary of the site, the heavily wooded preserve offers a dramatically different range of ecosystem experiences, which currently contrast to the character of the rough ground area to the east. As the sole remnant of native woodland on the site, this area offers unique experiential and educational value. The Margaret Noecker nature trail, a maintained path with defined entrances, winds through the preserve, leading students to different educational outposts and gathering spots. Plant identification markers and other natural signposts are located along the trail. A bird watching area, complete with bird blind, bird feeders, and bird bath, invites quiet observation and study of local wildlife.

The students proposed several designs for a tree house in the woodland preserve, which could also include an outdoor classroom space. The tree house contains opportunities for climbing, perching, sitting, and rocking in hammocks. The entire woodland preserve area is fenced off from Brittmore Road, with a locked gate, to prevent unauthorized access from the street.



Existing woodland preserve



Shared plant explorations



Woodland preserve, flagstone secondary path



Woodland preserve birdblind

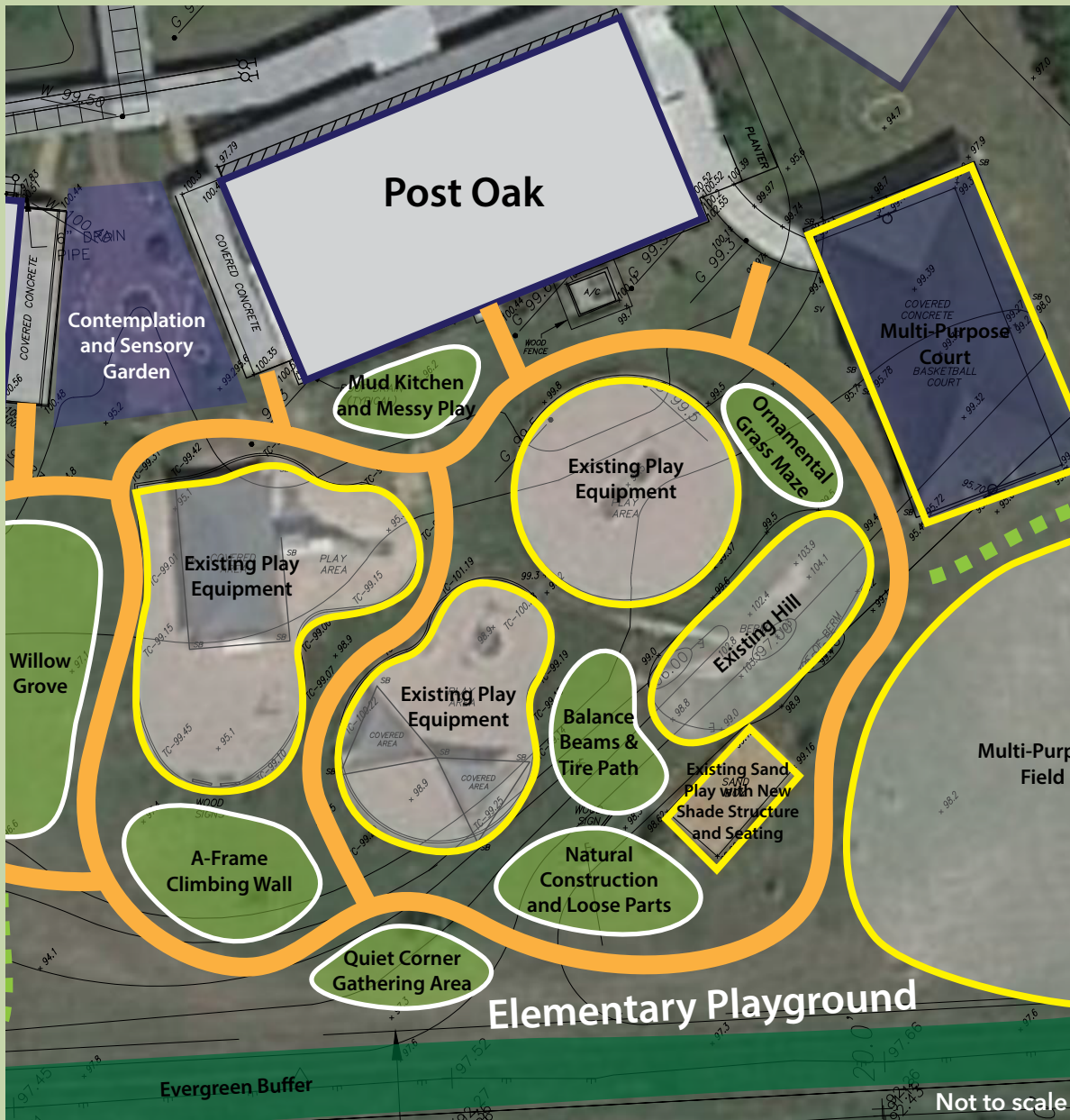


Woodland preserve gathering space



Informational orientation map

Elementary Playground



Existing play equipment and shade structure



Existing mound, sand play, and shade structure

Proposed additional settings to the elementary playground

The existing elementary playground consists of three settings defined by mulched safety use zones containing manufactured equipment and shade structures. An earthen mound adds diversity to this area. Substantial tree planting around and between the use zones would improve the comfort level and overall quality of this area. Small group gathering spaces including comfortable seating would add opportunities for outdoor learning and a shed for storing loose part play. The existing sand play area could be significantly improved through added shade and boundary seating, similar to the sand play in the preschool playground. Additional new settings could include balance beams and tire path, an ornamental grass maze, a mud kitchen/messy play area, natural construction and loose parts, an A-frame climbing wall, and a quiet corner for gathering.



Example of A-frame climbing wall



Example of mud kitchen



Example of balance beams



Example of natural construction



Example of grass maze

Contemplation Garden

In between the Laurel Oak and Post Oak buildings, the contemplation and sensory garden has a wide variety of plants to invite and stimulate the senses. Plants of different colors, textures, and scents encourage slowing down, reflecting, and exploring through touch, scent, and even taste. The garden has multiple options for seating, including shaded seating under arbors, small trees, and shade canopies. A variety of textured pathways, looping around the space add to the sensory variation and the sense of exploration. Other sensory installations could include flags, wind socks, outdoor mobiles, chimes, mosaics, and colorful sculptural elements. A permanent worry wall is installed in the garden as a place for children to place notes and let go of things that worry them. Small child-scale structures offer places for children to “hide”, such as a vine-covered teepee or a willow hut.



Example of inviting garden gate



Example of sensory pathway using flagstones and steppable plants



Example of ceramic, mosaic wall created by children



Example of child-made stepping stones

Science Center



Science Center proposed settings



Example of outdoor lab with translucent roof



Example of outdoor lab

The science center, south of Laurel Oak, offers potential for diverse hands-on science covering the full spectrum of STEAM (Science, Technology, Engineering, Arts, and Math) activities. Science faculty members are encouraged to develop concepts and “wild ideas” (i.e. outdoor learning activities that may respond to the special needs of Parish students).

The large, central outdoor science lab can be subdivided for multiple class groups, and other gathering spaces for class use exist around the periphery of the science center. Inside the outdoor science lab, there are counters and locked storage for both the lower and upper elementary classes to have their own storage spaces. Work tables, moveable white boards, and moveable seating provide opportunities for students to work in groups or independently. An outdoor sink provides a resource for washing edible plants, and using water in other experiments. Outdoor-rated power outlets provide flexibility for using electronic equipment. The lab pavilion is sheltered from the sun and rain for lessons in all seasons.

Around the central science lab, there is a pollinator garden, a weather station, experimental garden beds that can change as class interests and seasons change, and a willow grove. The weather station contains a wind vane, a sun dial, a thermometer, a solar panel power station, and a rain gauge. Ideas offered for the experimental garden beds include a hummingbird garden, a mud digging area, a wild flower planting, and a prairie grass planting. Other science study related elements could include a rock garden, pulley system, balance scales, and a fossil digging area. On the south side of the science center, in the rough ground bordering the fence, short looping trails provide access for classes and individual students to explore and observe nature stations such as bird feeders or bat houses.

A small educational pond is located in a low area adjacent to the proposed science center by gathering storm water from an existing drainage corridor. The small pond has varied water depth to support a broad range of aquatic plants and animals. A small deck or bridge allows students to explore and engage with the pond at their own level.



Small pond with solar-activated fountain



Science Center pollinator

Adventure Playground

The adventure playground is a well-developed and unique setting for adventure play at the Parish School. A fundamental principle of the original adventure playground concept (Emdrup, Copenhagen, 1942) was constant change to the environment conducted by children and facilitated by the playworkers. As such, adventure playground workers regularly recycle structures to inspire new types of inventions. Plentiful storage and a variety of structures ensure children have free reign to design and build whatever sparks their interest. Shaded areas in the adventure playground protect children during the hotter months.



Existing adventure playground sink station



Existing adventure play shady setting



Views of existing adventure playground



Toddler Playground



Interacting with soft evergreen shrub



Example of Live Oak limbs recycled as a toddler climbing structure

Proposed additional settings to the toddler playground

Located between the Chestnut Oak and Bur Oak buildings, the toddler playground has an existing play structure, sand play area, and lawn. A new looped pathway around the play structure and sand play, connecting to the entrances, aids in circulation and gives the toddlers a smooth surface for pushing wheeled toys. Other proposed new settings include sensory gardens, an outdoor art and messy play area, a mud kitchen, a stage/deck for pretend play, balance beams, and natural loose parts such as tree cookies, stumps, and boulders.



Example of natural loose parts corner



Example of sensory pathway corner



Example of a gathering space with recycled logs and portable play equipment



Example of a toddler stage

Preschool Playground



Existing sand play area

Proposed additional settings to the preschool playground

Located between the Bur Oak classroom and the Carruth Center, the preschool playground has a curvy concrete pathway, sheltered sand play area, play equipment climber, see-saw, and play house. Proposed additional settings include a water play area with a pump and rocky play stream in the existing drainage swale, a sound garden music play area, a natural playhouse village, an art and messy play workshop, a mud kitchen, a quiet corner, a tree grove and gathering circle, a butterfly garden, and a fairy garden. Additional shade in the form of shade sails and trees is recommended, especially near the existing play structure.



Example of enclosed messy play



Example of messy play (mud kitchen)



Example of play stream



Example of water pump



Example of quiet corner



Example of acoustic play



Example of natural playhouse



Example of natural playhouse



Example of climbing tree



Example of fairy garden

Orchard

Behind the Bur Oak building, the orchard contains a variety of fruit tree cultivars that do well in the Houston area, such as apples, pears, figs, plums, and persimmons. There is an informal gathering spot of picnic tables in the center of the orchard for class lessons, picnics, and other activities.



Existing fruit tree



Ready to harvest



Observing fruit

Marsh

This low-lying broad swale is the wettest area on the site, feeds into the wetland Rough Ground Area, and supports a variety of wet-loving plants and wildlife. The Margaret Noecker nature trail borders the marsh on one side. The trail could include a small deck or boardwalk to give further access to see the plant communities and wildlife thriving in the marsh. Beneath an existing baldcypress tree, new locked storage and seating provide a shady base for wildlife observation.



Existing marsh



Existing marsh

Prairie/Rough Ground Area

This low-lying area, recreating the traditional east Texas prairie landscape, is a setting for exploring native habitats and wildlife. The existing trail located on the periphery of the area is enhanced to improve access and become a branch off of the Margaret Noecker nature trail connected to the school core facilities. New winding trails through the middle of the prairie connect the interior of the prairie space and prairie outpost. The outpost has several log seats for prairie lessons and contains a simple counter and storage spot for prairie exploration materials, such as nets, bug boxes, and magnifying glasses.



Mown prairie edge



View across existing prairie



Mown prairie pathway

