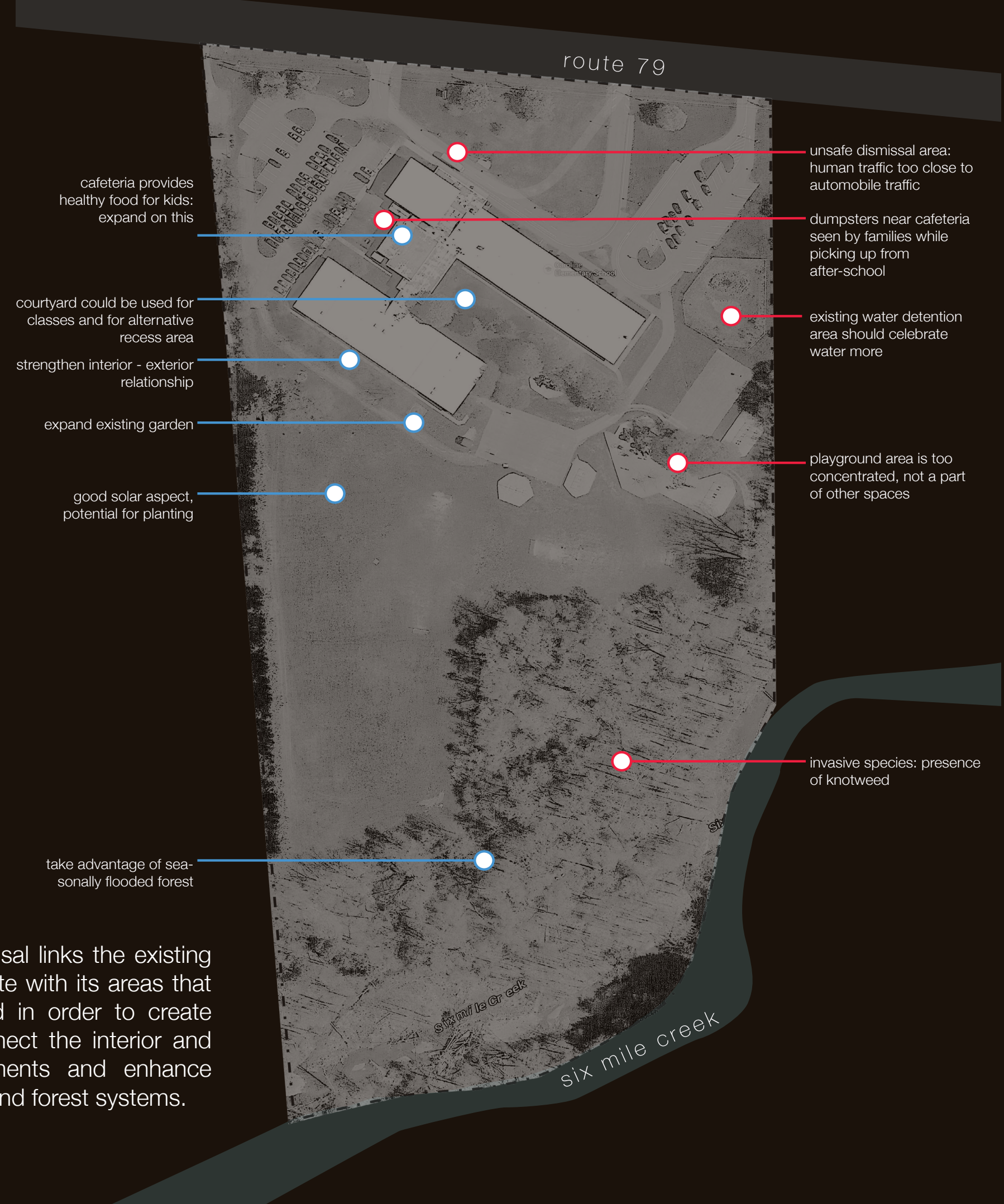


caroline elementary is part of an agricultural context as well as the cayuga lake watershed. the surrounding social context includes organizations that actively promote agricultural involvement.



our design proposal links the existing advantages on site with its areas that can be improved in order to create spaces that connect the interior and exterior environments and enhance the food, water, and forest systems.

Indoor-outdoor spaces responds to the routine of a typical school day. A strengthened relationship between indoor and outdoor learning environments inspires curiosity about the natural world. The experiential, visual, and evocative qualities of nature cater to a variety of children's learning styles, and enhance the existing curriculum.

Food systems respond to the school's agricultural context of the site, as well as the awareness that nourished bodies play and learn better.

Forest health management is in response to the presence of invasive knotweed and addresses the far-ranging future of the site.

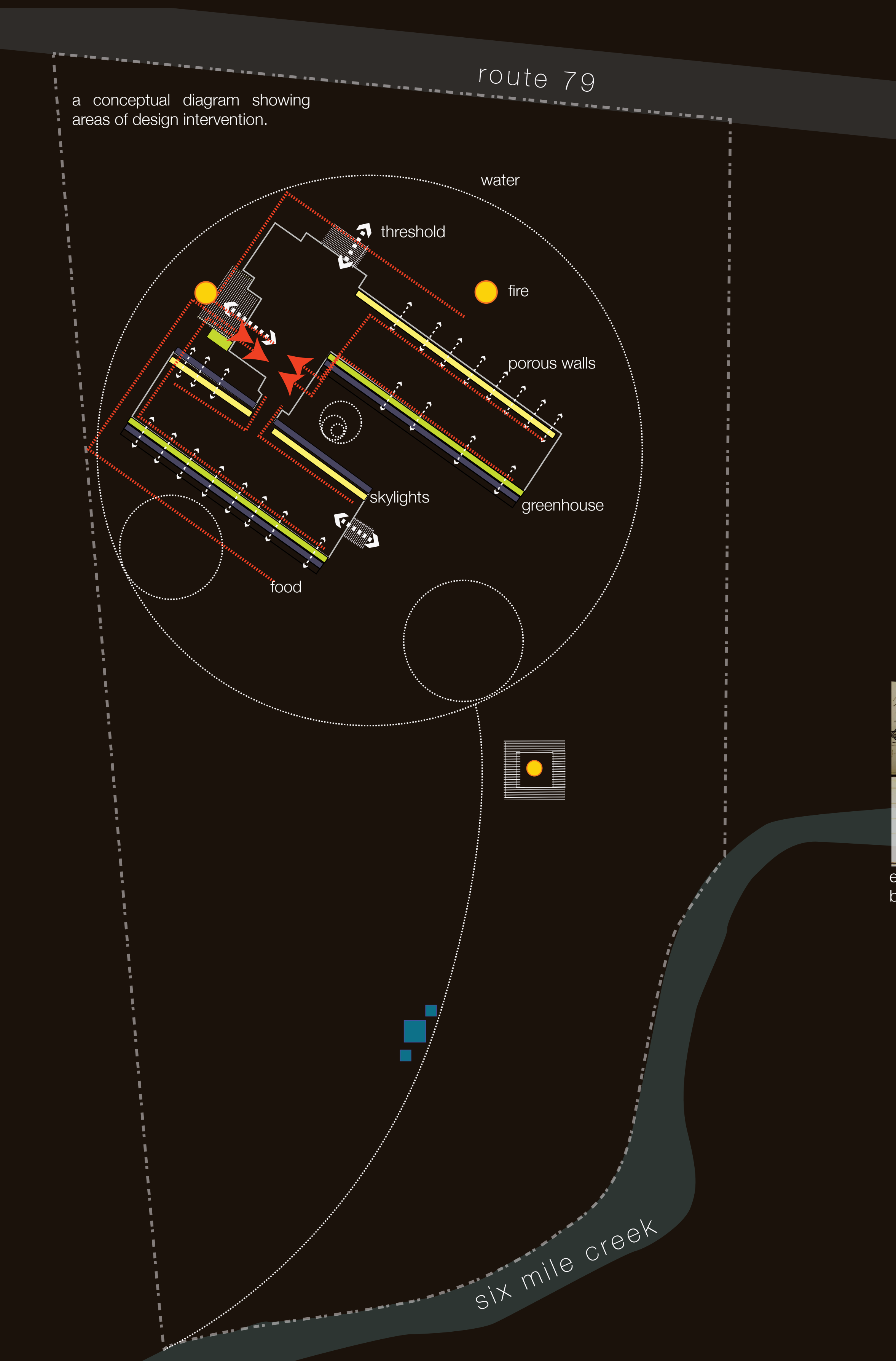
Water is treated as an interactive feature, celebrated on the site and as it enters the Six Mile Creek watershed.

t r a n s i t i o n a l
s p a c e s

t r a n s f o r m a t i v e
s y s t e m s

The concept of transition applies to systems of food and water as well as spatial experiences between the interior and exterior of the school building. This design proposal seeks to soften the edges between spaces, and enhance connections within food and water systems.

a landscape and architectural approach
caroline elementary school, slaterville, ny
kate chesebrough . rafael lopez-pegoraro . marilia reis



a conceptual diagram showing areas of design intervention.

TRANSITIONS

- from one state of being to another
- from education to play
- from outdoors to indoors
- from plant to plate
- from raindrop to waterway
- from hard to soft surfaces



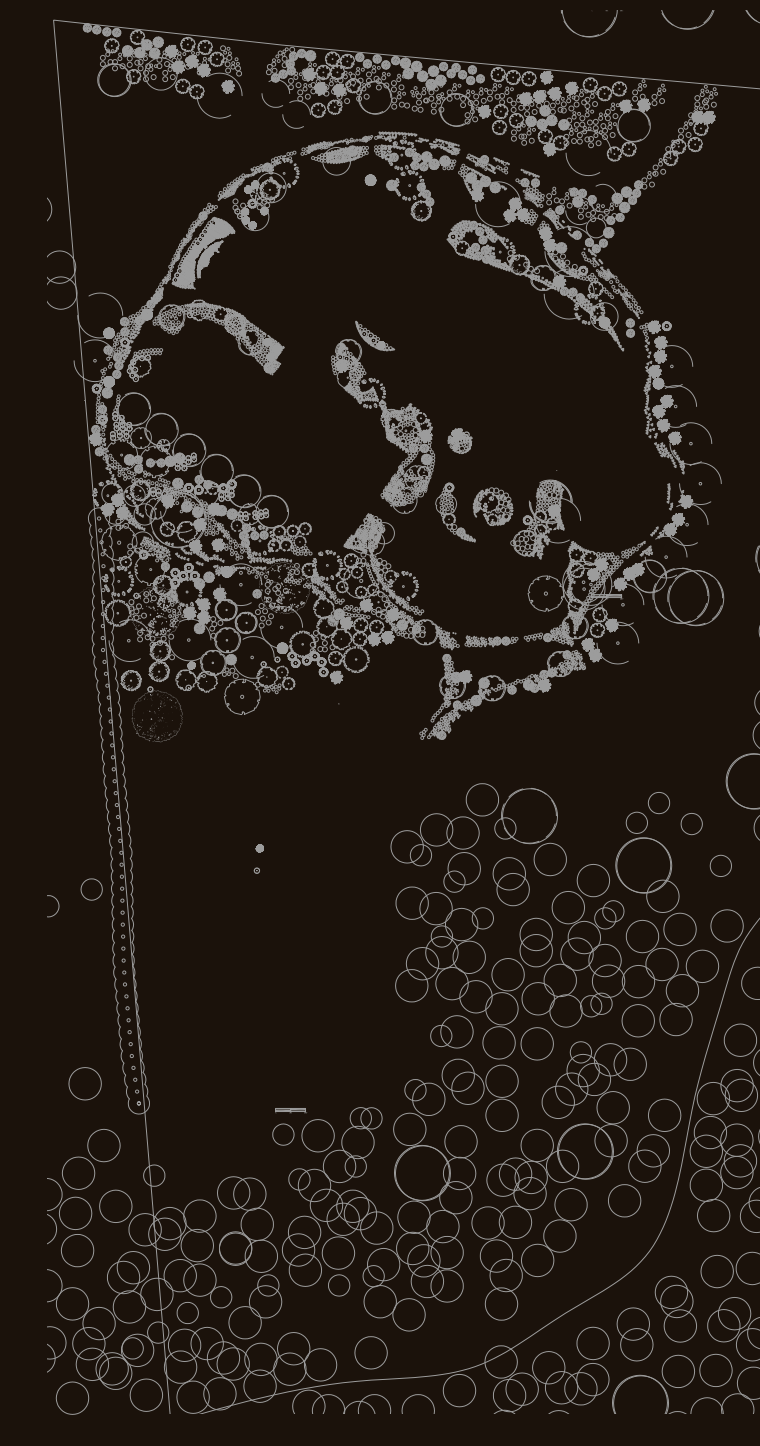
early sketches in this design process call for a porous boundary between indoor and outdoor spaces.



students and educators at caroline elementary are actively engaged with where their food comes from, where water on the site flows, and how their forests are sustained in this design proposal.



proposed topographic interventions enhance water flow through the site and provide interactive mounds from the cut and fill process of creating swales.



proposed plantings are based on providing food and an enhanced swale habitat.



detail area plan 1

detail area plan 2

detail area plan 3

t



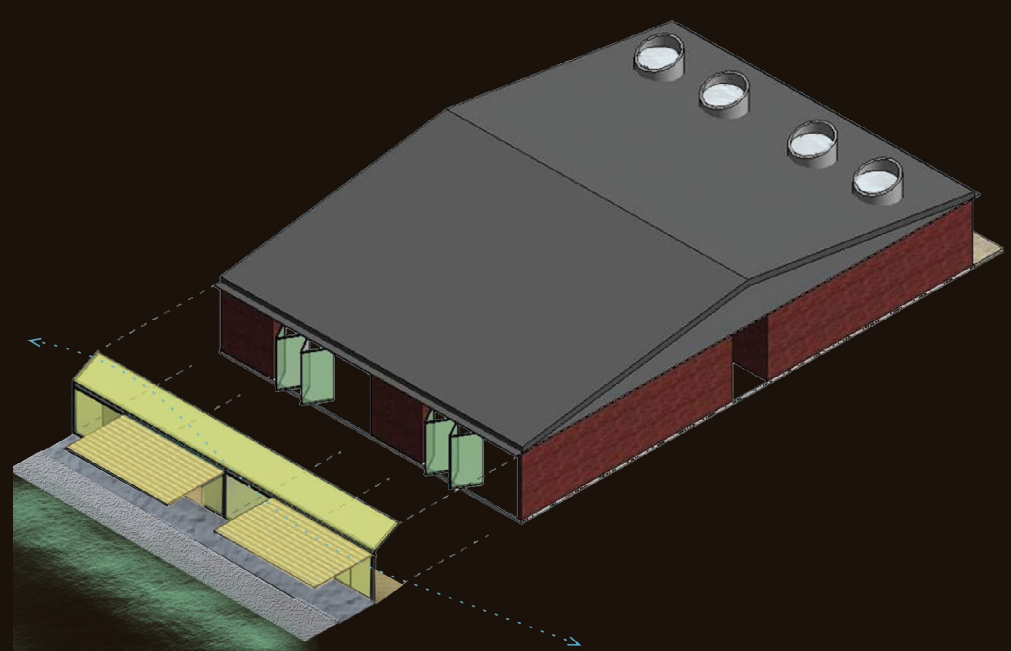
classrooms that extend outdoors



light-filled classrooms during winter.



glass doors open classrooms to nature



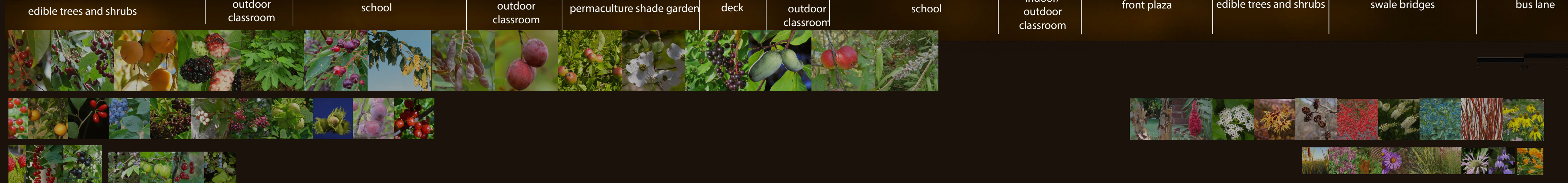
classrooms transition through a greenhouse and patio with retractable overhead structure to the outdoors.



the deck and fountain courtyard expand the outdoor classrooms adjacent to the building and provide an alternative space during recess. The warmth of wood combines with stone pavers and pools of water for a contemplative space for classes and for an alternative destination during recess.



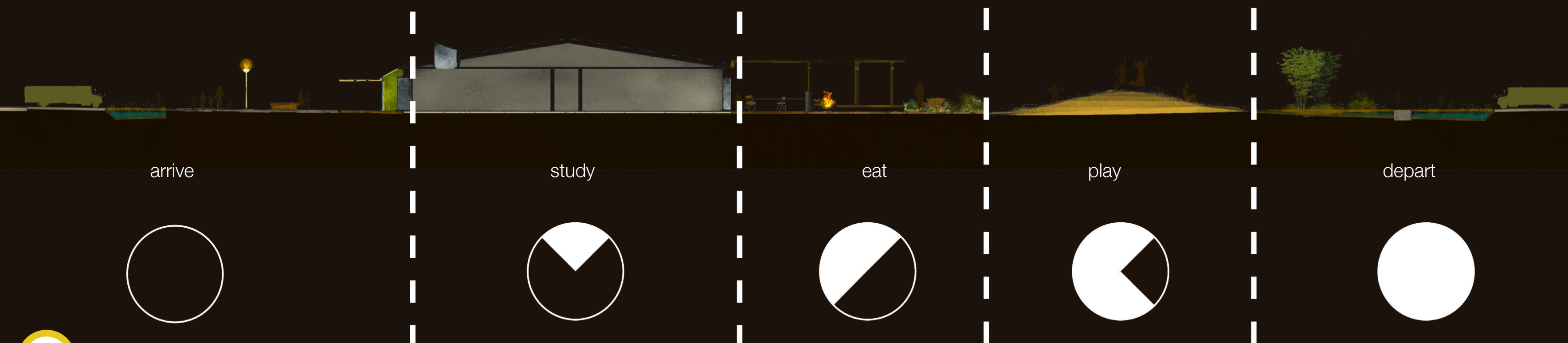
the deck in front of the school becomes a space for gathering for celebrations, learning about swale function, and a space to wait in and pass through during arrival and departure.



indoor / outdoor relationship

paying close attention to the daily routine at caroline elementary leads to designing around destinations and thresholds.

access between the school and playground area is similarly treated with an overhead pergola structure. the main entrance of the school is enhanced by a widened plaza space that can be used as a gathering area before and after school, as well as for school events for students' families. the plaza is buffered from the school bus road by swale plantings that move water through the site. swale plantings are used as protective barrier that guides students towards buses. An event-specific fire torch is prominent in this civic-minded space. a pergola structure announces the main entry to the school.



- proposed bus parking
- protective swale plantings
- MAIN ENTRY pergola
- FIRE PIT
- wooden deck
- benches, gathering area
- stone patio
- OUTDOOR CLASSROOMS
wooden deck
overhead structure
- moveable glass doors
solarium
- skylights on NORTH side
- fountains
shade permaculture plantings
- greenhouses on SOUTH side
stepped deck
- swale bridge
- RECESS ENTRY pergola
- bermed hillside water retention
- PERMACULTURE FOREST



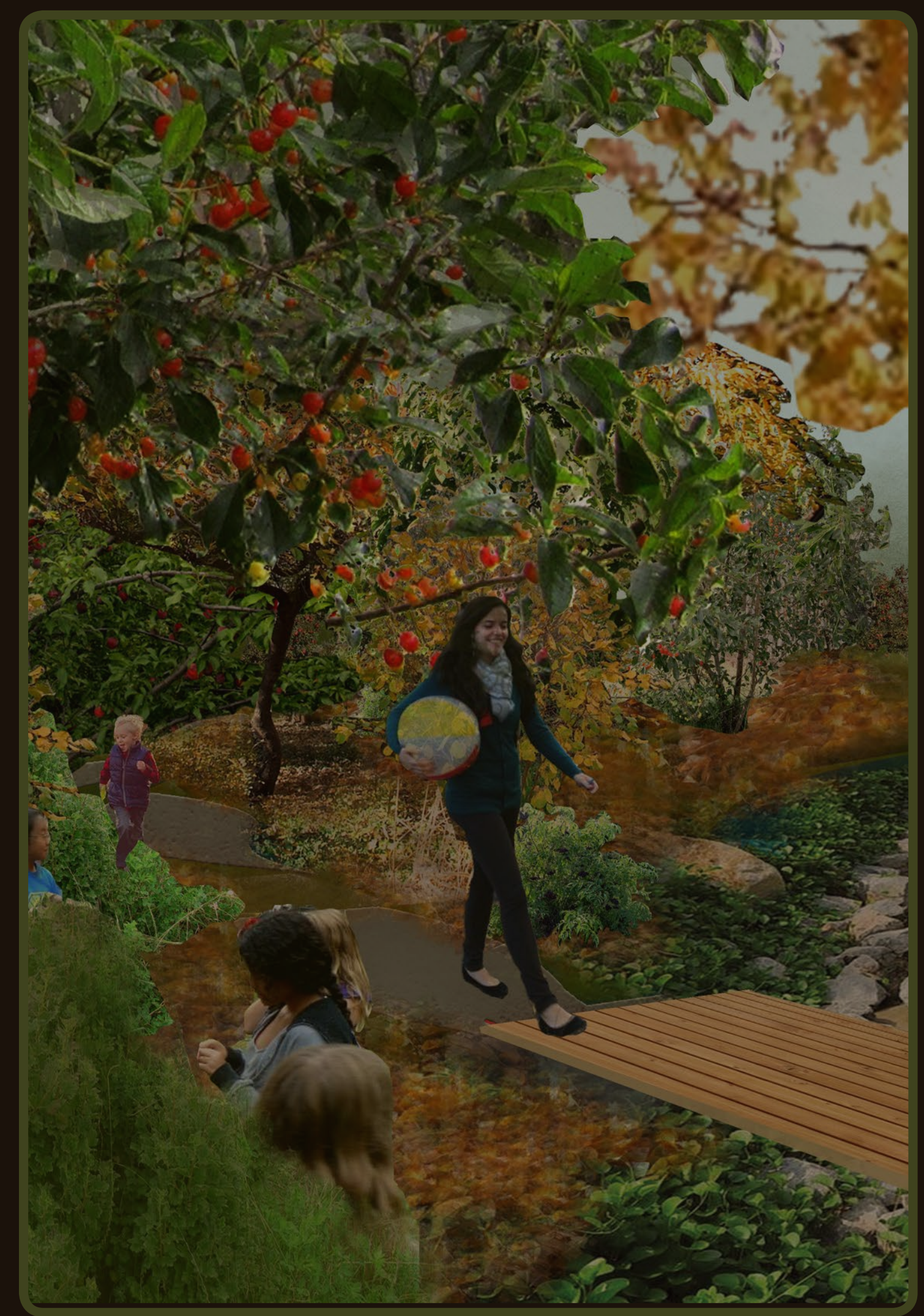
adults and children work together in an abundant garden.

kitchen garden

the kitchen garden provides fresh food for the school cafeteria with crops that are ready for harvest during the spring and summer. a pergola expands the cafeteria to an outdoor dining space with fire grill for cooking.



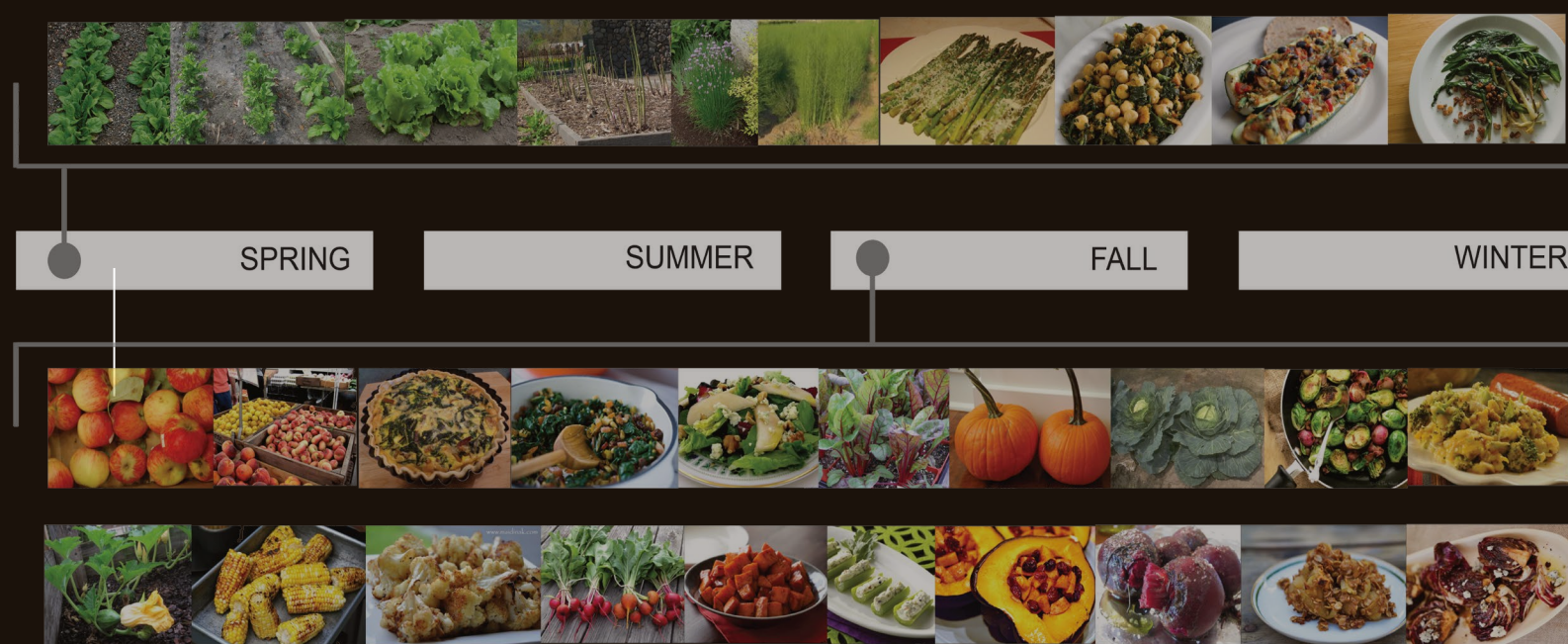
seasonally rotate crops in the kitchen garden with seeds started in the greenhouses.



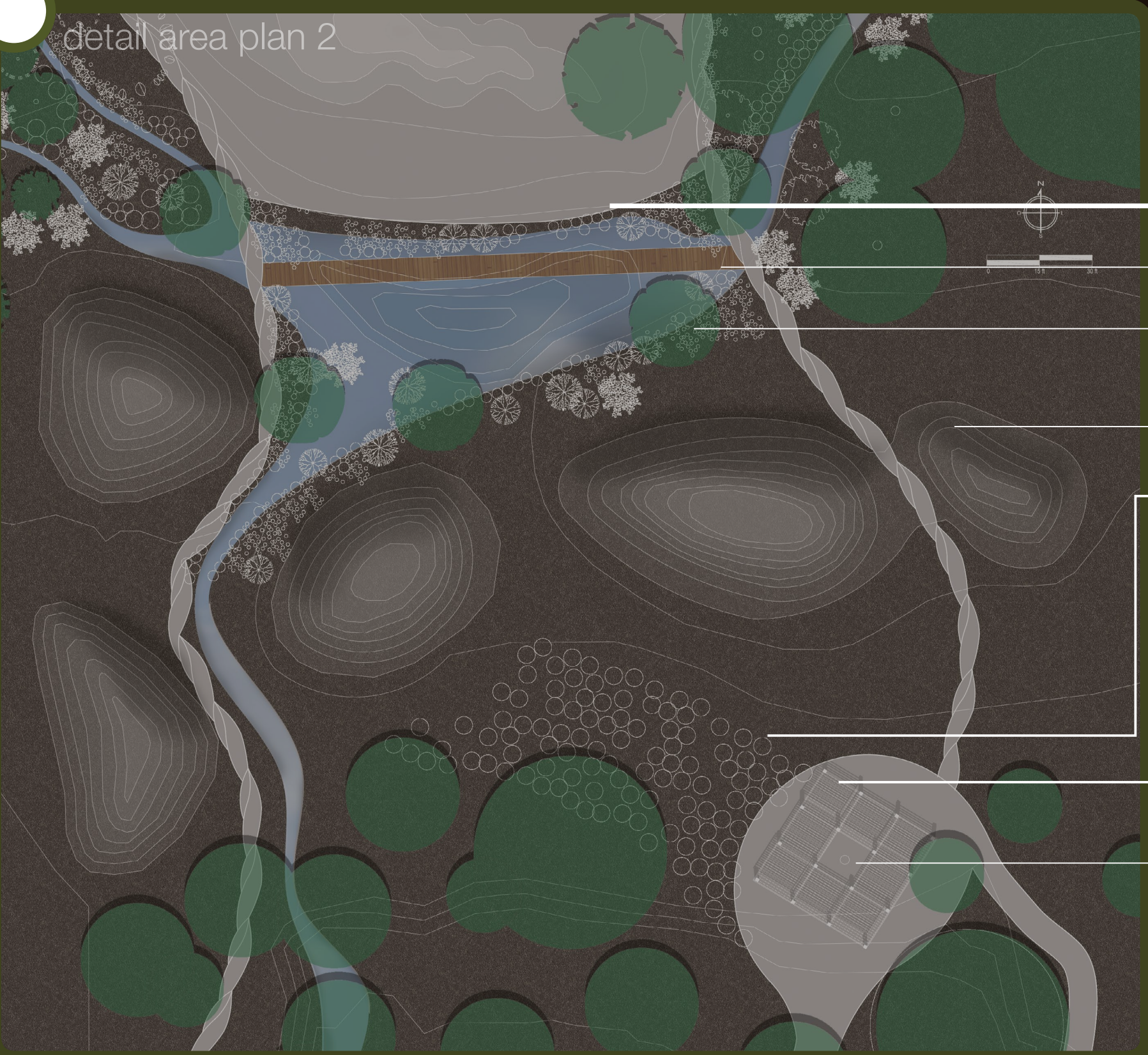
a swale bisects the permaculture forest.

permaculture forest

layered trees, large and small shrubs, and perennials provide fruit and nuts and create a rich forest tapestry with abundant food for humans and wildlife.



detail area plan 2



- retention pond
- bridge over retention pond
- swale plantings
- play mounds
- willow village
- OUTDOOR CLASSROOM pergola
- FIRE PIT

FOREST HEALTH: knotweed management

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invasive knotweed (alternately called smartweed) is a threat to native species in even-aged forest stands. this condition calls for remedial management if a forest is damaged by knotweed.

STRATEGIES

- forest tree planting**
strategy 1: prune knotweed twice yearly, propagate native tree seedlings to plant and manage.
- living willow play village**
strategy 2: prune knotweed twice yearly, plant four species of native willow cuttings in a play village structure. cuttings can be used for other purposes.

EFFECTS

- forest legacy**
willow plantings will reduce knotweed growth areas while young trees rapidly mature trees over time, forest is self-perpetuating as conditions allow for seedling regeneration.

WHY?

An even-aged forest stand has trees of all the same age. As they grow, they crowd out any other species in the understory. When the forest trees reach the end of their lifetime, there are no younger trees to replace them. By pruning the knotweed twice every year, it is slowly starved of resources and will not be able to compete.

a proposed retention pond with surrounding mounds to enhance the existing playground area. during recess, kids can wander between these mounds and roll or sled down them during the winter. willow plantings are proposed to surround the entrance to the existing outdoor classroom next to the woods. these can be woven into a willow 'village' over time, providing a new space for exploration. a pergola as well as a camp fire pit serves as a transition point between the existing school play grounds and the forest.



a pergola around the outdoor classroom defines the threshold between the play area and the forest.



- swale
- play hills
- outdoor classroom
- willow village
- tree saplings started in the greenhouses are planted in forest test plots
- forest



BOUNCING BRIDGE

deck

stepped deck

dragon

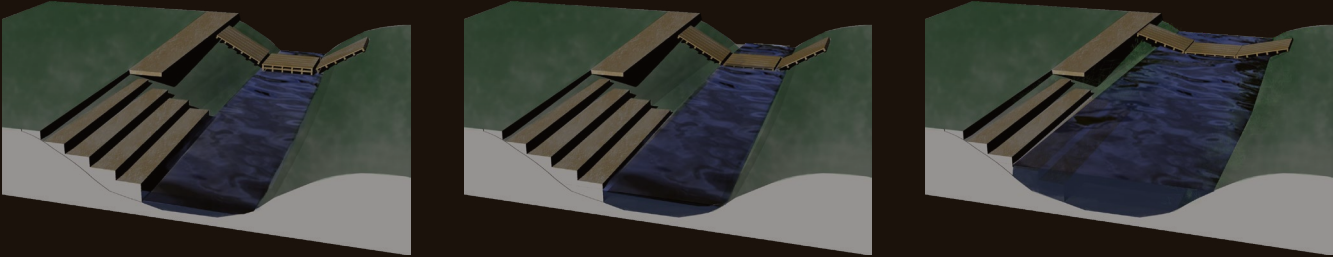
stepping stones

water-responsive decks

seasonal flooding changes the character of the forest. a series of deck structures invite interaction with water phenomena.

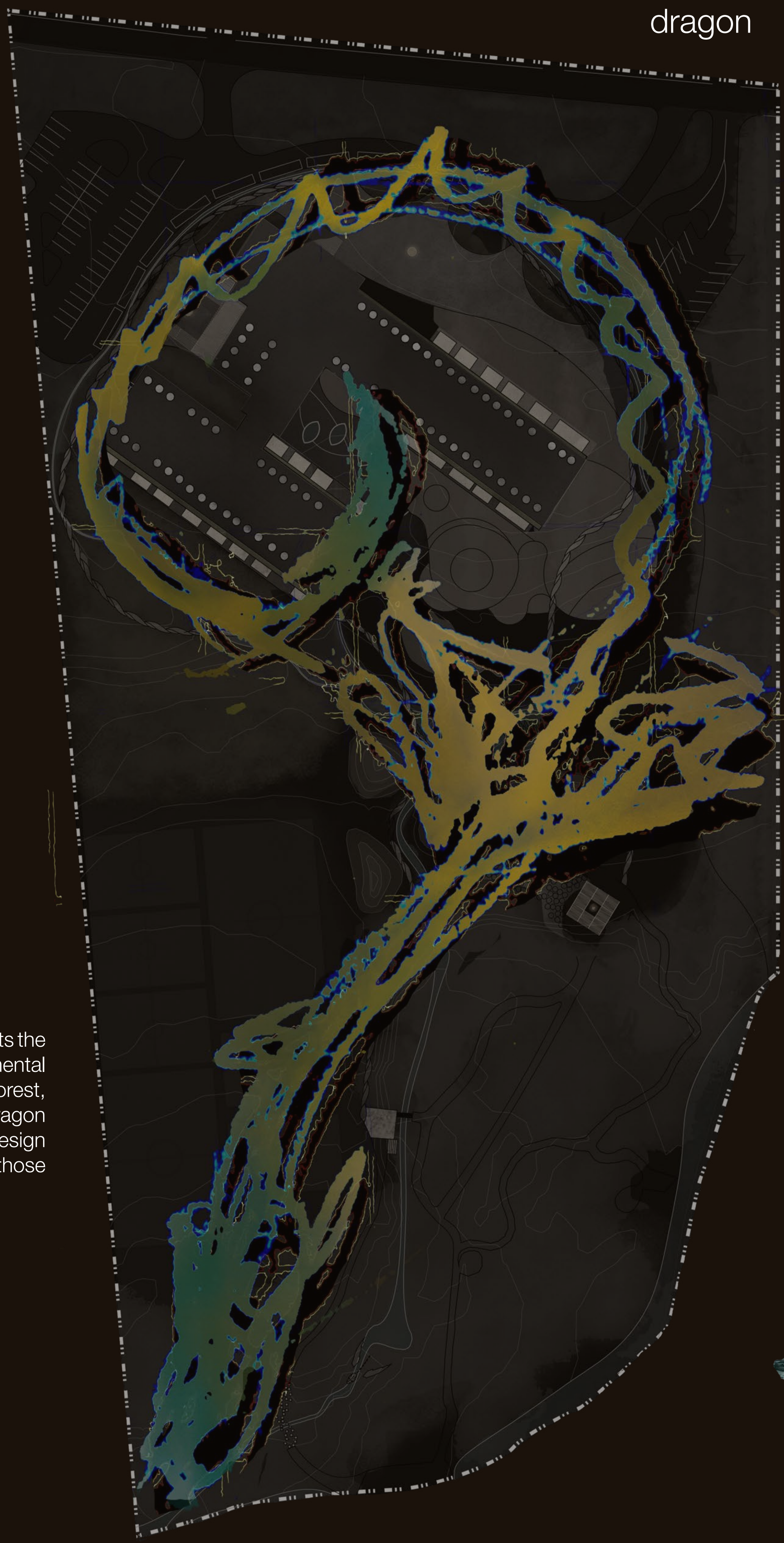
water is treated as an interactive feature of the site in the forest setting, as a system of stepped platforms descend existing slopes and are alternately submerged by water depending on its seasonal and storm event levels.

low, normal, and high water levels move the bridge.



dragon metaphor

while this design proposal connects the literal elements which are fundamental to life, such as water, food, forest, and fire, the metaphor of the dragon embodies the spirit of this design and incites the imagination for those experiencing the space.



a stationary deck remains above high water level. stepped decks become inundated and revealed with flood levels. a moveable bridge bounces on water.