



OWEN MIDDLE SCHOOL

CONCEPTUAL MASTER PLAN

JUNE 2016

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Prepared by:

ASHEVILLE DESIGN CENTER

INTRODUCTION

In early 2016, Owen Middle School (OMS), located in Swannanoa, NC, approached the Asheville Design Center (ADC) to discuss potential design ideas for their campus. With approximately 40 acres of land, there are myriad possibilities for the property. OMS asked ADC to investigate ideas that would create outdoor learning environments that engage not only the students, but the entire community. At the time of this project, OMS had been approached or internally developed a number of design projects targeted at outdoor learning. However, OMS requested ADC help develop a cohesive plan for the campus that would take advantage of the right opportunities that could seamlessly integrate into the property in a meaningful and unified way.

Asheville Design Center

ADC is a nonprofit founded in 2006 to help build livable communities in Asheville by providing asset-based planning and design services. ADC brings a multi-disciplinary group of designers together to work through a participatory process that results in design solutions that are client-driven. For this project, the following volunteers participated as members of the design team:

- Aaron Ryba, AIA, NCARB, McMillan Pazdan Smith Architecture
- Beth Bailey, Elizabeth Bailey Landscape & Graphic Design
- Bill Bauman, Retired Professor of Architecture

- Mike Lovoy, PE, Advantage Civil Engineering, PA

The project management team was led by:

- Abbie Emison, AICP, ADC Project Manager
- Chris Joyell, ADC Executive Director

Owen Middle School/Natural Impact Initiative

In 2014, Owen Middle School established the Natural Impact Initiative (NII), a collaborative group of teachers and staff aimed at creating a school landscape that promotes environmental stewardship, citizen science, and exploratory learning. The NII seeks to build “global citizens” and cultivate their “local identity” through:

- Appalachian Heritage;
- Environmental Stewardship; and
- Resource Management.

Since its inception, the NII has accomplished a number of meaningful projects. These include:

- Native Pollinator Garden (March 2015): Using native species, OMS students, staff, and volunteers planted hand-crafted raised beds to attract and support beneficial local pollinators.
- Monarch Butterfly Waystation (March 2015): Students planted milkweed to sustain migrating monarch populations.

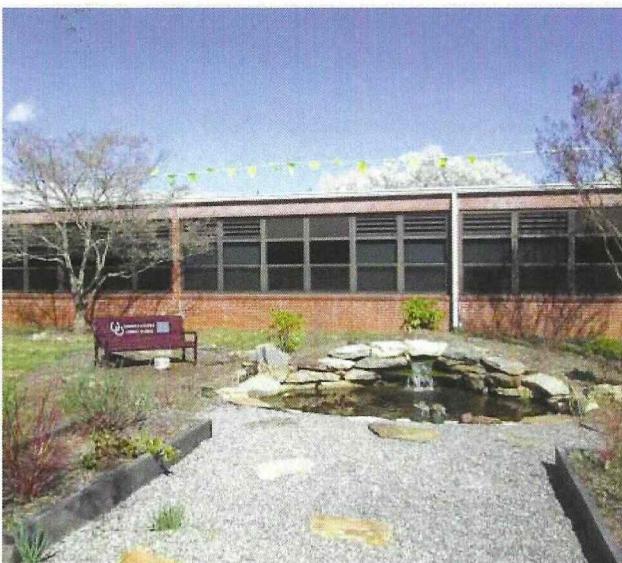


Image 1: Existing Outdoor Classroom



Image 2: American Chestnut Germplasm Orchard

- American Chestnut Germplasm Orchard (April 2015): Planted 10 50/50 F1 Hybrids and other exotic variety saplings. Students will be harvesting germplasms in three years.
- Quilt Garden (May 2015): Designed by Rotary Club members and OMS staff, and built by Rotary Club members, students, and staff. The garden provides ongoing horticulture opportunities for students.
- Pond Restoration/Outdoor Reading Classroom (October 2014-May 2015): Multi-phase project that began with removal of invasive species, such as poison ivy and water lilies.

The NII group and their smaller Steering Committee guided the conceptual master plan project and worked closely with ADC to build upon their previous successes. The following OMS teachers and staff led the Steering Committee:

- Brittany Krasutsky, Chair
- Jack Hill
- Cindy Sturdivant
- Amanda Venturella
- Carl Firley
- Jim Cooper
- Heidi VonDohlen

Process

In order to gain an understanding of the needs, desires, and requirements of Owen

Middle School, the ADC team used the following methods:

- Review of plans and maps;
- Site visits and site inventory by the ADC team;
- Site constraints analysis (topography and flood plain);
- Meetings with OMS's Steering Committee;
- Stakeholder workshops (two total) – one for the NII team and one for the larger community; and a
- Brief Preference Survey.

After review of background materials, the ADC team met with the OMS Steering Committee to initially discuss the project process and develop a timeline. The teams decided to hold two workshops to present the conceptual master planning process, review ADC's analyses, and gather input and buy-in from key stakeholders. In between the workshops, ADC developed a design framework and analyzed the site for key opportunities and potential obstacles (including feasibility and cost).

Workshop #1

The first workshop was held on April 6, 2016 at Owen Middle School. This was an internal workshop with the Steering Committee and the full NII team. The ADC team reviewed their ongoing design process with the attendees and then broke into small groups that focused on a key element of the potential conceptual design.

- Gateways/Trails: Paths and entrances that focus access to the campus.
- Interactive: Technology that can be used to engage students and the community.
- Learn: Structures or areas that students and teachers can use to learn within and about the campus and its environment.
- Nature: Ecosystems or habitats that can be created or fostered to better understand the environment.
- Play: Whimsical structures or areas that encourage engagement in nature without specific lessons.

Each small group rotated through the five elements, giving feedback on references images and discussing priorities.

The ADC team took this feedback and information and began the initial design process, placing key features and developing circulation options.

Workshop #2

The second workshop was held on May 10th, 2016 at Owen Middle School. This workshop was held in conjunction with a school district-wide meeting and was open to the larger community. During this meeting the ADC team informally presented preliminary conceptual designs for the master plan and passed out a brief preference survey. This workshop served to inform the community and larger school district on OMS's plans for their campus and raise awareness of the Natural Impact Initiative.

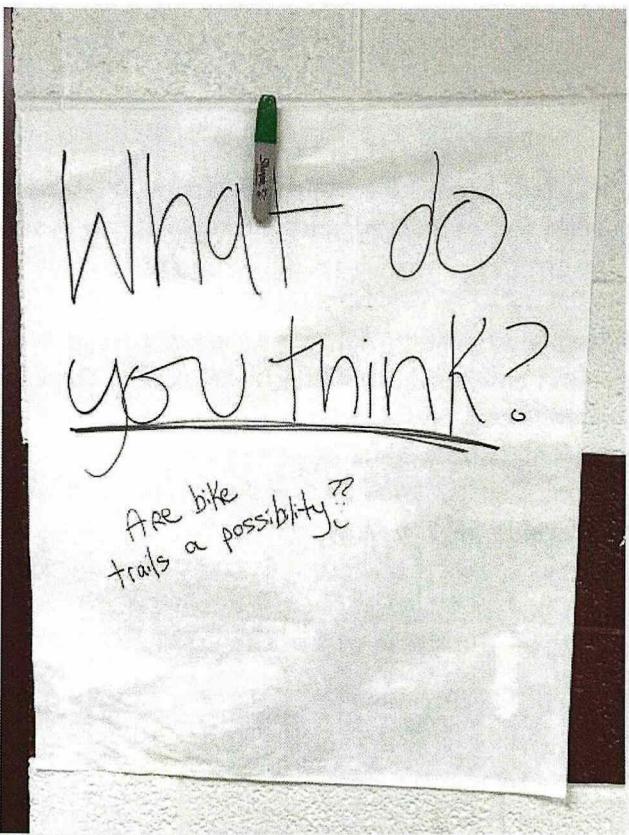


Image 3: Workshop Feedback

The following sections provide a summary of the design team's analysis and findings, as well as the conceptual master plan design and recommendations. These findings and recommendations are based upon background research and synthesis of the two workshops, surveys, one-on-one discussions, and numerous Steering Committee meetings.

FINDINGS

Site Description

The Owen Middle School property is approximately 39 acres, located in Swannanoa, NC. It is bounded by Old US Highway 70 to the north and the KOA campground and ponds to the south. To the east are a few residential parcels and open land, and to the west is a residential mobile home neighborhood.

Access to the site is primarily on the northern edge of the site, where the school buildings and parking lots are located. Fences are located throughout the property, most noticeably at the boundaries abutting the KOA campground and residential neighborhood to the east. These restrict access to the property, to some extent, but residents from the nearby neighborhoods can, and do, climb the fences to visit the school grounds. In addition, there is a gate in the southeast corner of the property, which is usually open.

The topography of the site is mostly flat at the northern end, but begins to slope considerably past the football fields. This topography will impact the location and viability of ADA accessibility to the southern end of the property.

The 100 year flood plain does not significantly impact the site. Only the far southern edge of the site is within the flood plain boundaries.

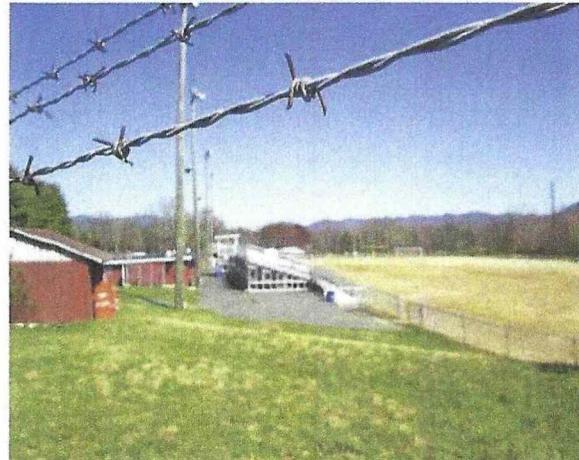


Image 4: View of the football fields.



Image 5: View of the adjacent residential neighborhood.



Image 6: View towards the KOA campground.



Image 7: Owen Middle School Context

Key Themes

During the almost four month process, the ADC design team analyzed the site and goals of the NII team, and OMS in general, to develop six key themes or opportunities. These were primarily based on the elements reviewed in the workshops, but trails were added as a separate group because of its importance.

- Trails

- Gateways

- Interactive
- Learn
- Nature
- Play

These themes are used throughout the conceptual master plan to organize and illustrate the team's findings and recommendations. Below are brief descriptions of each theme or opportunity.

Trails

At slightly less than 40 acres, Owen Middle School is fortunate to have an extensive amount of open land associated with the school grounds, especially compared to similar facilities in the region.

There are a few existing pathways and "desire paths" that have been established and used over time; however, these paths do not necessarily provide connection to one another and certain parts of the property remain disconnected and otherwise underutilized.

Gateways

With the development of the proposed trail system and associated program elements distributed around the campus, Owen Middle School not only provides new amenities for the students, but for the community as well. With the opportunity to invite new users to the campus comes the need to create a front door and an invitation for these individuals, as well as focus access in approved locations.

Interactive

One of the key focus areas of the Natural Impact Initiative is to find creative ways for students interact with nature and their school campus. Technology can be a creative and meaningful way to engage and educate students about their natural environment. As such, the team investigated different ways and methods of creating interactive tools within the overall conceptual master plan. These tools harness the flexibility of technology in ways that will significantly involve the students in learning.

Learn

Owen Middle School's Natural Impact Initiative sends the students out into their school's natural environment to learn directly from that environment, by their own observations. The first step is to identify places on the site where the students can gather to focus on what they want to observe, to observe various aspects of that environment, and then regroup to discuss their observations.

Nature

Only a narrow strip of land at the southern site border, along the ponds, retains the natural, historic character of the land, before development of the Owen Middle School campus. There are also

a few vestiges of woods along the two tiny creeks, which run south into the ponds, and along the south edge of the football field. The rest is now mostly buildings, pavement, and grass. Enhancing these natural areas can help integrate nature back into the campus and provide students, and the larger community, with exposure to this type of environment.

Play

One important aspect of Owen Middle School's conceptual master plan is the opportunity to create fun outdoor activities that can be implemented into different areas of the campus for times of play. These activities will allow students to interact with nature and simply play in an unstructured way that helps keep them active in a fun way. These fun activities can also include learning aspects to assist with expanding the minds of children in a playful way. The play aspect allows students to have fun in a physical manner, while it helps to improve their emotional strength, imagination, and promotes healthy brain development.

DESIGN & RECOMMENDATIONS

Disclaimer

The following designs and drawings are conceptual only and for the convenience of reference. They should not be relied upon as representation express or implied, of the final size, location, or dimensions of any building area or landscape feature.

Conceptual Master Plan

The conceptual master plan for Owen Middle School's

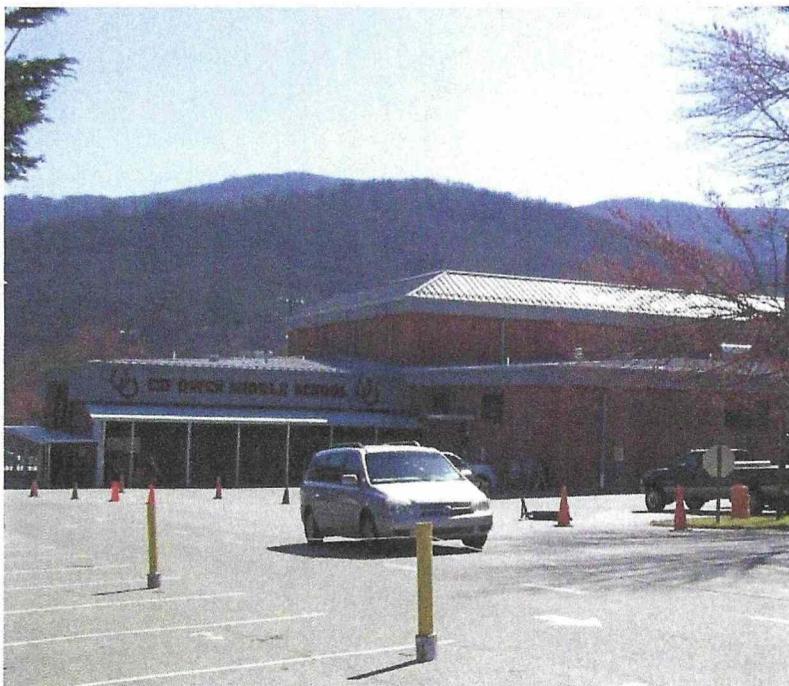


Image 8: View of the school grounds.

Natural Impact Initiative highlights key learning environments. These environments are arranged by the six themes discussed above and focus on opportunities for students to interact with nature, both as a learning tool and as a tool for play.

The following provide a brief description of the specific elements that are included under each theme.

Trails

Trails act as the linear pathway linking together different destinations and activities spread across the campus. However, these linear elements are themselves activated with features along the way that encourage learning, play, and exploration that is not stationary. The trails vary in materials from a hardscaped surface along the ADA compliant route, to more of a natural packed stone dust and/or wood chips in other areas. By establishing a series of new pathways and reworking existing ones, the proposed trail system offers multiple experiences throughout the campus. The trail serves to link together various uses and provides multiple routes through the use of connections and loops. In addition, the new trail system allows OMS to link up with the potential Town of Black Mountain greenway.

Gateways

Gateways are the major defining features for the proposed trail system. They are the first impression and last experience users will have during their visit. There are four main gateways in which corresponding user groups access the trail system: Student, Athlete, Public, and Neighborhood. Each gateway is logically positioned on the campus to provide a unique access point for each user group according to where they are invited to gain access



Image 9: Example Weather Station

and is most convenient for them. Each gateway will have a unique and different defining physical characteristic to provide an identity for each user group which aims to celebrate their role and privilege in the overall campus.

Interactive

The interactivity theme includes a variety of tools that will enhance the students understanding of the natural world, and their local environment. These include:

- Weather Stations: These stations are placed around campus and measure



Image 10: Example Gateway Fence Art

rain fall, temperature, wind speed, etc. The stations allow students to collect and analyze weather data from all over campus.

- Wildlife Cameras: Cameras set up across campus will stream video to classrooms for lessons, and to the wider community.
- Wildlife Tracking Stations: Tracking stations allow students to explore the types of animals that share their campus.



Image 11: Example Amphitheater



Image 12: Example Beaver Viewing Platform

- Signage with QR Codes: Signage with QR codes allows for information to be shared using a small amount of space.

Learn

Key considerations of learning element include distance from the indoor classrooms, number of students in a group, access for all students, shelter from the environment, environmental factors observable from a location, electric and electronic needs, and others. Multiple sites were evaluated to be able to observe the many different micro-environments on the campus. Sites also need to be chosen to minimize the impact of observation.

Nature

Natural environments can and should be integrated into the Owen Middle School campus in order to foster learning and allow students and the community to experience natural landscapes. Native orchards, community gardens, and a demonstration garden will bring local plants and edibles to the campus. A unique viewing platform on the ponds in the southeastern corner of the campus will engage the students and larger community with the area's largest beaver dam.

Play

Wellness/exercise stations and small play areas can be located around the campus along the trails to allow for periodic play stops. Logs can be placed in strategic areas along the trail system to allow students to walk or jump across them. Slides can be placed into slopes to encourage students to go off trail. A low ropes course located at the north of campus will engage students in play that is meaningful, especially from a team-building perspective.

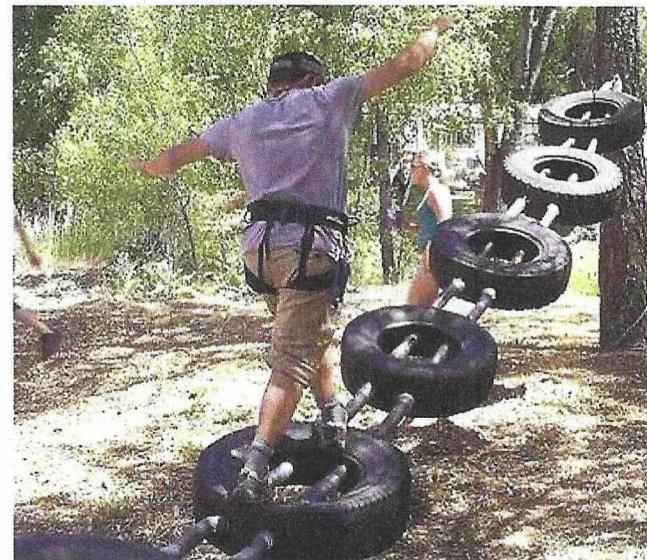
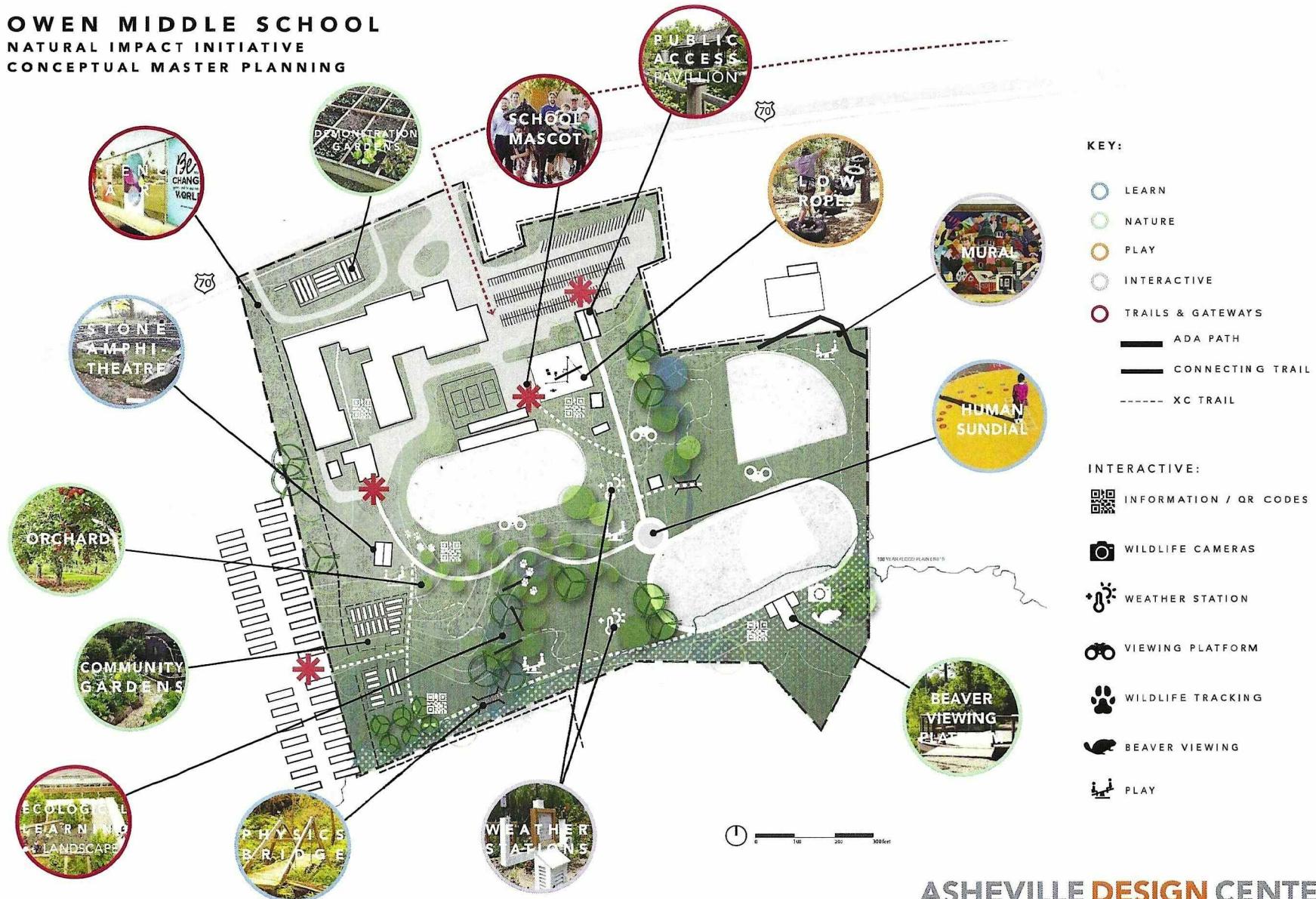


Image 13: Example Low Ropes Course



Image 14: Example Orchards

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Implementation Matrix

The adjacent matrix lists the projects that will achieve the goals and concepts set out in the conceptual master plan. Each one of the projects is grouped by its key theme (Interactivity, Trails, Gateways, Learn, Play, Nature) and includes an estimate of the effort (both time and money) required to complete the project, as well as indications if the project could be an opportunity for volunteers, a sponsorship opportunity, or a potential for a student project. Basic projects, such as clearing vegetation and removing fencing, are also included as requirements for beginning more intensive projects.

During the second workshop, held in May, attendees were given a short preference survey. Fifteen surveys were returned and the following briefly summarizes the results.

Top 3 Major Features of the Conceptual Master Plan:

1. Outdoor Classrooms/Learning Environments
2. Natural Environments/Ecosystem
3. Trails

Top 3 Aspects of the Conceptual Master Plan:

1. Connection to Local History
2. Public and Community Access
3. Interactive Elements

OWEN MIDDLE SCHOOL CONCEPTUAL MASTER PLAN

Implementation Matrix

June 2016

Activity	Program	Money/Effort Ranking (\$\$\$\$\$)	Student Assistance Opportunity	Volunteer Opportunity	Sponsorship Opportunity
Clear Vegetation and Invasive Species from Streams	Setup	\$	X	X	
Remove Excess Fencing	Setup	\$	X	X	
Clear and Grub Football Field Perimeter	Setup	\$	X	X	
Signage/QR Codes	Interactive	\$	X		X
Fence Art	Gateways	\$	X	X	
Weather Stations	Interactive	\$			X
Wildlife Cameras	Interactive	\$			X
Wildlife Tracking Stations	Interactive	\$			X
Sundial	Learn	\$		X	
Mural	Interactive	\$	X	X	
Create Gateways (4)	Gateways	\$\$	X	X	
Demonstration Gardens	Nature	\$\$	X	X	X
Orchard	Nature	\$\$	X	X	X
Community Gardens	Nature	\$\$	X	X	X
Ecological Learning Trail	Trails	\$\$	X	X	X
Bridge	Learn	\$\$		X	X
Connecting Trail	Trails	\$\$			
Exercise/Play Stations	Play	\$\$\$	X	X	X
Low Ropes Course	Play	\$\$\$		X	X
School Mascot Sculpture	Gateways	\$\$\$			X
Beaver Viewing Platform	Nature	\$\$\$\$		X	X
Amphitheater	Learn	\$\$\$\$			
Public Access Pavilion	Gateways	\$\$\$\$			X
ADA Accessible Trail	Trails	\$\$\$\$			X

CONCLUSION

The conceptual master plan for Owen Middle School is intended to be a guiding document for the Natural Impact Initiative. The designs and recommendations are fluid; they can and should adapt as goals and priorities change. As OMS and the NII take on and complete projects, the plans can continue to provide a framework for implementation and goal setting.

OMS has a unique opportunity to develop their extensive campus as an asset for students, and the community at-large. This type of opportunity can create and foster important relationships across the community, between residents, students, and teachers and staff. OMS and NII are experts are building these types of relationships and developing partnerships among diverse groups. This conceptual master plan provides a guide for implementing their vision.

Initial Workaround

APPENDIX A: CONCEPTUAL MASTER PLANS

APPENDIX B: IMAGE SOURCES

Image 1: Image courtesy of William Baumann.

Image 2: Image courtesy of Brittany Krasutsky.

Image 3: Image courtesy of Abbie Emison.

Image 4: Image courtesy of William Baumann.

Image 5: Image courtesy of William Baumann.

Image 6: Image courtesy of William Baumann.

Image 7: Map created from Google Maps.

Image 8: Image courtesy of William Baumann.

Image 9: Image from <http://fallschurchtimes.com/15644/latest-tj-outdoor-classroom-is-volunteer-success-story/>.

Image 10: Image from <http://www.curbly.com/users/diy-maven/posts/10347-6-decorated-chain-link-fences>.

Image 11: Image from http://d.lib.ncsu.edu/collections/catalog/funk_outdoorClassroom.

Image 12: Image from <http://dotsonarchitects.com/recreational/>.

Image 13: Image from <http://www.chapelrock.net/ropes/low-ropes.htm>.

Image 14: Image from <http://beyondgreen.weaversway.coop/2010/03/spring-gleaning.html>.

APPENDIX C: TEAM MEMBER
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