



Fayette Street Community Park - Transformed For the Village of Earlvile, New York

Prepared By

Design Group

Cornell University
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Design Connect

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Project Profile

Client

Partnership of Community Development

Site

Fayette Street Community Park owned by the Village of Earlville

Client Team

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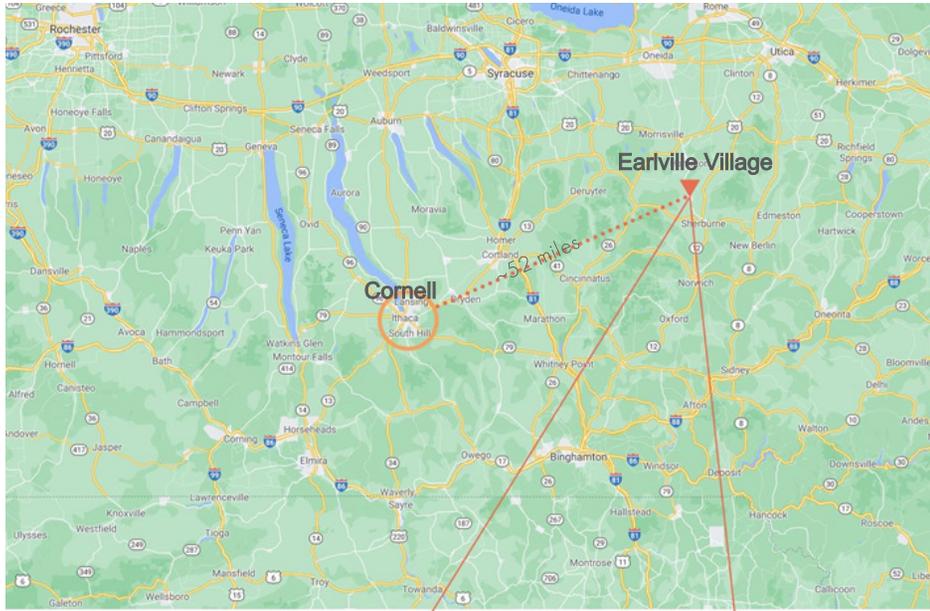
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Introduction

Project Background - General



The Village of Earville, New York is named after Jonas Earl, a canal commissioner. It is situated on the border between Madison County and Chenango County, partly in each county and in close proximity to the towns of Sherburne and Hamilton. The Main Street which runs through the county line also intersects the village at its heart.

It was first settled around 1792 and originally called “Forks” until the current title was adopted around 1835 after development of the Chenango Canal, which was instrumental and pivotal to the later development. Earville became an incorporated village in 1887 and its Historic District was added to the National Register of Historic Places in 1982.

Some basic statistics from the latest census 2020 are listed below:

- Overall spatial coverage: 1.08 sq. miles
- Population: 1,206
- Density: 1,116 people per sq. mile
- Median Age: 32.7
- Average Household Size: 2.6 people

Village of Earville is located 52 miles from Cornell campus and reachable via Hamilton’s local airport though the area is most easily accessible by car. While it may not be as large a community such as Ithaca, it is well connected by a network of roads with potentials for attracting visitors. The site is under USDA plant hardiness zone 5a with a general soil hydraulic group A denoting well drained soil ideal for natural landscape works.

In terms of circulation and social densities, dynamics, the school served as a main contributing factor to gathering and social engagements beyond the local residents of Earville. Yet, with the closing of the local school it has decreased the numbers of visitors traveling to the area.

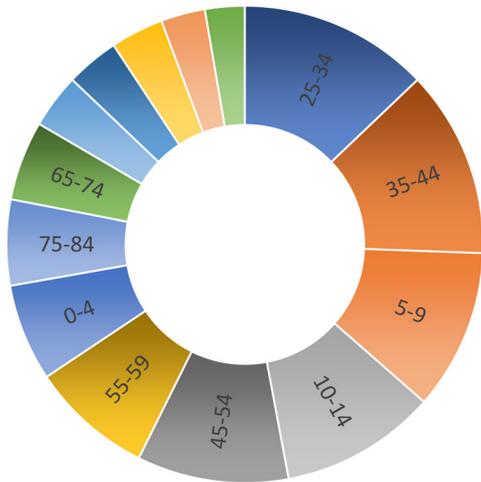
As a critical means for rejuvenating the local community through infrastructure renovations, this project focuses on the Lafayette Street Community Park, which consists of a now barely visible old trail traveling around the large fields encompassing the local fire station, a small children’s playground and a small skatepark.



Introduction

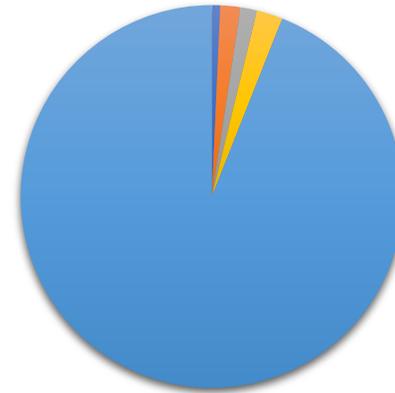
Project Background - Demographics

Age Distribution



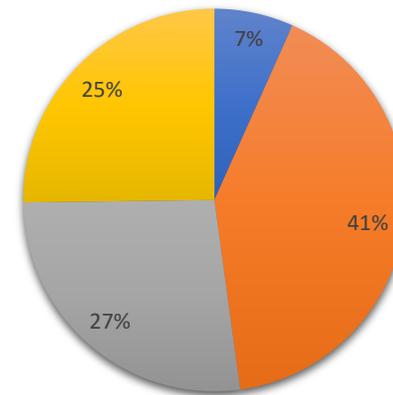
- 0-4
- 5-9
- 10-14
- 15-17
- 18-20
- 21-24
- 25-34
- 35-44
- 45-54
- 55-59

Race in Earlville



- Native
- Mixed
- Other
- Black
- White

Chart Title



- Divorced
- Married
- Single w. Children
- Married w. Children

Introduction

Project Background: Chenango Canal

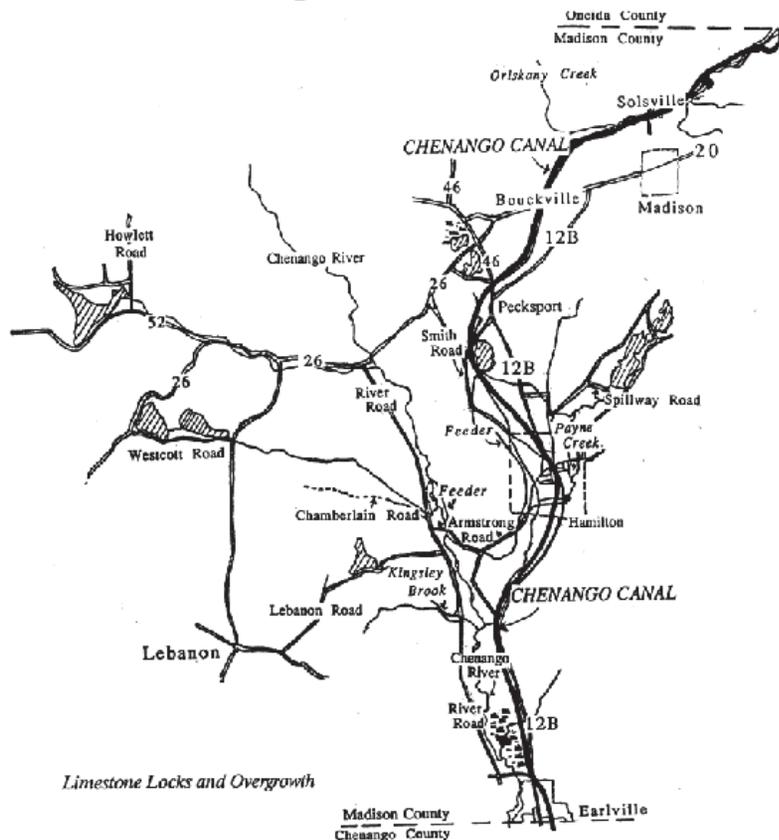
A distinctive landmark in the history of the village was the Chenango canal.

The Chenango canal was reportedly the first reservoir-fed canal in the US, a milestone in engineering construction.

The construction of Chenango canal brought prosperity to the village as farms prospered from increased trade, businesses saw an increase in patrons, and settlers moved to the area.

Madison County utilized this historical landmark and rebuilt the Chenango canal towpath trail in 1994 following the original canal towpath.

The Chenango Canal in Madison County



THIS IS A COPY of a post card picture of the aqueduct which carried the Chenango Canal across the Chenango River a mile south of Earlville. The canal passed from right to left across the river on these stone arches.

Introduction

Project Background: Opera House

The most distinctive landmark is the Earlville Opera House, serving the community activities, such as theater performances, movies, public meetings and town meetings.

The playground is about an eleven minute walk to the Opera House allowing events at both locations to be shared.



Introduction

Project Background - Methodologies, Approach & Intentions

In order to provide design a proposal that transforms the current community park of Earlville and it delivers a rich yet robust scheme responding to the client's requests, a systematic approach was adopted. Understanding the diversity of site components as well as the design specifics (the trail, playground, and skatepark), each sub-area was assigned to a sub-group of team members within the larger Design Connect team. Each section of the park was predominately the responsibility of a related group and connected to each other to form the larger community park. Spatial qualities and design transitions are just some key elements that are focuses to ensure each section is fully integrated with each other for a coherent and comprehensive scheme.

The primary goal of the project is to provide spatial designs for the community park to enhance its functions as open space for leisure activities, inviting for local residents and visitors alike as well as innovations that offer interesting, engaging features of social interactions. To intersect the practical and implementable art and design ideals with what is suitability for the Village, the design team worked closely with the client representatives in project meetings to engage in meaningful conversations, particular items of interests, schematic developments that addressed all concerns of the client. The sub-groups met interested client representatives separately to ensure effective discussions with precision on specific qualities of each portion to avoid generalization and inefficiencies. Internal team meetings would serve as communicative platform for updates, internal feedback and collaborative exercises such that the whole team is in the same level of understanding in terms of the overall design directions, progress and way forward.

Before the initiation of design exercises, an online survey was conducted to give the design connect team a first impression of the site and preliminary requests of the concerned community groups regarding the project. The online survey collected a total of 88 responses with a focus on current usage patterns, preferences, hierarchy of amenities' renovation priorities which corresponds to the original primary targets for interventions (the trail, the playground and the skatepark). This will be further discussed in the next section.

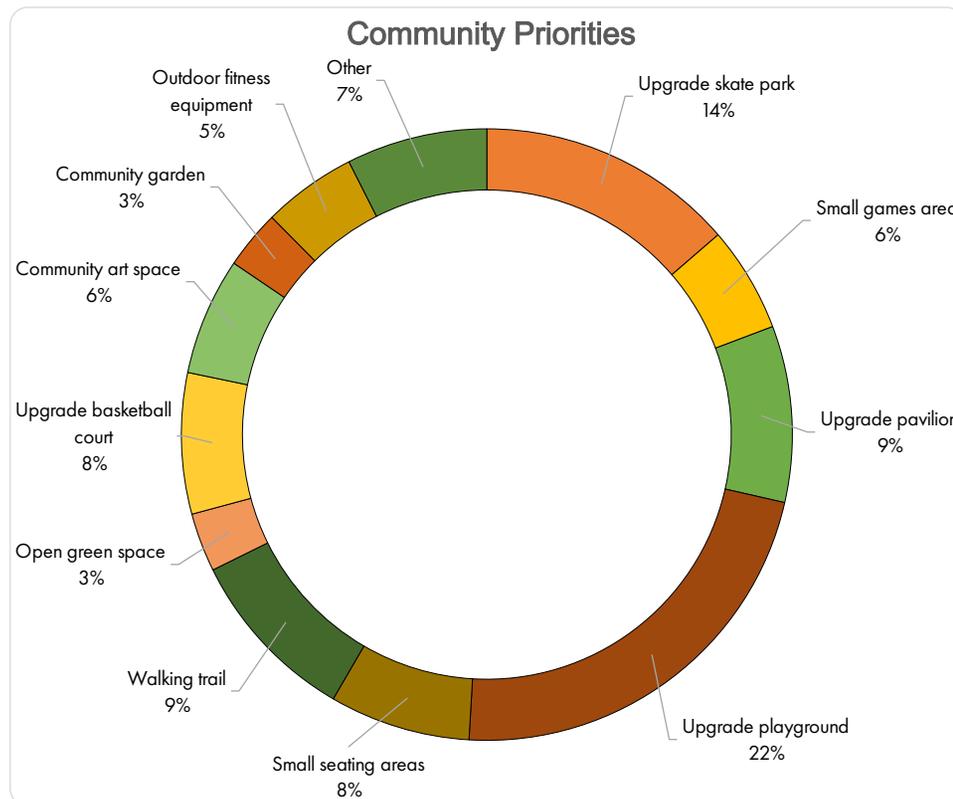


Introduction

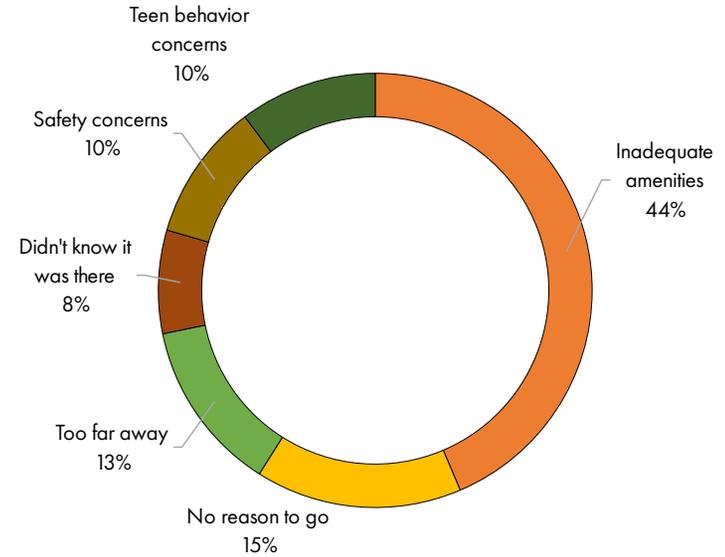
Client, Intended Users & Survey

The primary client for this project is Partnership of Community Development for the communities in the Village of Earlville. The local residents hope to attract visitors and enhance circulation inflow to boost the vitality of the village. Given the diversity and potentials of the community park, the spaces are expected to offer opportunities for all age groups to accommodate different interests.

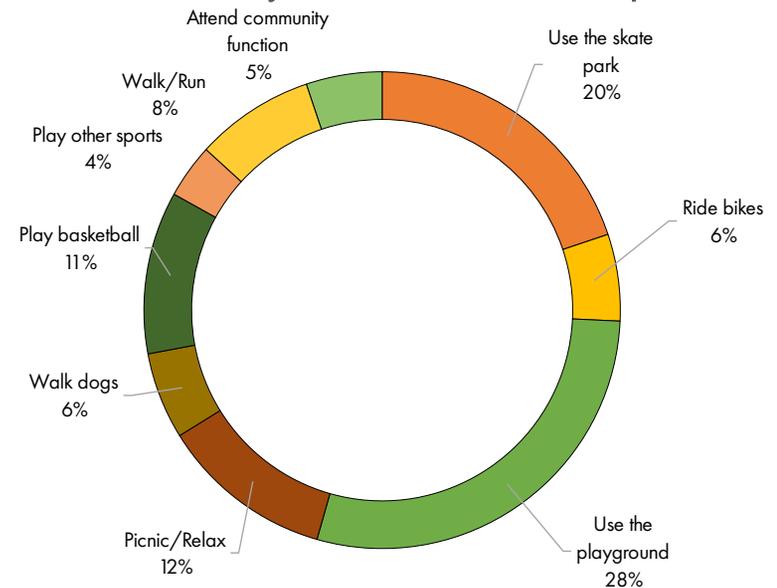
The initial survey, within the 88 responses, indicated that the playground, skatepark and walking trail have the highest support. While the pavilion also received equal weighting (9%) as the trail, it was decided given the structure was recently installed, will remain untouched. The other two primary questions in the survey reveal usage patterns and rationales for lack of use. Staying consistent with the renovation priorities, most households use the park for the skate park, playground and gathering purposes while the two main reasons for failing remain low quality facilities and the little attractiveness of the park. This corresponds with the client's main objective for the project to emphasize in innovative transformation.



If your household does not use the park, why not?

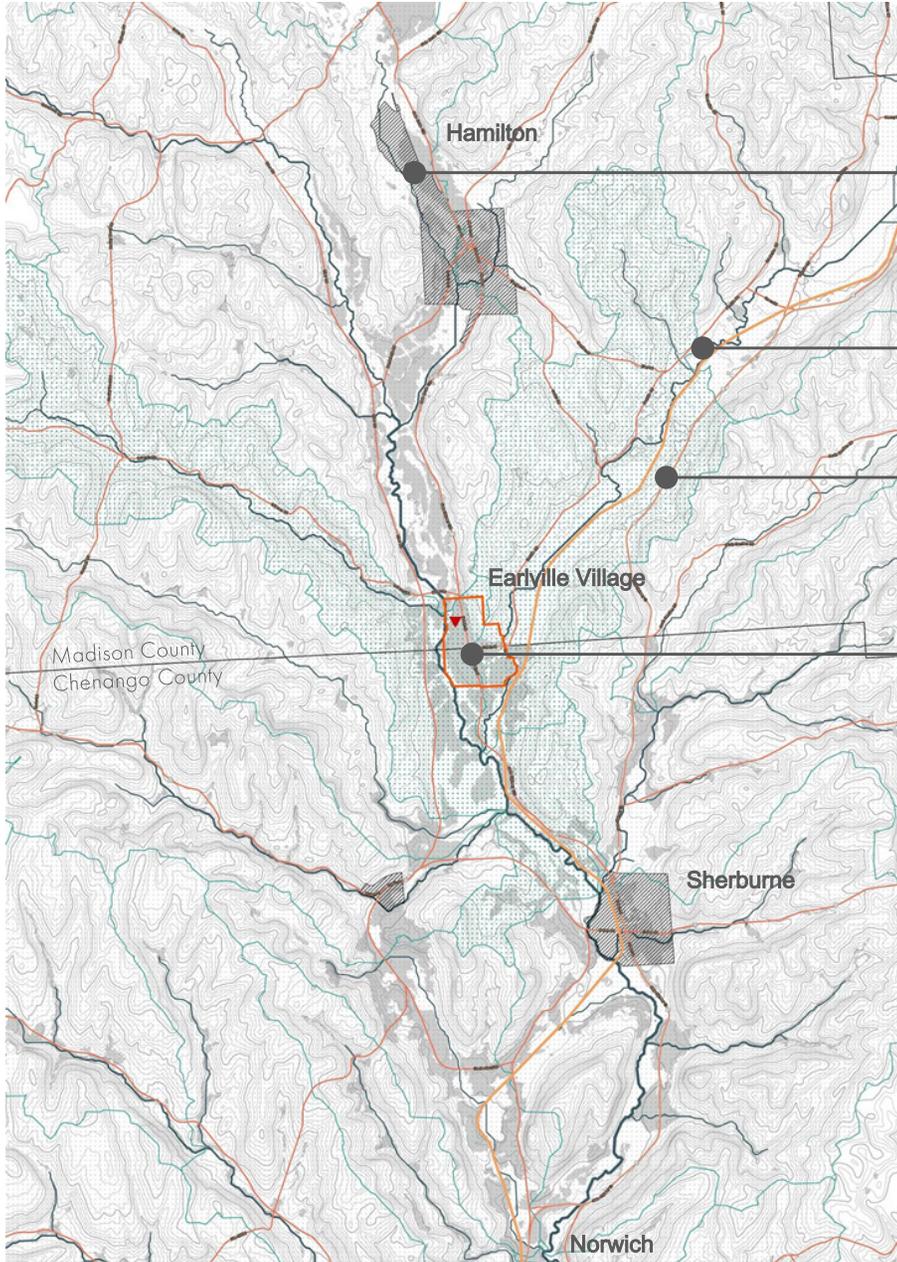


What does your household do at the park?



Project Context

Regional Properties



Hamilton Municipal Airport

New York Susquehanna and Western railway

State Highway 12

Main Street

The site is located towards the northern end of the Village of Earlville. It is near state highways and crossed by main streets, which provides good potentials for visiting circulations and traffic in flow. Besides its municipal bisections, Earlville is largely surrounded by forestry and farmland with a built composition of low-rise structures and essential amenities including a local church, fire station, workshops, but also unique cultural features such as the opera house.

And while Earlville is in close proximity to various natural water sources and within two sub-watersheds, with its geological compositions constituting generally well-drained soil the flooding potentials and extends are negligible for the design considerations of the project. The rural settings and natural surroundings provide the project an attractive backdrop that can also be integrated in such a way which allows visitors to not only enjoy the new facilities and design spaces within the community park but with opportunities for other explorations of nature to provide a unique experience and dynamic journey.

Project Context

Site Analysis - Existing Conditions

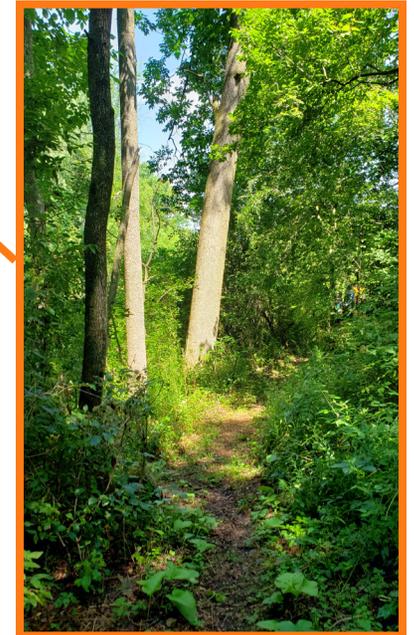
General

In general, the existing site is at the corner piece of the larger plot of land the fire station, baseball field and the closed school. The existing community park is a large green field with small hard paved plots i.e. the playground, the skatepark and the barely visible trail hidden under the canopies at the edge of the site. These segmented spaces could provide interesting opportunities and spatial dynamics that offer unique experiences and aesthetic cohesions for an attractive renovation effort.



Trail

The trail is difficult to use, due to the lack of maintenance. It is barely identifiable from the overgrown vegetation that now dominates the space. While the canopies may provide shading for the new trail, the uninviting "wilderness" remains discouraging for users. Urgent renovations are necessary to fully capitalize the existing natural features such as the stream towards west side of the plot.



Playground

The existing playground provides standard and traditional equipment that is for young children, which largely restricts its potential to accommodate other older age groups. Extent of existing playground and lack of facility diversity further limits the opportunities for inter-generational play and limits the number of users to engage with the space. The material qualities are also typical whereby there is a materiality disconnection with the surrounding natural settings and originality which relates to Earlville. They are also arranged in such a way that contains little coherence and interconnections between equipment, making the space look segmented.

Skatepark

The skatepark is in need of attention, as it is currently composed of various materials that have taken a beating from the harsh New York climate. Rust, rot, and caverns for garbage have settled into the obstacles, as well as a family of hornets. This is creating an unsafe skating environment that may cause an accident in the future.



Project Context

Community Engagements - General

Client meetings were carried out bi-monthly to ensure consistent conversation between the design team and client representatives. The design development was tailored to the users' needs while providing an opportunity for the sub-teams to address any request or concerns posed by the client group. The content of the meetings for each sub-group progressed from conceptual design directions to schematic developments and finalized with detailed logistics of material choices, cost implications and time scale in phasing.

From the initial general client meetings, given the scope of work covered and potential costs for constructions, phasing is suggested. This not only lowers the challenges of financial stress in funding applications, but also allows partial operation of the park at all times and removes the potential of a complete shutdown for constructions. Material choices are made in terms of durability to ensure providing good performances, but also for cost consideration and implementation concerns. Because the existing trail is the most unusable amenity, it is aimed to have the trail renovated first with parts increments in playground and skatepark installations following.

Project Context

Community Engagements - Trail

Through client meetings, we discussed through material options, concept development, design options, design direction, concerns, planting integration, budget discussion, and phase flexibility.

The timeline with all the critical aspects discussed is listed below:

10/14

Meandering path with connection to streets and neighborhood park.
Different surfaces and textures.
Plantings and signage about local ecosystems, flooding, and the rich history of Earlville.

10/30

Materials matching the pavements of the playground and skatepark.
Trail length
Combination of Option 1 and Option 2 trail designs.
Southern end of site being constrained within the boundary, including utilization of the existing sidewalk.
Signage for educational purpose

11/13

Overlaying two options with representative color-coding.
Clear budget needed for materials and planting.
Signage

11/18

Plantings and overall budget.
Bench and lightings options.

Project Context

Community Engagements - Playground

10/14

Precedents - natural playscape, multiple age groups, color blocking.

Materiality

Site boundaries

10/28

Project phasing

Equipment options

Maintenance and longevity

11/12

Project phasing

Equipment and placement

Finalized flooring materials

11/19

Finalized equipment and placement

Cost/budget

Lighting options

Project Context

Community Engagements - Skatepark

10/15

Discuss precedents and material options.
Decided to find alternatives to concrete paving.

10/28

Discuss first-version skatepark design, alternative pavement materials, and how to preserve existing trees.
Decided to use concrete paving.

11/17

Discuss the phased design, preservation of existing trees, and modification of the initial design concept.
Decided to incorporate movable obstacles and relocate skatepark.

Design Proposals

Interventions Overviews

While each section of the community park has its own unique characteristics, an overarching theme for the community park is its ability to act as a transformative space that is capable of providing activities for local residents and visitors. From the client meetings it was determined that the park would integrate into the surrounding environment while still providing a colorful and artistic setting that would resonate with the rich cultural history of Earlville to give it a distinctive character. Thus, an innovative approach with attention to local features and natural elements was selected as the primary strategy in formulating conceptual frames for the 3 areas of the park.

Inter-generational play and multi-usage was also emphasized during the initial design concept discussions, whereby the spatial design and facilities compositions would provide opportunities for a wide age range and reduce single-use equipment to diversify utilization. The overall design of spaces will then provide options for different users and further accommodate a more diverse community.

The design pays close attention to the durability and maintenance demands of the equipment and materials used, in order to provide the community with a long-lasting environment. Cost implications and flexibility for phasing implementation have also been integral to the design process for the different sections of the park. The spaces designed will ensure good natural drainage, in anticipation of New York's cold and snowy conditions .

Design Proposals

Interventions Overview - Finalized Overall Scheme



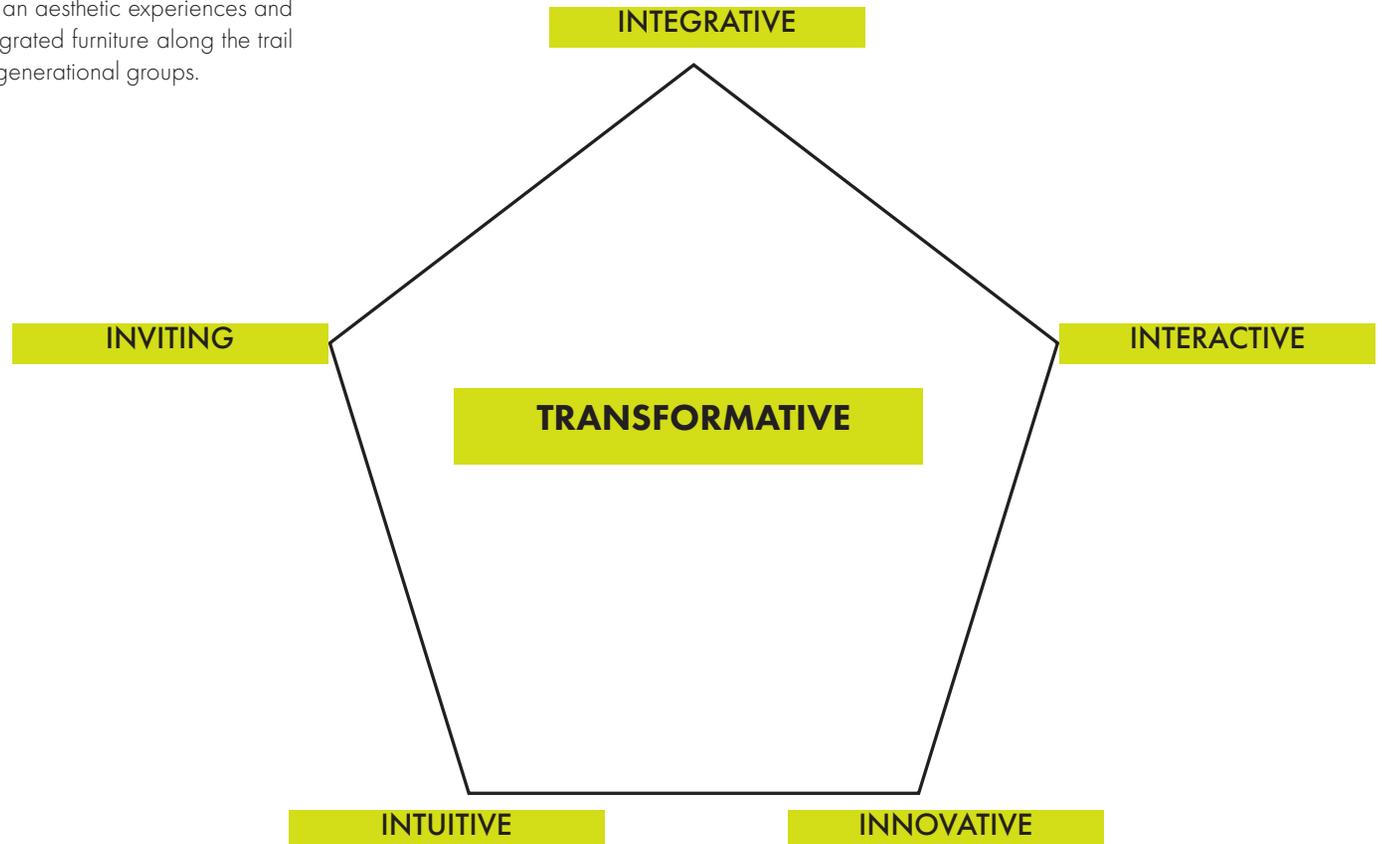
Design Proposals

Transformative Trail - Concept

For the transformative trail concept for the Village of Earlville, the on-site but hardly recognizable and heavily overgrown trail would need to be renovate and transformed into a place for residents and visitors to enjoy.

The main concepts we are trying to convey with our design are the five "i"s: Integrative, Interactive, Innovative, Intuitive, and Inviting.

We are proposing to turn the currently trail into an integrative loop that will link all the elements on-site into a cohesive journey, while introducing interactive historical and educational signage along the trail. Differentiating material will indicate different yet interconnected zones of the playground, skatepark, and vegetative fronts. In addition to the intuitive, dynamic planting will allow sensory stimulation along the trail, in accordance with the river's proximity, providing both an aesthetic experiences and possible drainage concerns on site. The pockets of integrated furniture along the trail will provide seatings and encourage interaction of intergenerational groups.



Design Proposals

Transformative Trail - Precedents

We chose our precedents based on the type of materials, the planting schemes, and the elements such as signage and furniture, which we incorporated into our design.



Design Proposals

Transformative Trail - Material Decisions

The material choice responded to client preferences and the budget requirement.

Bank Run Gravel



Concrete Flooring



Composite Timber



Design Proposals

Transformative Trail - Strategies & Elements

Material transition

The trail material is to be transitioning from concrete flooring into bank run gravel, then to composite timber matching to the change in programs.



Vegetation

We are proposing the usage of tolerant native species with consideration of both aesthetics and on-site drainage:

Woody Plants

- Redbud Tree
- Sweet gum
- Yellow-wood
- Butterfly bush
- Serviceberry
- Crabapple
- American basswood



Herbaceous Plants

- Echinacea
- Bee balm
- Phlox
- Rudbeckia
- Filipendula
- Sedum
- Lilies
- Lavender
- Gaillardia
- Poppy
- Salvia
- Penstemon
- Russian sage
- Hollyhock
- Peony
- Butterfly weed



Design Proposals

Transformative Trail - Furniture and Lighting

Prefabricated wooden benches to placing along the trail.



We also provided a list of lighting options for the client to choose from according to need:

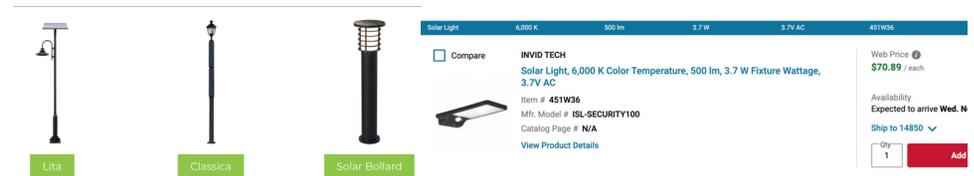
- ILLUMIENT-smart off-grid lighting (www.illumient.com)
- SLI-solar lighting international (<https://www.solarlightingil.com/solar-walkway-pathway-lights/>)
- GREENSHINE (<https://www.streetlights-solar.com/brighta-solar-lighting-system.html>)
- GRAINGER (<https://www.grainger.com>)
- HOME AND LIGHTING (<https://homeandlighting.co/>)



ILLUMIENT



SLI-solar lighting



GREENSHINE

GRAINGER



HOME AND LIGHTING



Design Proposals

Transformative Trail - Signage

Signage

We have designed educational and ecological signage with color-coding, to give an overview on Earlville's history and local ecosystems, including bird species and native plants.

Large horizontal boards would provide general information such as historical timelines and/or ecological overview.

Vertical signage provide detailed information such as certain species of native animals and plants.
(Note: the dimensions suggested can be revised based on necessity)



HISTORY TIMELINE OF EARVILLE

1750s

FIRST SETTLEMENT 1792
The first settlement was on the banks of the Chenango River in the spring of 1792. The first settlers were John, Peter, and John Smith. They were followed by other families from the Hudson Valley and the Mohawk Valley. The settlement was named "Earlville" in honor of Earl Cornwallis.

1800s

CONSTRUCTION OF CHENANGO CANAL 1814
The Chenango Canal was built to connect the Chenango River to the Hudson River. It was the first canal in the United States. The canal was built by the state of New York and was completed in 1814. It was a major engineering feat and played a key role in the development of the region.

1850s

CONSTRUCTION OF CHENANGO CANAL 1870
The canal was rebuilt and improved in 1870. The new canal was built to the west of the old canal and was completed in 1870. It was a major engineering feat and played a key role in the development of the region.

1900s

SCOUTING PROGRAM 1903
The Boy Scouts of America was founded in 1903. The first Scout camp was held in Earlville in 1903. The camp was held at the Chenango River and was a major event in the town's history.

1950s

BOWLING ALLEY 1965
The first bowling alley was built in Earlville in 1965. It was a major event in the town's history and was a popular place for recreation.

2000s

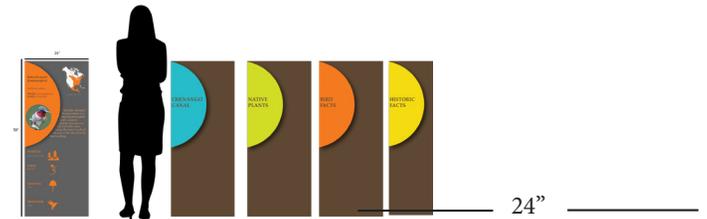
EARLVILLE OPERA HOUSE 1905
The Earlville Opera House was built in 1905. It was a major event in the town's history and was a popular place for entertainment.

CONSTRUCTION OF RIBICUTE 128 1830
The construction of Ribicute 128 was a major event in the town's history. It was a major engineering feat and played a key role in the development of the region.

CONSTRUCTION OF ONTARIO AND WESTERN RAILROAD 1850
The construction of the Ontario and Western Railroad was a major event in the town's history. It was a major engineering feat and played a key role in the development of the region.

SECOND SETTLEMENT 1795
The second settlement was on the banks of the Chenango River in the spring of 1795. The first settlers were John, Peter, and John Smith. They were followed by other families from the Hudson Valley and the Mohawk Valley. The settlement was named "Earlville" in honor of Earl Cornwallis.

HORIZONTAL BOARD



Ruby-throated Hummingbird

Archilochus colubris
ORDER: Caprimulgiformes
FAMILY: Trochilidae

NATIVE RANGE

The Ruby-throated Hummingbird is a small hummingbird with a slender, slightly downcurved bill and fairly short wings that don't reach all the way to the tail when the bird is sitting.

Buttonbush

Cephalanthus occidentalis

NATIVE RANGE

Buttonbush, (genus *Cephalanthus*), also called button willow or honeyballs, genus of at least six species of shrubs or small trees of the madder family (Rubiaceae) native to Africa, Asia, and North America.

Buttonbush plants are named for their fragrant creamy white spherical flowers. They are sometimes used in landscaping and are a source of food for ducks and other waterfowl. In North America the common buttonbush (*Cephalanthus occidentalis*) is the best-known member of the genus and can reach up to 6 metres (20 feet) high in marshes and swamps.

HABITAT
OPEN WOODLAND

FOOD
NECTAR

NESTING
TREE

BEHAVIOR
TREE

VERTICAL SIGNAGE

24"

58"

46"

Design Proposals

Transformative Trail - Design Development

For the preliminary design, we proposed a rough scheme of the trail loop starting from the existing sidewalk on-site, punctuating into the playground, linking the skatepark, meandering towards the river, and finally connecting to the current street at the southern end. Pocket spaces with seatings are distributed along the length of the trail allowing for rest areas.



Design Proposals

Transformative Trail - Design Development

For the preliminary scheme, we provided two options.

Option one is refined within the existing boundary, while option two extends beyond the current borders to give views of the river beyond the trees.



Design Proposals

Transformative Trail - Design Development

We refined both options by narrowing the trail width and revising the trail loop according to the development of the playground and skatepark, in addition to material dimensions.



Total length:
~3,989. FT.
Concrete:
~4,711. FT.
Bank run gravel:
~1,728. FT.
Composite wood:
~8,603. FT.



Total length:
~3,340. FT.
Concrete:
~3,414. FT.
Bank run gravel:
~10,285. FT.
Composite wood:
~9,010. FT.

Design Proposals

Transformative Trail - Final Design

Two options were provided to offer flexibility to the changing circumstances, where option one was more conservative and option two was offered as a possible future extending out into the forest approaching the river. The final plan incorporated both options, with option 2 used a possible future phase.

The total trail length is set at 12,226 feet for full loop not including the 3,881 feet future addition.



Total length:
~12,266 FT.
Full loop:
~14,420 FT.
Addition:
~3,881 FT.



0 4 8 16m



0 2 4 8m



Design Proposals

Natural Playscape - Initial Goals and Concepts

The playground proposal for the Fayette Street Community Park is designed to reflect client needs of creating an intergenerational, diverse, and unique playspace. Currently, there is a small playground on the lot with no integrative seating for parental supervision and weathered play equipment. The Design Connect team worked closely with client feedback and community survey results to design a playground that will hopefully attract new visitors and rejuvenate the community, accommodate a variety of different age groups, upgrade equipment, and integrate Earlville's historic value and the vibrancy of its arts community. One method adopted to accommodate a wider range of people was to specify different types of activities that could take place on-site. Our design hinges on four different types of play that contribute to children's learning and development as well as cater to a broader range of users: functional play, constructive play, dramatic play, and games with rules. Functional play involves physical activities and can cater to the older children who visit the playground, while constructive play (centered around building and creating) and dramatic play (involving the imagination and role playing) offer spaces of engagement amongst younger children. And lastly, the games section caters to a broader spectrum of people of all ages. The multifaceted nature of the playground would then allow for different spaces of interaction, play, and creative learning for everyone.

Design Proposals

Natural Playscape - Precedents



Above are the precedents presented to the client, which showed a natural playscape approach as a way to integrate the textural and sensory engaging activities, linking the playground with the trail and skatepark. These images introduced vibrant colors and thematic graphics as a way of demarcating varying play areas within the same space, as well as a more seamless method of integrating the different park elements. Open-ended play structures were another aspect of the playground presented, as studies have shown that these playscapes open the imaginations of its users, because its use is not pre-described. For example, flexible sculptural elements can serve as both seating or climbing structures. By introducing a gradient between a hardscape (paved areas) to softscape (sculptural grass mounds), the entire playground offers options for future phasing or can simply be implemented as a complete configuration as the materials change through-out the site.

Design Proposals

Natural Playscape - Flooring Material

The material options proposed for flooring of the playground area include: EPDM rubber flooring, colored concrete, natural grass, and engineered wood fiber mulch. There were initial concern for cushioning under climbing equipment as a safety precaution, which resulted in the selection of rubber flooring to satisfy both insurance and liability concerns. Colored concrete was selected for the full basketball court area to maintain a graphic vibrancy. Engineered wood fiber mulch was chosen for the primary playscape as it acted as an impact buffer, integrated well with the natural playscape approach, was very cost-effective, and in addition, could be easily installed and requires little-maintenance year-round. Surrounding each defined play area is natural grass, which can serve as lawn areas for seating during picnics, hanging out, or even as performance spaces during warmer seasons, and can be easily reseeded when needed.



EPDM Rubber Flooring



Colored Concrete



Natural Grass



Engineered Wood
Fiber Mulch

Design Proposals

Natural Playscape - Strategies & Elements

Design Focuses

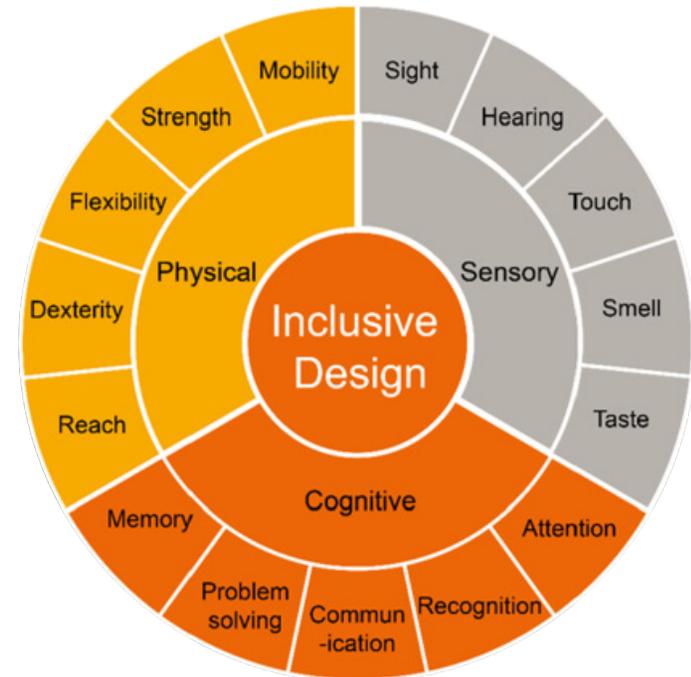
Design focuses of the playground area is developed with phasing implementation in mind, while being sensitive and responsive to the dynamic historic and artistic personalities of the Village of Earlville. The playground aims to attract new and old visitors alike, with the integration of the vibrancy of the arts community through the implementation of graphic elements and color. The design also aims to provide a space of connectivity and inclusiveness, accommodating for wider age ranges in response to the feedback received from the initial surveys from Earlville residences. An initial concern regarding sound isolation was mitigated by the addition of vegetation and landscape elements along the eastern site border of neighboring residences.

Equipment

As upgrades to existing equipment was needed, this design proposes the installation of fixtures that are interactive, innovative, accessible and engaging. Durability, maintenance, and safety concerns were resolved by sourcing fixtures from playground equipment manufacturers, rather than custom built fixtures. This enables the client to purchase directly from manufacturers with standardized safety measures. The range of equipment selected also speaks to the type of play intended - open-ended, sensorial, and interpretive.

Inclusive Design

The natural playscape approach enables an integrative playscape for intergenerational play by creating spaces not just for children, but also functional and leisure areas that can serve the local community. Another important factor considered was the accessibility of play in order to accommodate for different levels mobility and other forms of inclusivity. By considering design through the lens of physical, sensory, and cognitive interaction, four different types of play areas were developed.



Design Proposals

Natural Playscape - Design Development



OPTION A

Total area:

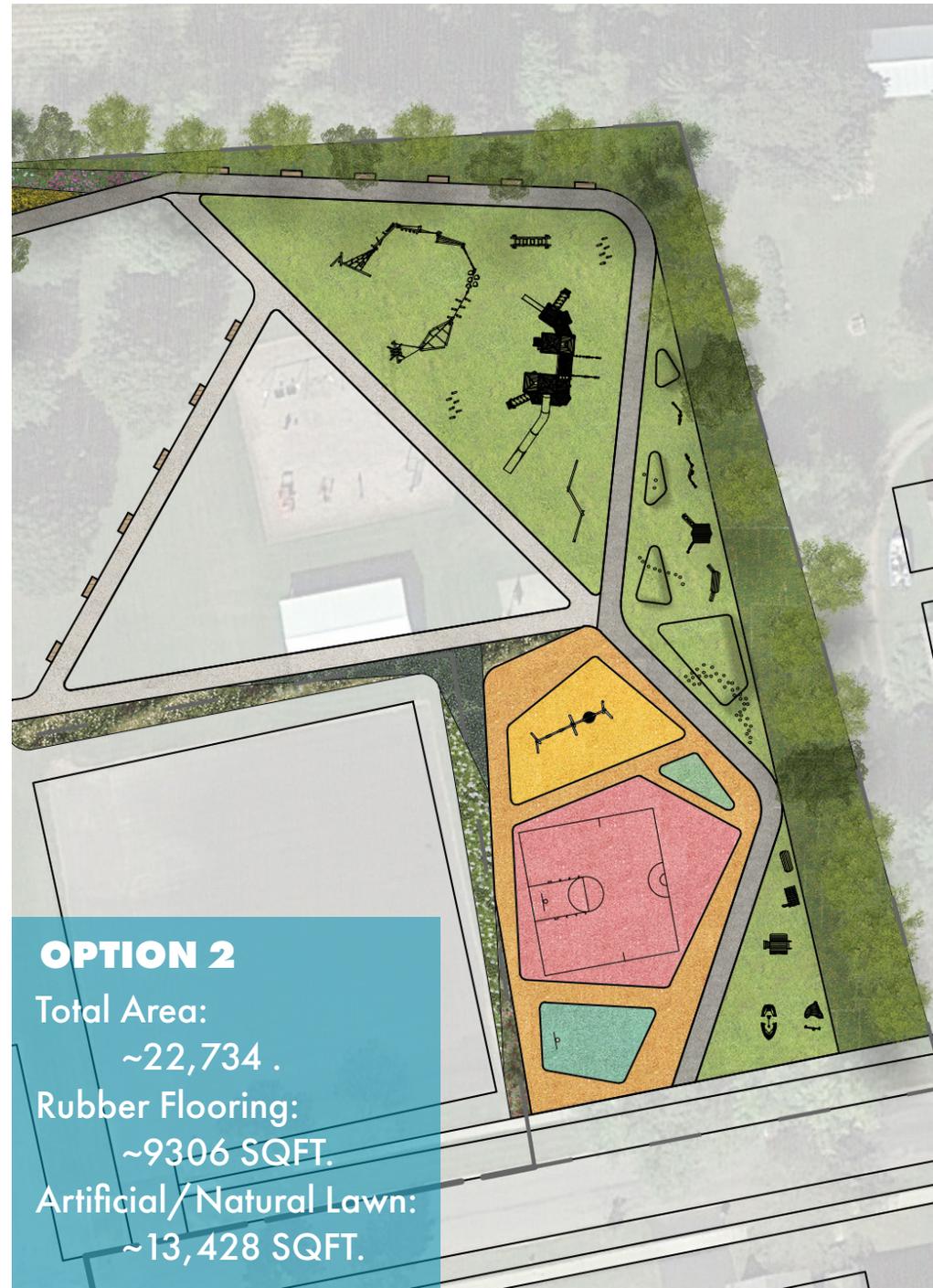
~55,617SQ.FT.

Rubber Flooring:

~54,515 SQFT.

Artificial/natural lawn:

~1102 SQFT.



OPTION 2

Total Area:

~22,734 .

Rubber Flooring:

~9306 SQFT.

Artificial/Natural Lawn:

~13,428 SQFT.

Design Proposals

Natural Playscape - Design Development

Initial strategies used the four different types of play as programmatic spaces. The different playspaces were connected via meandering paths which lead to the skatepark and trail, allowing visitors to traverse through the playground while providing ease of access to the other areas.

Option 1

Option 1 was initially proposed and later refined to reflect client feedback. As shown on the left, the different types of play are simultaneously separated while still connected by different pathways. The games section includes a full basketball court and foursquare, providing activity areas for a wide range of users. The dramatic section is located directly to the right of the games section and includes an imaginative, colored floor which resembles a lagoon to cater to younger children. Functional play is located in the center of the playground and includes a large, wooden play structure. Constructive play is located at the top left and incorporated grass mounds for climbing, musical equipment, and other activities centered around building and creativity. The proposal further combines a natural playscape aesthetic with more colorful moments, primary in the flooring materials.

Option 2

In Option 2, the playground was scaled down in order to retain an existing pavilion and provide a more financially feasible option. The overarching programmatic strategies remained the same, however the dramatic and constructive sections were noticeably scaled down. In addition, rubber flooring was only used in the games section, while the other sections used natural or possibly artificial grass. In doing so, general costs were greatly reduced and the playground now adhered more closely to the aesthetic of a natural playscape. An additional sound isolation planting buffer was introduced between the dramatic section and the neighboring houses, as privacy and noise complaints had been an area of initial worry for the local residents.

Design Proposals

Natural Playscape - Final Design



FUNCTIONAL

CONSTRUCTIVE

GAMES

DRAMATIC

FINAL PROPOSAL

- Total area:
~22,734 SQFT.
- Engineered Wood Fiber Mulch:
~ 8408 SQFT.
- Colored Concrete:
~4882 SQFT.
- Natural lawn:
~9444 SQFT.

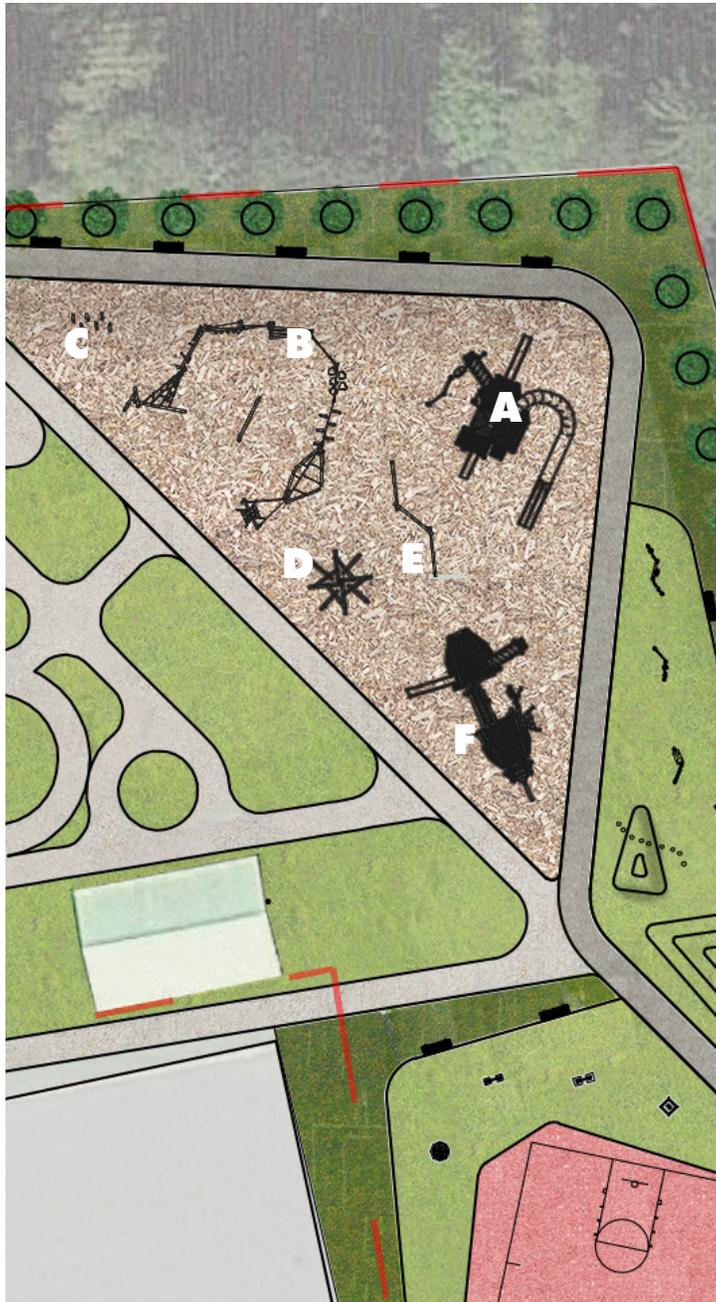
Design Proposals

Natural Playscape - Final Proposal

The final proposal uses the same site footprint as Option 2, with minor adjustments. After further discussions with the client, the games section is to now contain a full basketball court as opposed to a half-court, in addition to new play equipment such as a marble table and connect four board. By enlarging the court and adding various equipment, the space could now be used by more people, and allow for full-court games. The dramatic play area also incorporated play equipment for younger children, which would harnesses their imaginations such as a theater stage to reflect the theatrical history of Earlville. The constructive play area was slightly reduced in size to allow for more planting, but equipment remained largely the same with grass mounds for climbing and sliding, musical equipment, and an outdoor chalkboard. The functional play section includes various large play structures for more physical play. In order to meet liability standards for ground impact, a decision was made to use mulching as a buffer material instead of natural grass, as it was proven to be more impact resistant and easy to maintain over a long period of time.

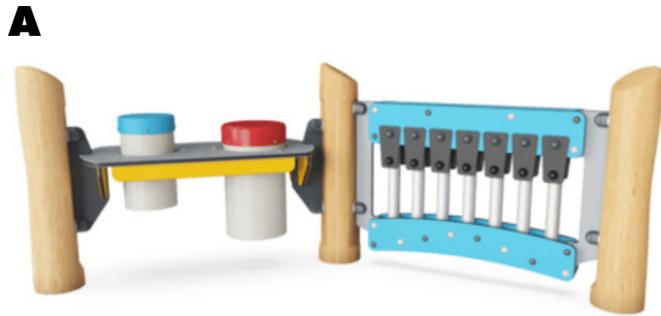
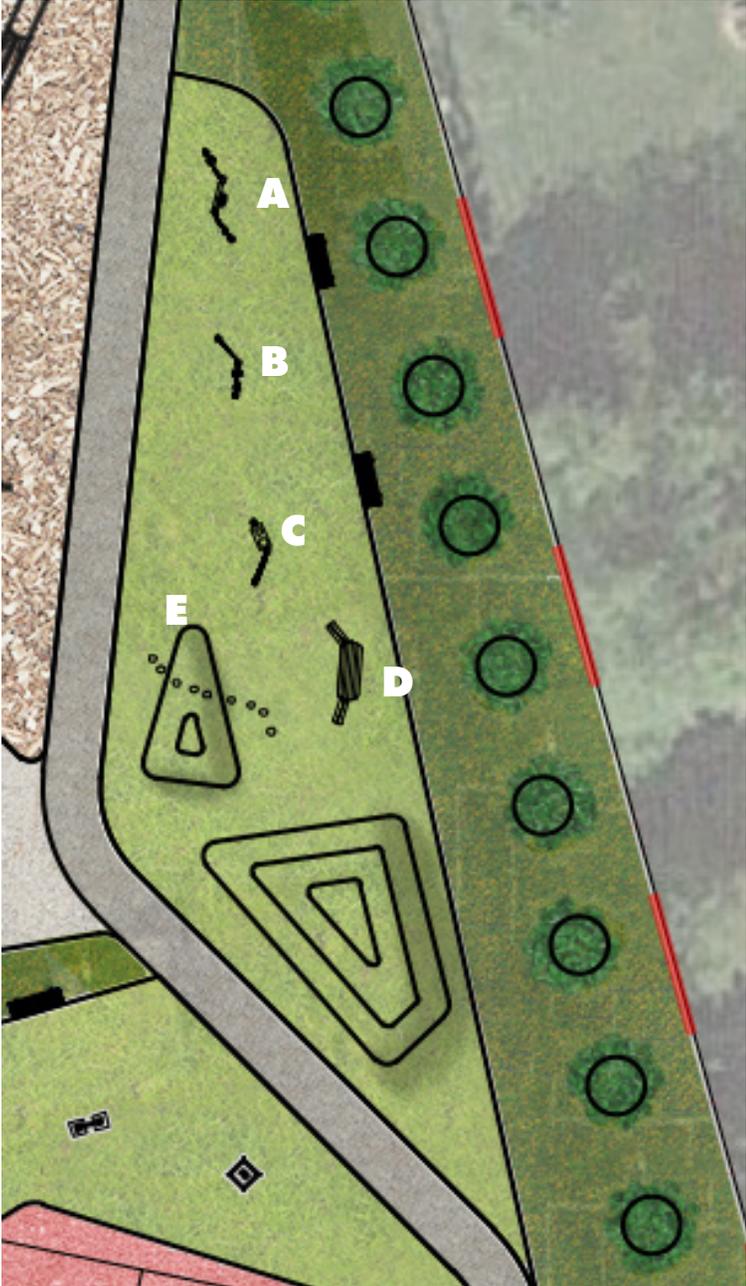
Functional Play

Equipment Selection



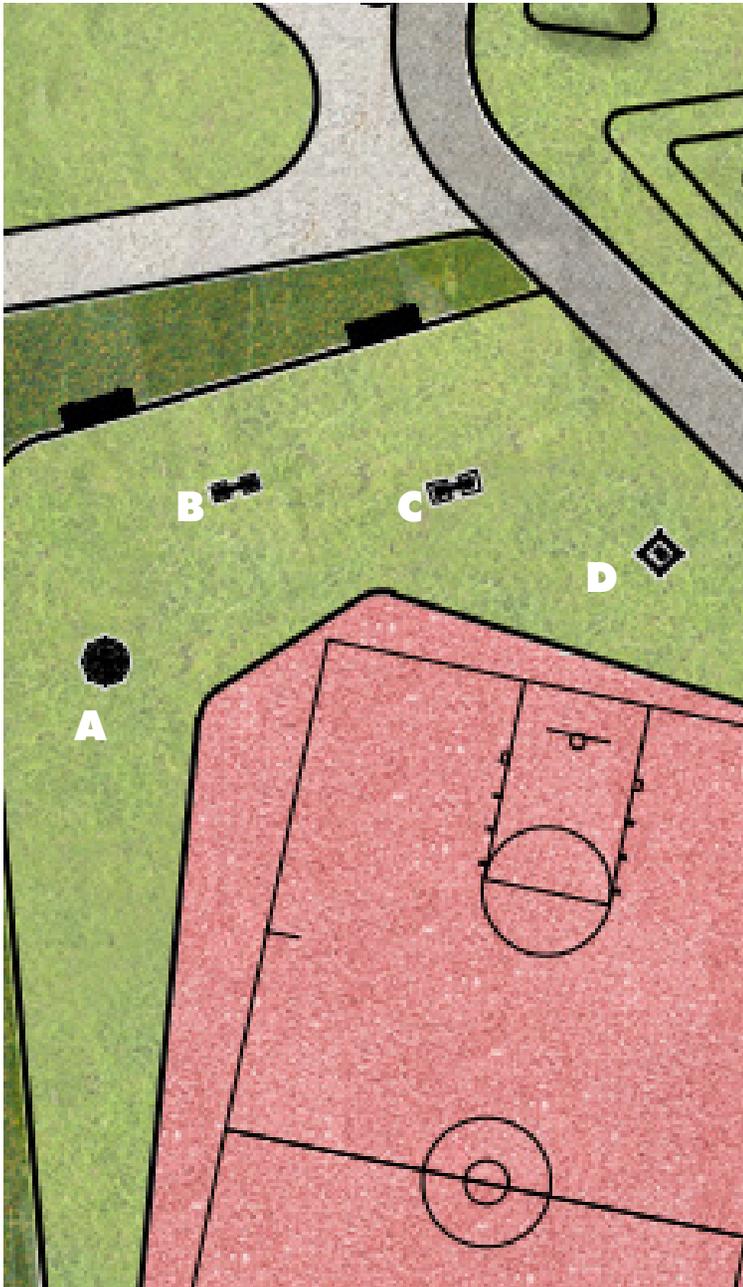
Constructive Play

Equipment Selection



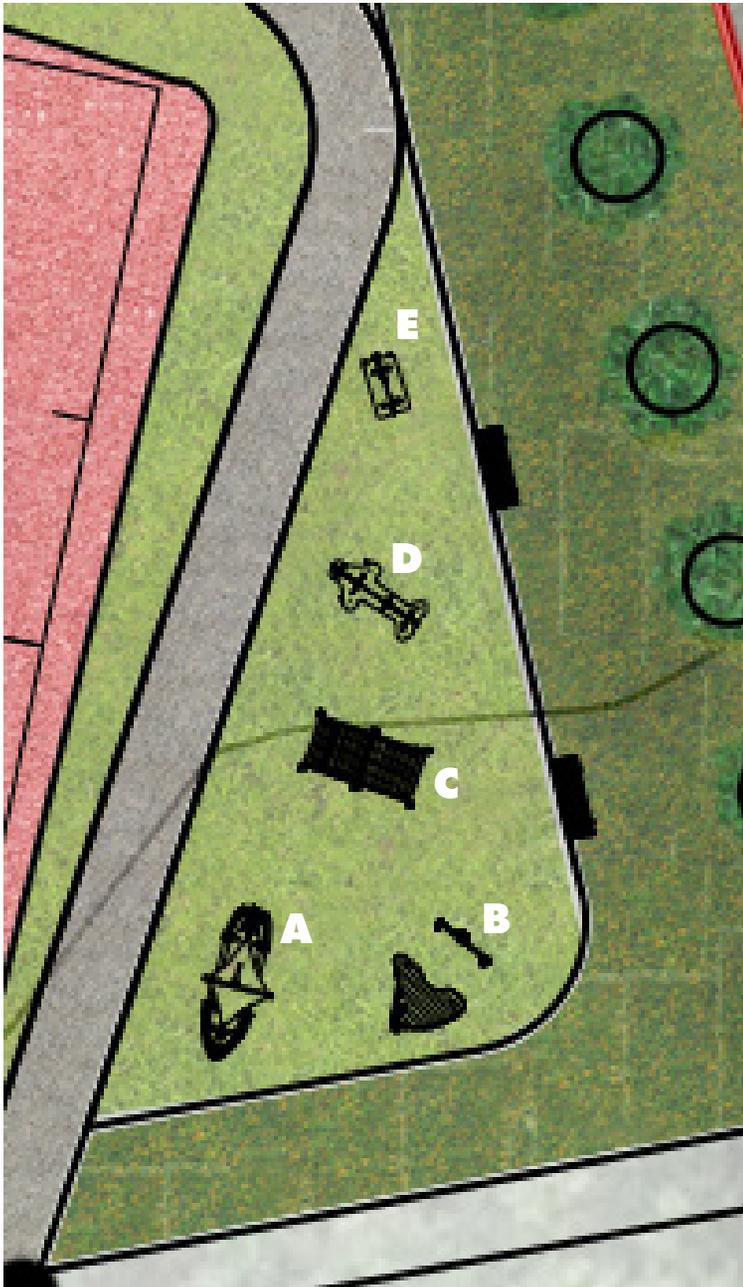
Games Play

Equipment Selection



Dramatic Play

Equipment Selection



A



B



C



D



E





VIEW FROM FUNCTIONAL PLAY



VIEW FROM GAMES PLAY



VIEW FROM DRAMATIC PLAY

Design Proposals

Dynamic Skatepark - Precedents

The original intent for the initial precedents was to show what is feasible. Color blocking, obstacles, and even furniture integration on site are all possible features of a modern skatepark, thus the typically gray topographical cement field would not have to be the only solution when it comes to a skatepark's design.



Design Proposals

Dynamic Skatepark - Concept

Although Earlvile does not have the weather advantages as some well known skatepark locations in California or Australia as shown in the bottom precedent image, element of color do not have to be lost.



Design Proposals

Dynamic Skatepark - Material Decisions

The following three materials were analyzed for the built skatepark environment:

Wood

Pros:

Easy to assemble on site.

Cons:

Wood has a high maintenance costs in terms of labor repair and is susceptible to weather conditions such as dampness, mold and rotting over time.

Steel

Pros:

Easy to assemble on site and low cost of maintenance.

Cons:

Steel sheets may have possible sharp edges from build and/or use over time. The sheets are laid over usually hollow material, which can create a noise concern for the neighbors in the vicinity. The material is also susceptible to temperature fluctuations, being very hot in the summer, and extremely cold in the winter.

Concrete

Pros:

Of all the materials looked at, concrete as the least amount of maintenance over time, and because everything is cast in place it can be used to foster a high degree of design flexibility. Concrete itself is very strong and smooth, thus optimal for varied weather conditions in the Northeast.

Cons:

High initial cost and the site will become a permanent structure that will be extremely difficult to change into something else.



Design Proposals

Dynamic Skatepark - Strategies & Elements

Having decided on a more permanent structure for the skatepark environment, a variety of permanent cement materials were studied. Concrete was ultimately chosen, for the other materials caused safety concerns with use over time.

Porous Asphalt

Unit cost: \$2 to \$3.5/sqft

Pros:

Hydrological benefit where surface of will not pool large bodies of water.

Cons:

There may be a high-cost associated with maintenance in the future, as loose pieces of asphalt can pose as a hazard to skaters thus drawing safety concerns.

Porous Concrete

Unit Cost: \$2 to \$6/sqft

Pros:

Hydrological benefit where surface of will not pool large bodies of water. The large spaces between rocks will also provide aeration, thus reduce surface temperatures in the hot summer months.

Cons:

Installation of this material will take a long time, as it needs to set in place thus reducing the amount of run-off pebbles. And with long-time usage, there may be high-maintenance requirements to reduce the amount of loose materials, posing as safety concerns.

Concrete

Unit Cost: \$4 to \$10/sqft

Pros:

Concrete is nearly maintenance-free once the material is cast on site and should survive against varying weather conditions without much worry.

Cons:

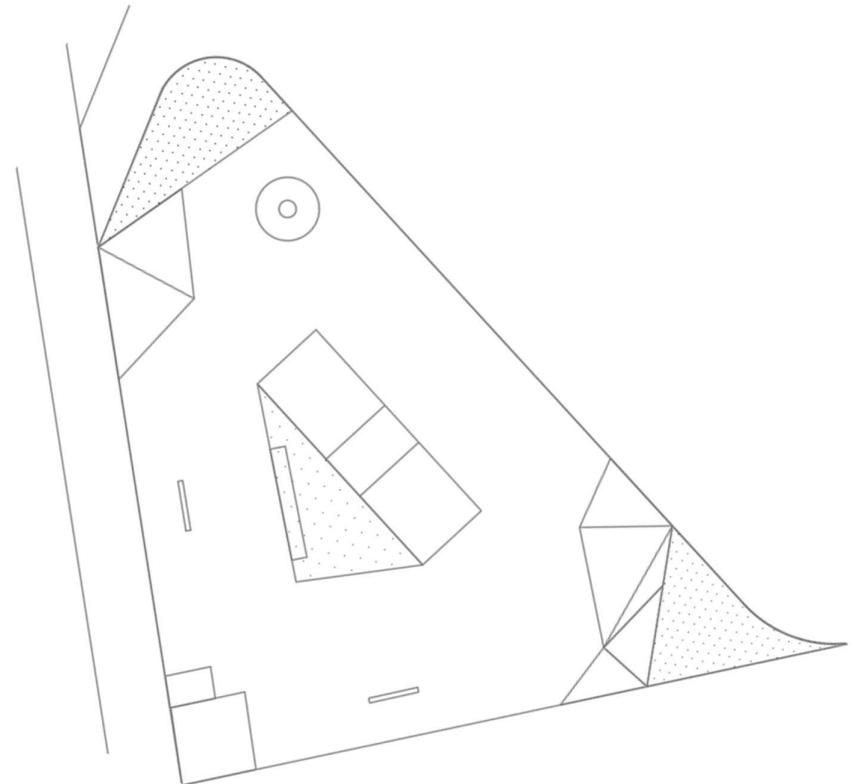
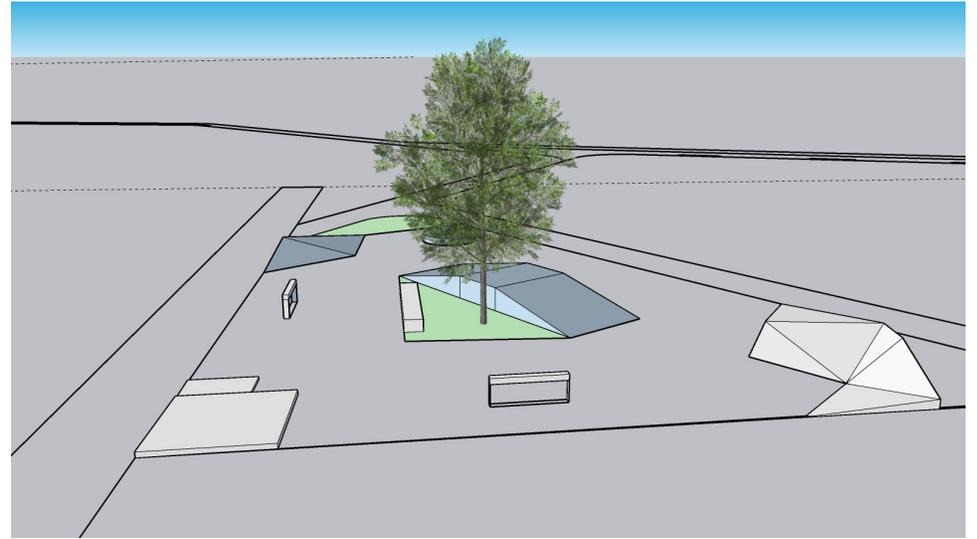
A higher initial cost is associated with the material as it can quickly become very expensive to cast the variety of topographical conditions of the skatepark, such as the ramps and bowls. And because the material is very solid, water drainage may pose a problem if not designed or cast correctly, thus, there is a limited margin of error in the initial stages for planning and casting on site.



Design Proposals

Dynamic Skatepark - Design Development

The final design is comprised of three-phases design. The first phase is the movable obstacle area. As our clients want to have wooden obstacles that can be stored during winter time, assembled easily on site, and changed periodically, we added the movable obstacle area, which will be friendly for beginner and medium-level skaters. When the concrete pump track and bowl area are still being constructed, the movable obstacles can be the first phase of skatepark that is ready to open to the public. Our clients want to have the low-maintenance skatepark while wood might require high-maintenance because it deteriorates quickly under severe weather conditions, but our clients are willing to purchase different obstacles online or created different obstacles using their local carpenter to displace the previous old obstacles. These movable wooden obstacles are chosen online from "Ocramps", as this brand offers various categories of obstacles and very detailed description of their dimensions. We then chose several obstacles that will be fun to play for skaters, and created 3-d model for them according to the dimension

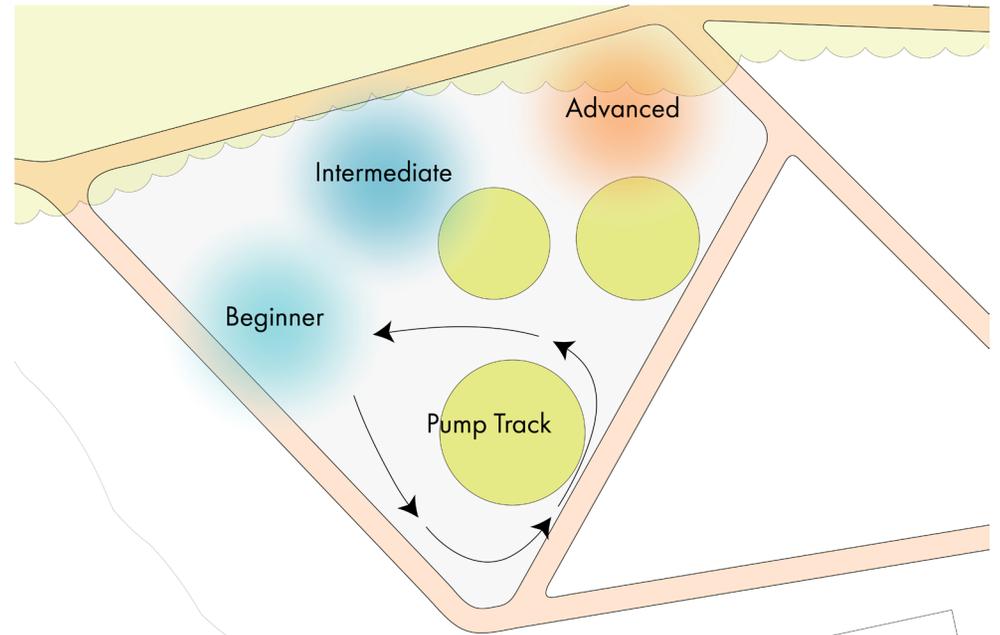


Design Proposals

Dynamic Skatepark - Design Development

From the very beginning, it was very evident that the three trees on-site were very important to the residents as it was the only area in the park, which provided natural shade without having to walk directly into the shrubs along the perimeter of the park. However, the trees are situated in such a way that it took a great deal of the surface area away from the skatepark, particularly as the skatepark was purposely relocated to account for the noise and the new area was the furthest distance away from the neighbors' houses.

The idea proposed, is to integrate a pump track onto the site between the trees, thus preserving the trees without losing skatepark real-estate. In addition the trees will be protected by a ring barrier, which can double as seating for parents while looking out for their children. In addition, the skatepark obstacles are proposed to be scattered by level of the user, as to mitigate serious accidents from the constant movement of people.



Design Proposals

Dynamic Skatepark - Final Design



- Total Paved Area: 18,600 sqft

Design Proposals

Dynamic Skatepark - Final Design



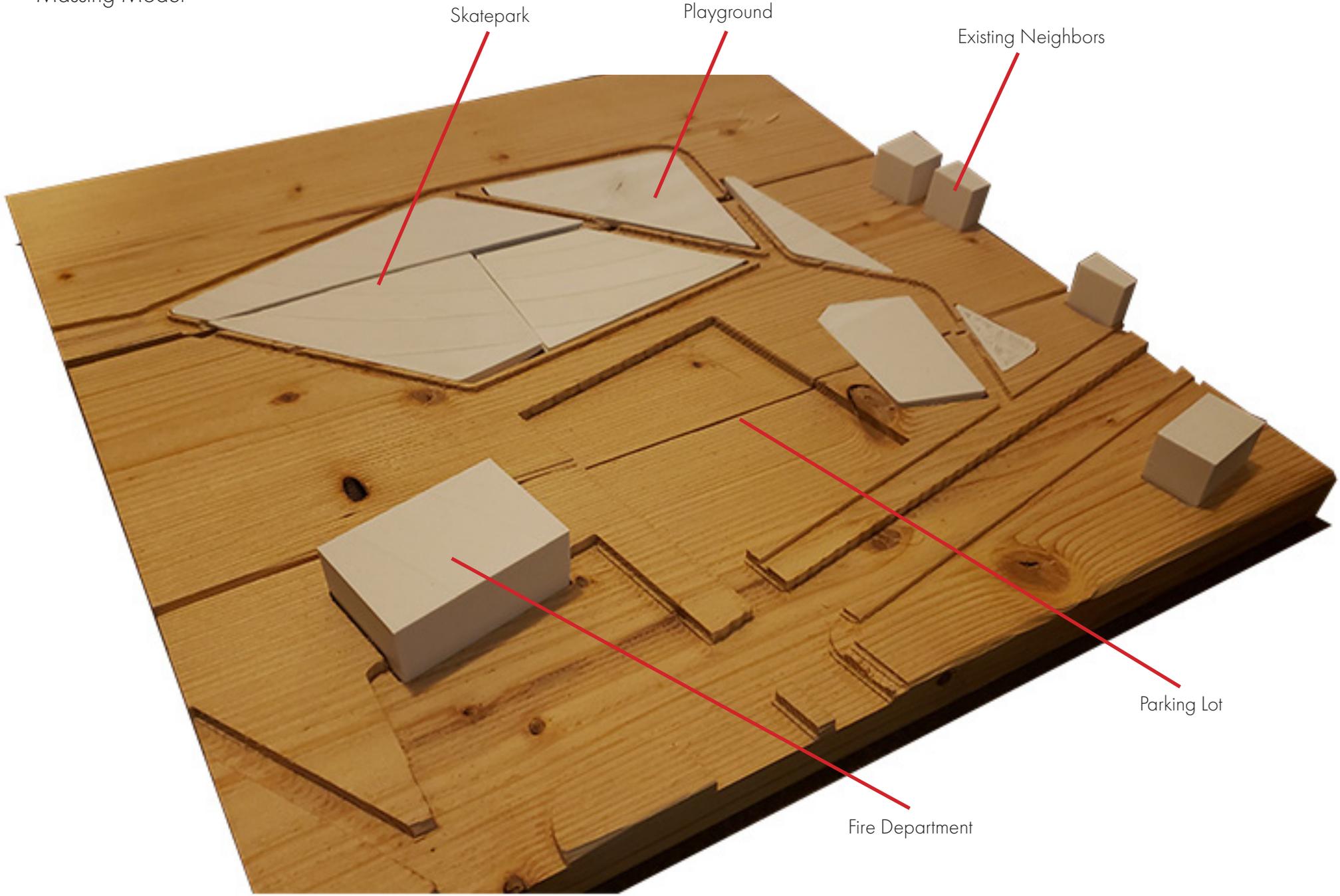
Design Proposals

Dynamic Skatepark - Items Logistics

Equipment	Dimensions	Cost	Assembly Time				
	Height: Bump: 12 inches, Rail: 17 inches Width: 4 feet Length: 8 feet	499	1-2 hrs		Height: 6 inches Width: 18 inches Length: 7 Feet	299	10 mins
	Length: 6 foot	529	30 mins		Length: 8 feet Width: 19.5 inches Height: 10.5 – 13.5 inches	299	10 mins
	Height: 9 inches Depth: 19 inches Length: 6 feet	269	20 mins		Height: 12 inches Width: 3 feet, 2 inches Length: 6 feet	379	45-60 mins
	Height: 3 feet, 2 inches Width: 6 feet Length: 6 feet, 5 inches	1409	2-3 hrs		Height: 9 inches Width: 19 inches Length: 4 feet	138	10 mins
	Height: 1 foot, 3 inches Width: 2 feet Length: 8 feet	339	1 hr		Height: 14" on high end, 9" on low end Length: 10 feet Width: 12 inches	418	30-45 mins
	Height: 10 inches Length: 7 feet Width: 18 inches	199	30 mins				

Design Proposals

Massing Model



Skatepark

Playground

Existing Neighbors

Parking Lot

Fire Department

Supplementary Logistics

Budget Report - Suppliers

The budget has been separated into the 3 divisions of project, some materials overlap but for the most part they have their own items for purchase. The trail has the fewest elements and the prices are based on information from local suppliers. The skate park budget is mostly used on the different skate park obstacles. The playground incorporates materials for the floor and obstacles from local suppliers. The total is about \$650,000.

Information from Suppliers:

Cossit Concrete	Concrete	\$139.50 per cubic yard	15000 sqft = 47 cubic yards
White Eagle Sand and Stone, LLC	Bank Run Gravel	\$450 per ton + \$85/hr for delivery	
Total		\$7,201.20 including tax and delivery	

Supplementary Logistics

Budget Report - Trail

Materials Dimensions	Size (SQ. FT.)	Cost	Cost per/
Composite Wood (6920 sqft)	6,920	\$41,520.00	\$6 per SQ. FT.
Bank Run Gravel (14,224 sqft)	14,224	\$2,702.56	\$0.19 per SQ. FT.
Concrete Trail (3,710 sqft)	37,10	\$14,840.00	\$4 per SQ. FT.
Composite wood additional (8,091 sqft)	8,091	\$48,546.00	\$6 per SQ. FT.
Vegetation			
Trees (no. 46)	46	\$4,600.00	\$100 per no
Shrubs (no. 20,577)	20,577	\$82,308.00	\$4 per SQ. FT.
Benches (no.18)	23	\$31,510.00	\$1,370 per no
Total	12,266 FT	\$170,630.56	
Total (with trail extension)	14,420 FT	\$219,176.56	

Supplementary Logistics

Budget Report - Playground

Material	Size (SQ. FT.)	Cost	Cost per/
Concrete flooring	4,882	\$29,292.00	\$6 per SQ. FT.
Mulching	8,408	\$2,522.40	\$0.3 per SQ. FT.
Functional			
Castle		\$60,010.00	
Ship		\$58,580.00	
1 beam		\$470.00	
3 beams		\$1,220.00	
Stilt		\$1,240.00	
Crawling		\$1,680.00	
Parkour		\$16,540.00	
Constructive			
Music play		\$2,260.00	
Drawing play		\$6,150.00	
Emotion play		\$1,260.00	
Learning play		\$3,150.00	
Games			
Marble table		\$12,460.00	
Memory pair		\$6,390.00	
Ball labyrinth		\$9,050.00	
Connect four		\$10,010.00	
Drama			
Playhouse		\$10,010.00	
Theatre stage		\$4,600.00	
Boat		\$12,740.00	
Pullman bench		\$2,090.00	
Jumbo bench		\$4,730.00	
Total		\$256,454.40	

Supplementary Logistics

Budget Report - Skatepark

Concrete

Skate Park (8,500 sqft)	\$51,000-\$85,000
Pump Track (7,500 sqft)	\$75,000-\$150,000
Skate Bowl (2,600 sqft)	\$65,000-\$156,000

Obstacles

Obstacle 1	\$499.00
Obstacle 2	\$529.00
Obstacle 3	\$269.00
Obstacle 4	\$1,409.00
Obstacle 5	\$339.00
Obstacle 6	\$299.00
Obstacle 7	\$299.00
Obstacle 8	\$379.00
Obstacle 9	\$138.00
Obstacle 10	\$418.00
Obstacle 11	\$199.00

Total	\$196,206.00 - \$396,206.00
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Thank You