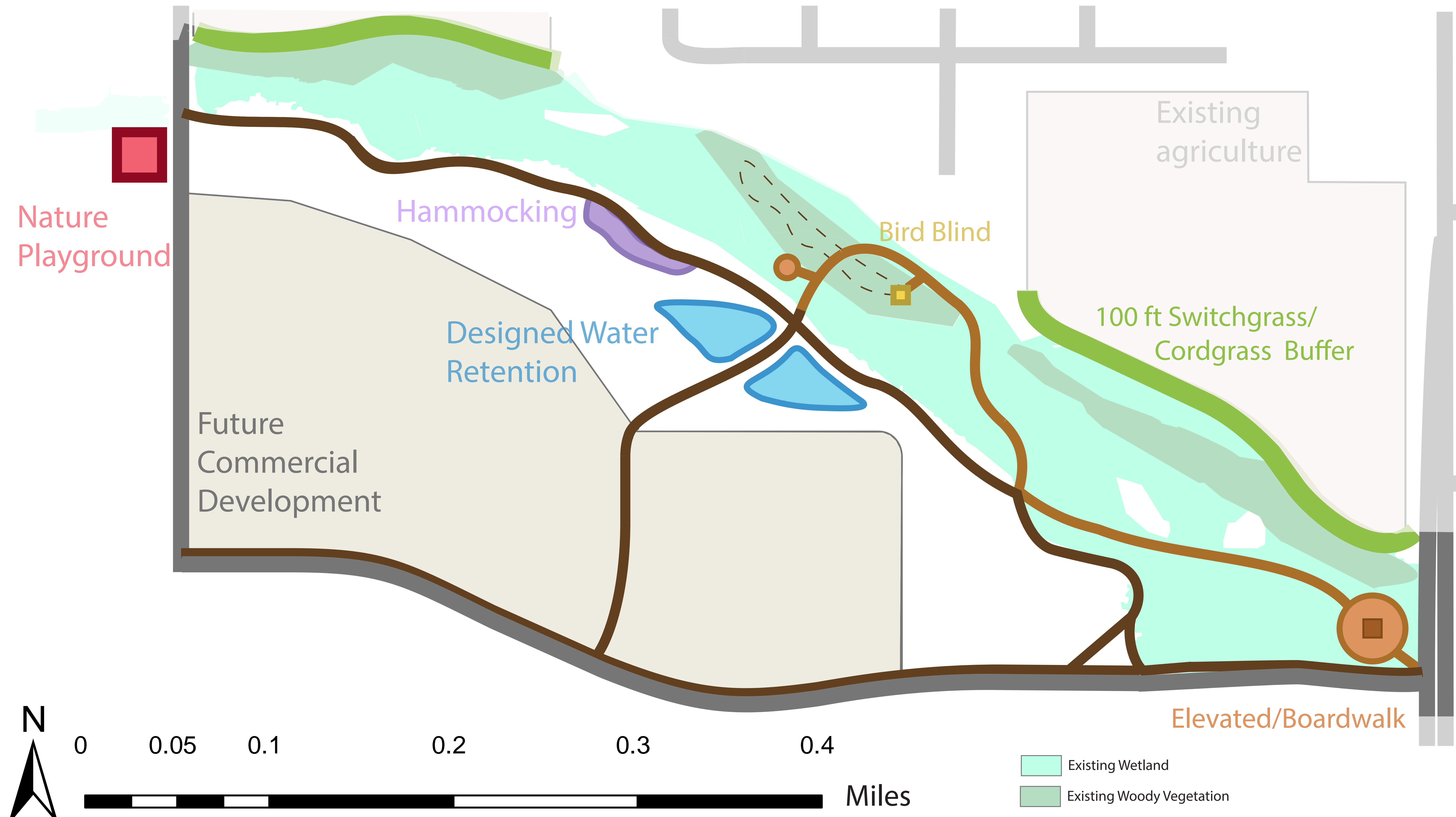
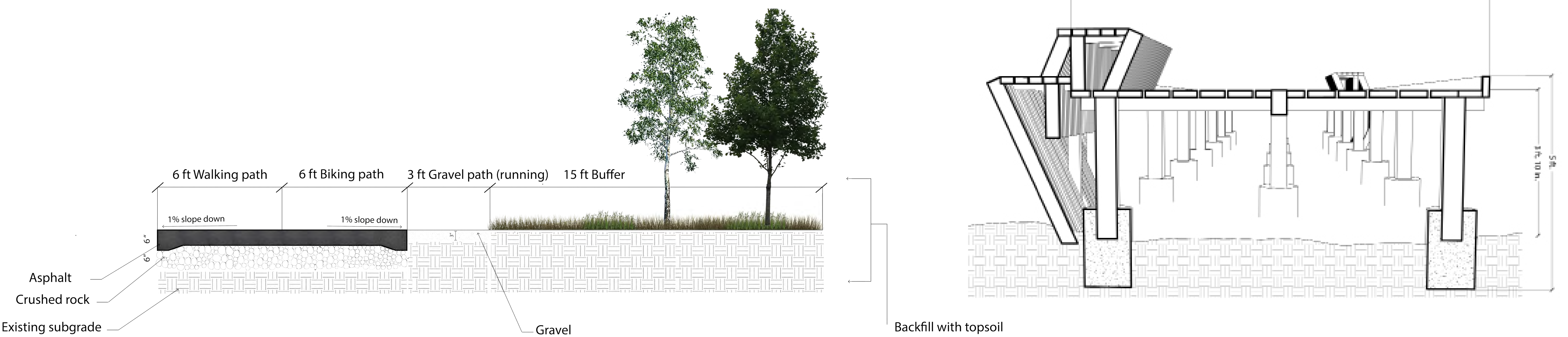


Lake Itasca Greenway

Create a human experience with nature, connecting the COR to Itasca with a focus on stormwater management in respect to future development and existing wetlands



Trail Sections



Precedents

ACES Treehouse
Aspen, CO



Solitude in natural area
Ideal for watching wildlife and personal reflection

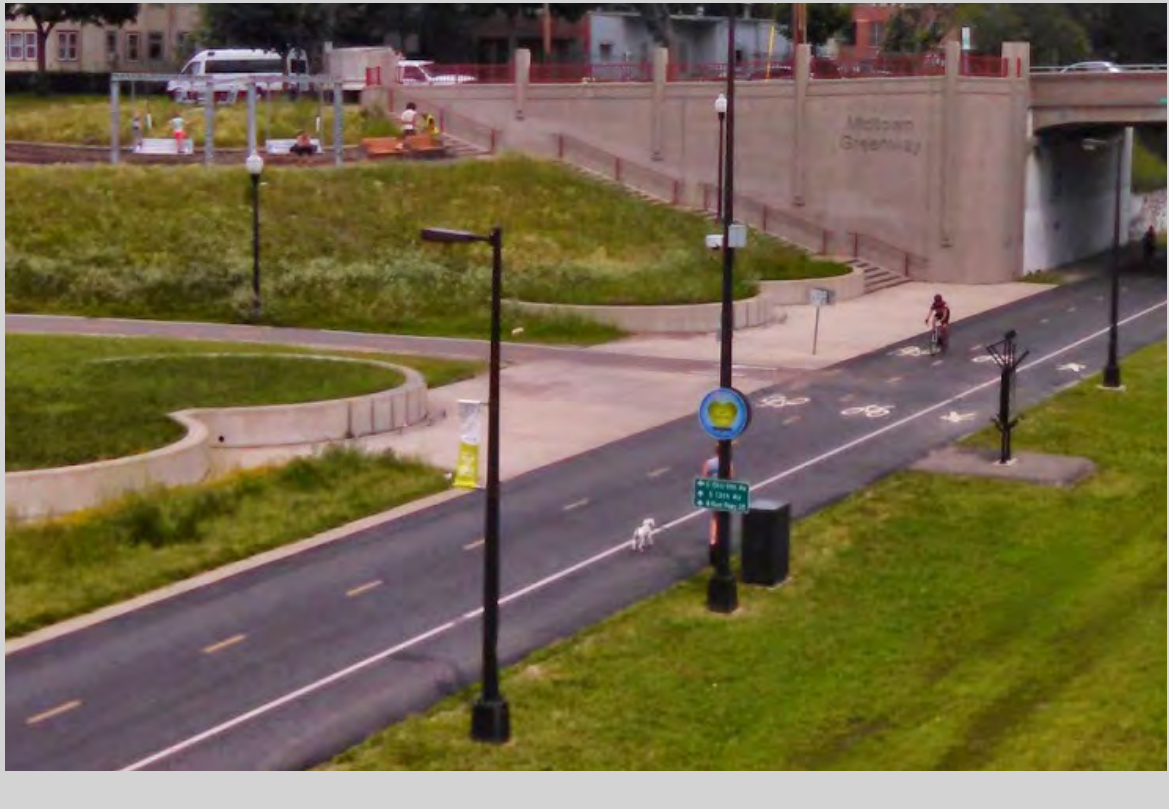


Materiality
Reflects natural surroundings



Education
Visitors can watch and learn about site wildlife ecology

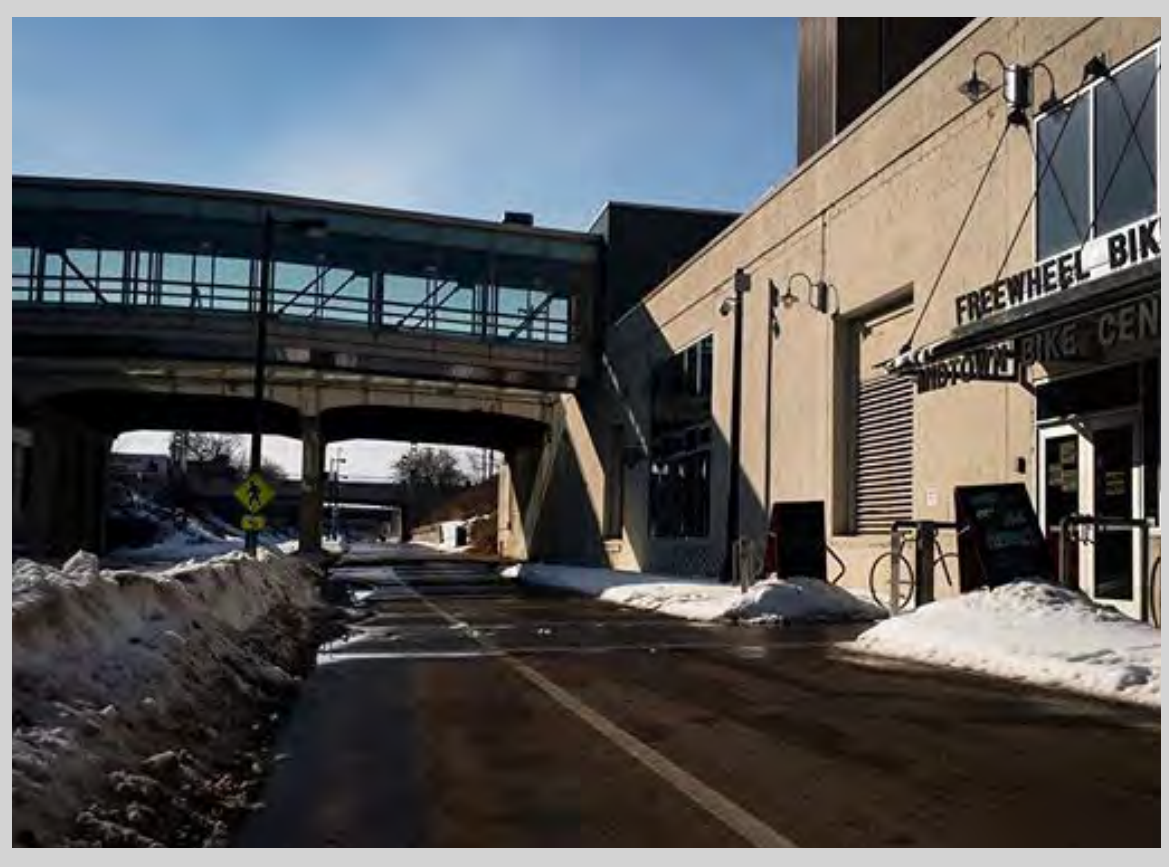
Midtown Greenway
Minneapolis, MN



Easy connections from city streets to trail
Safely and clearly transports pedestrians and bikers from sidewalk to trail



Materiality
Urban infrastructure and natural vegetation seamlessly coexist



Commercial Connections
Businesses utilize proximity to public domain, and add to the trail's atmosphere

Discovery Hollow Nature Play Area
White Bear Township, MN



Unique play equipment
New avenues for imaginative play

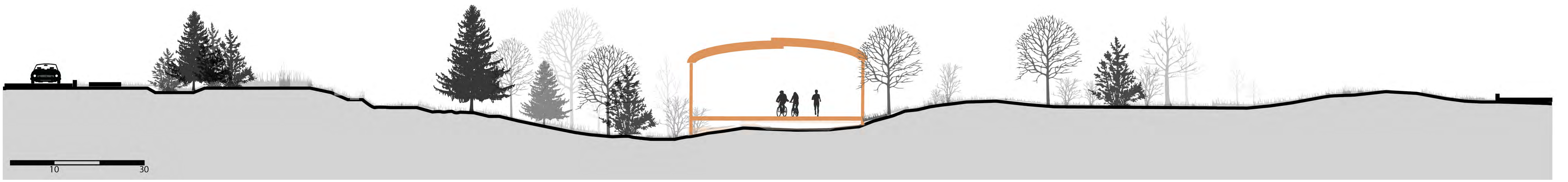
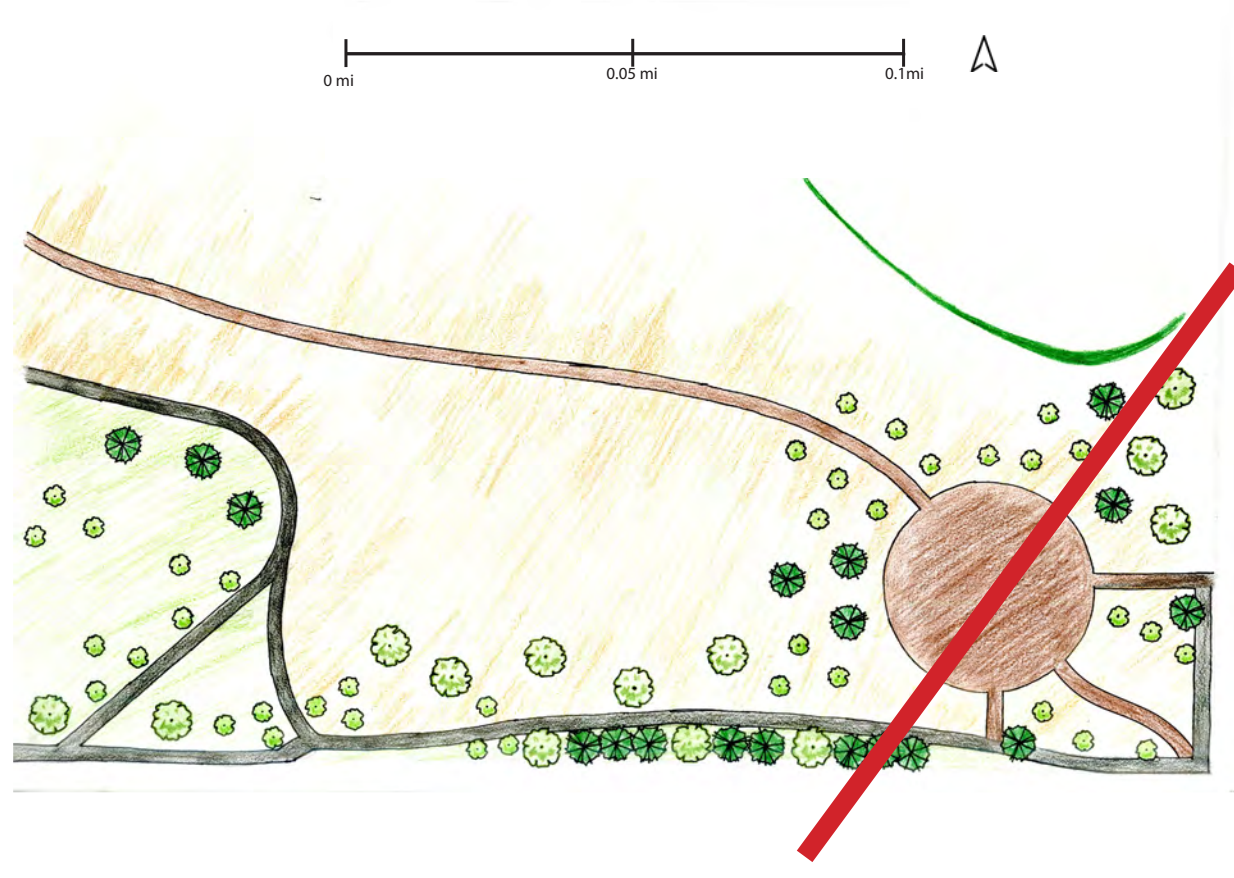


Materiality
Connects children with their natural surroundings



Education
Visitors can learn and take part in growing fruits and vegetables at community garden

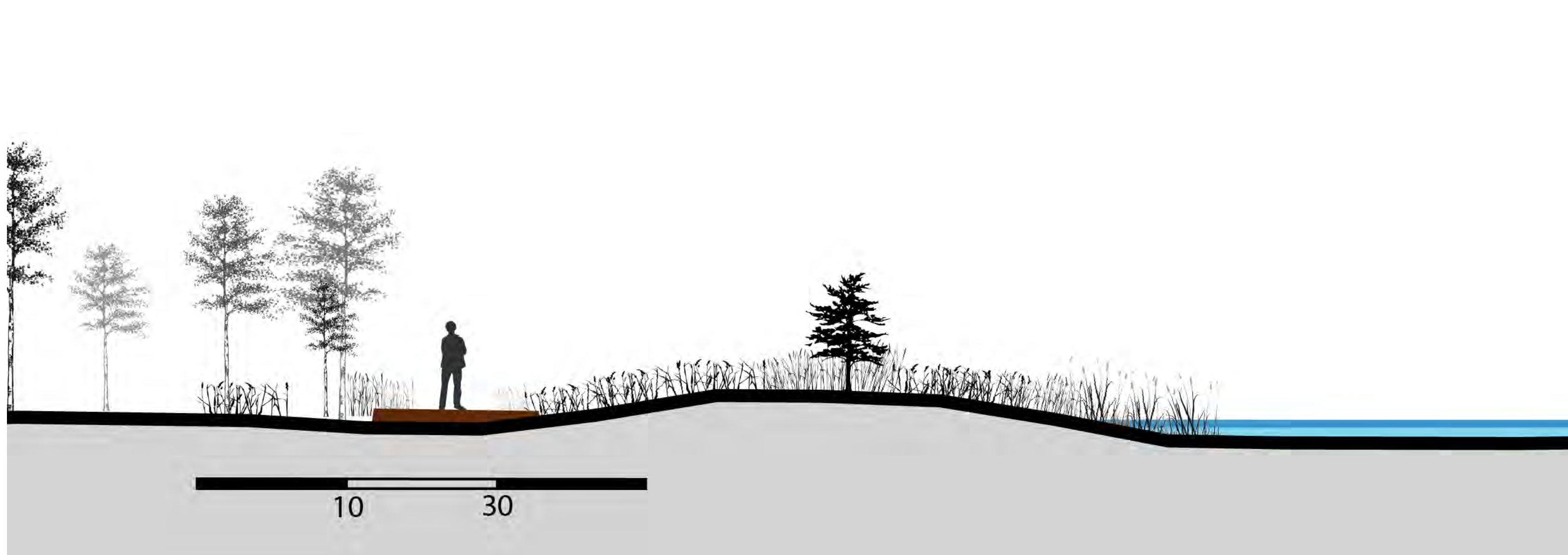
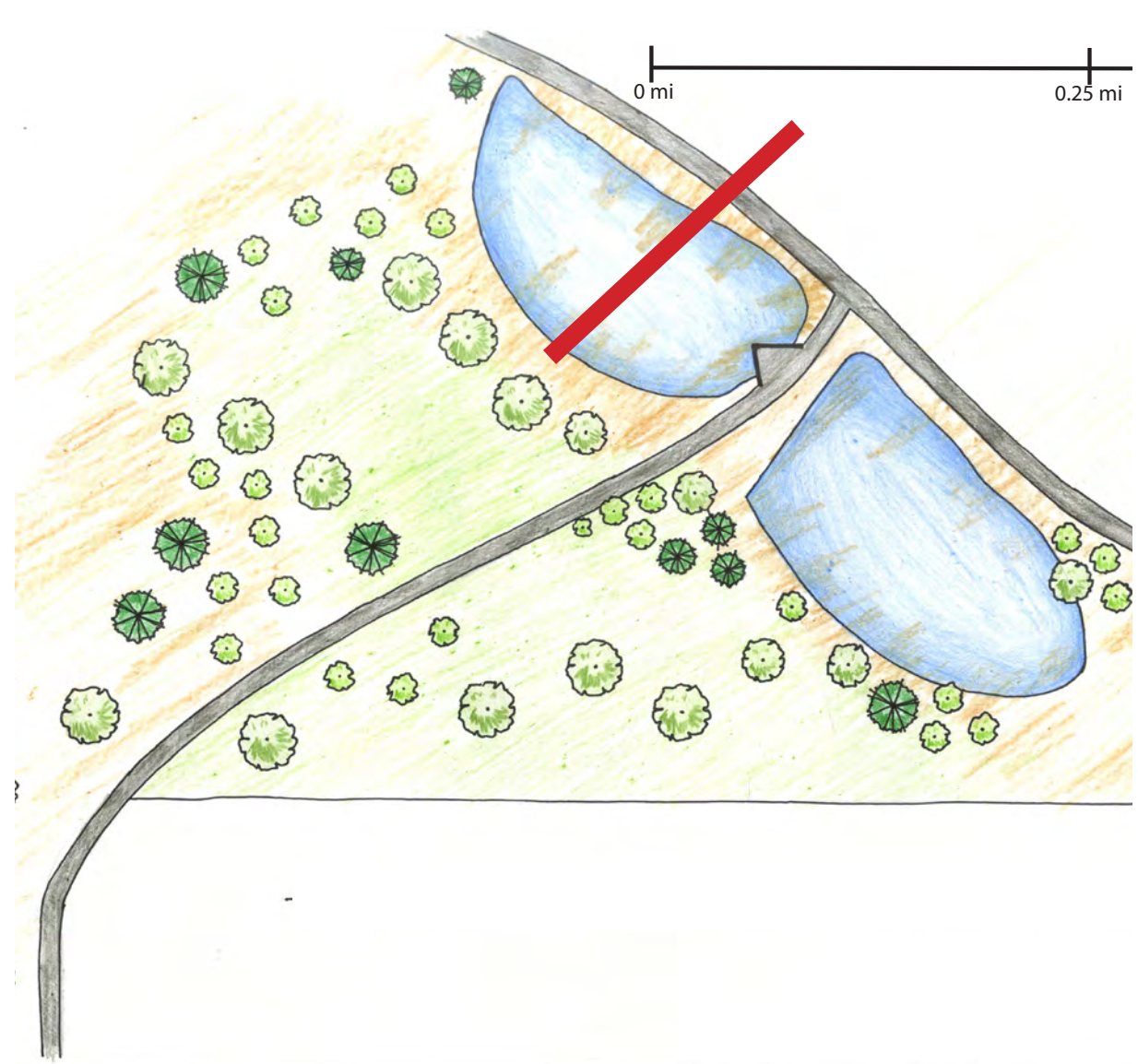
Entrance



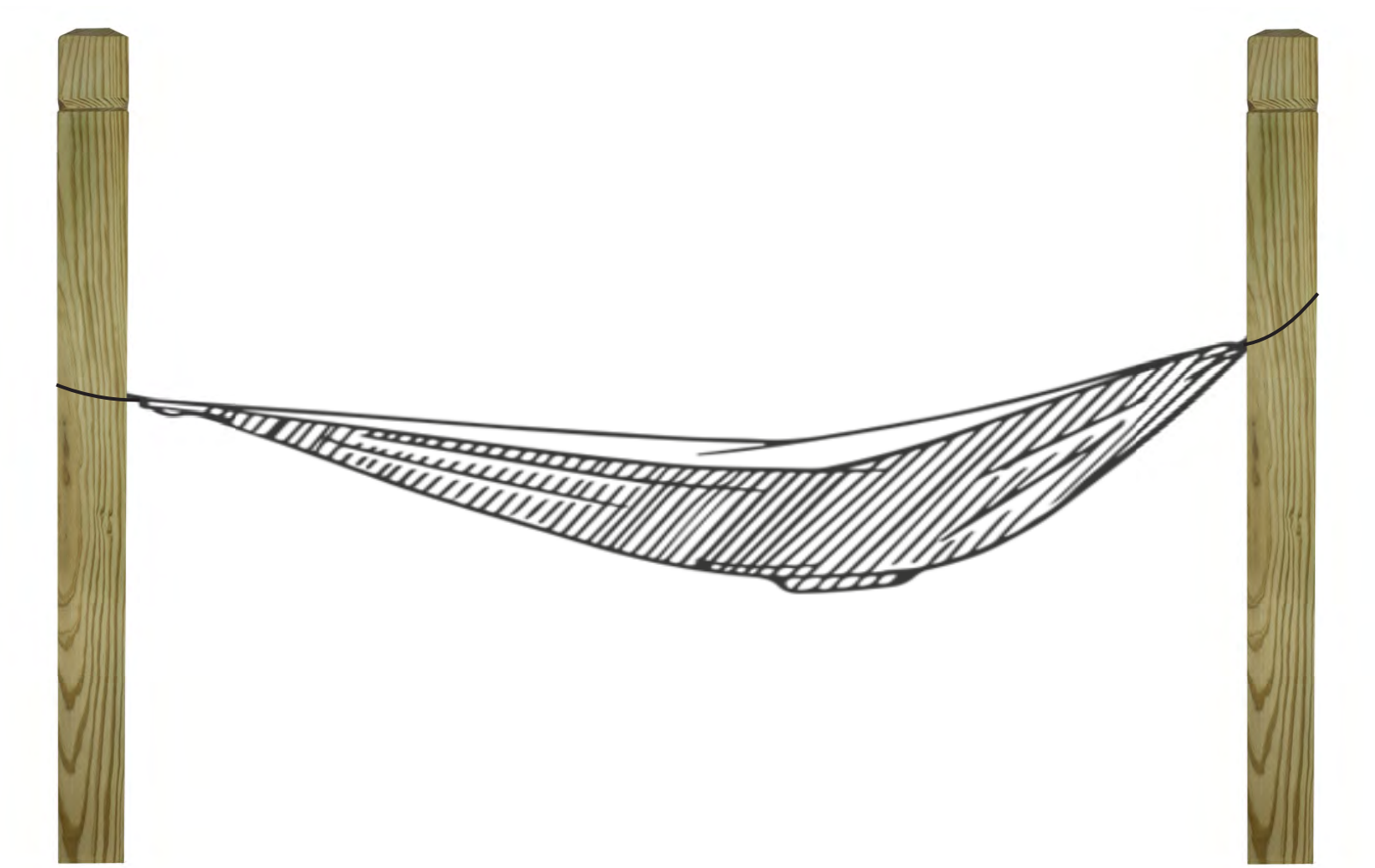
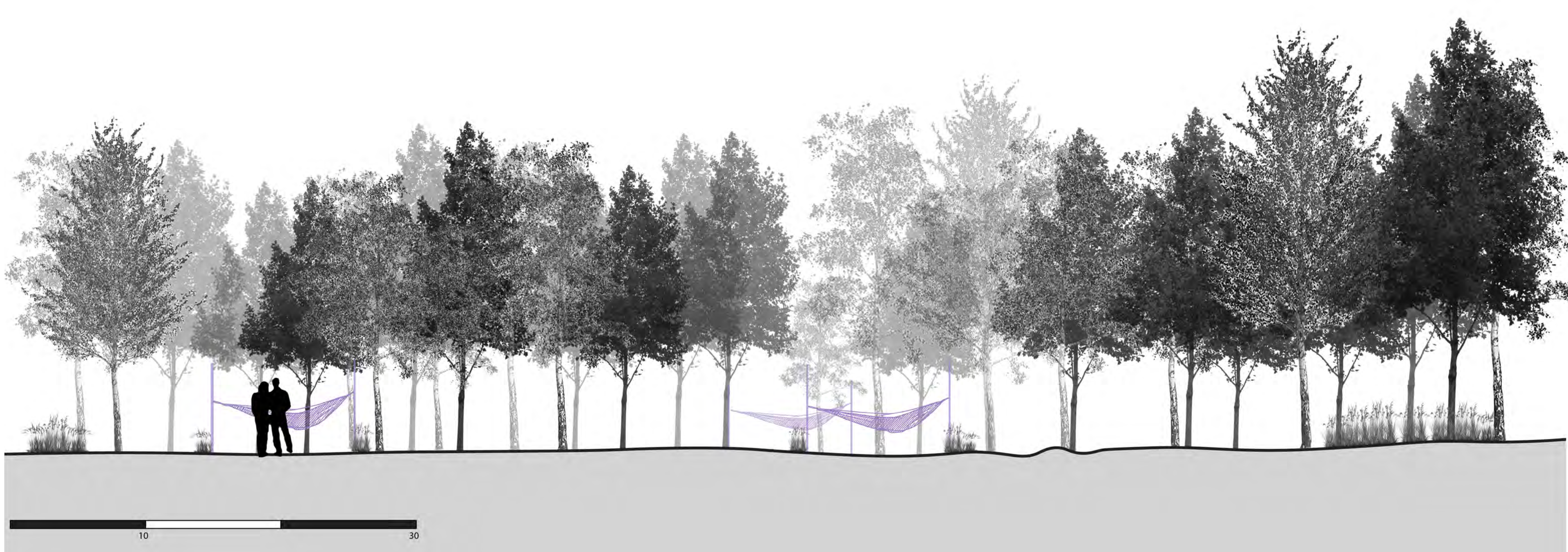
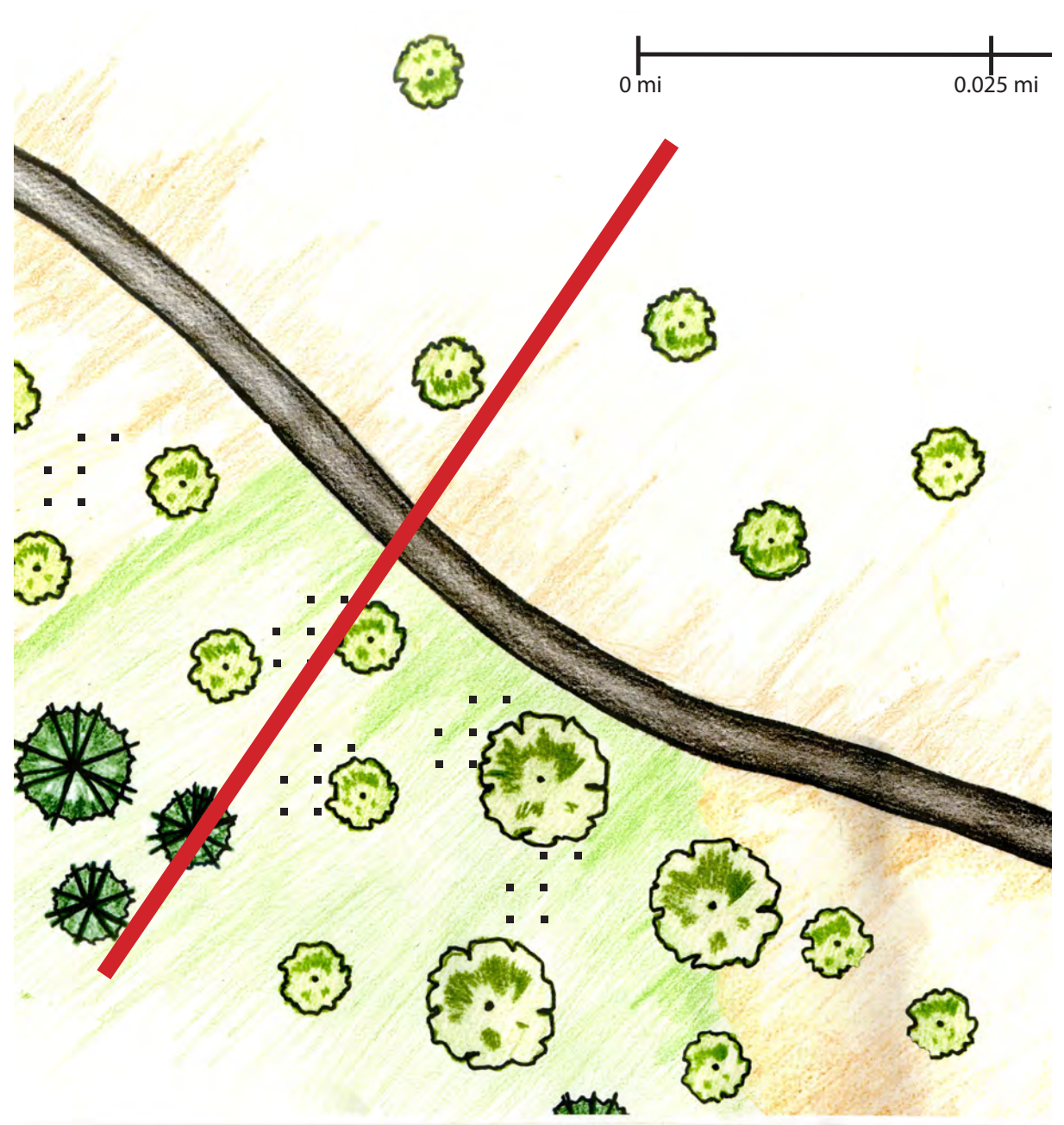
Bird Blind/Wildlife Viewing Area



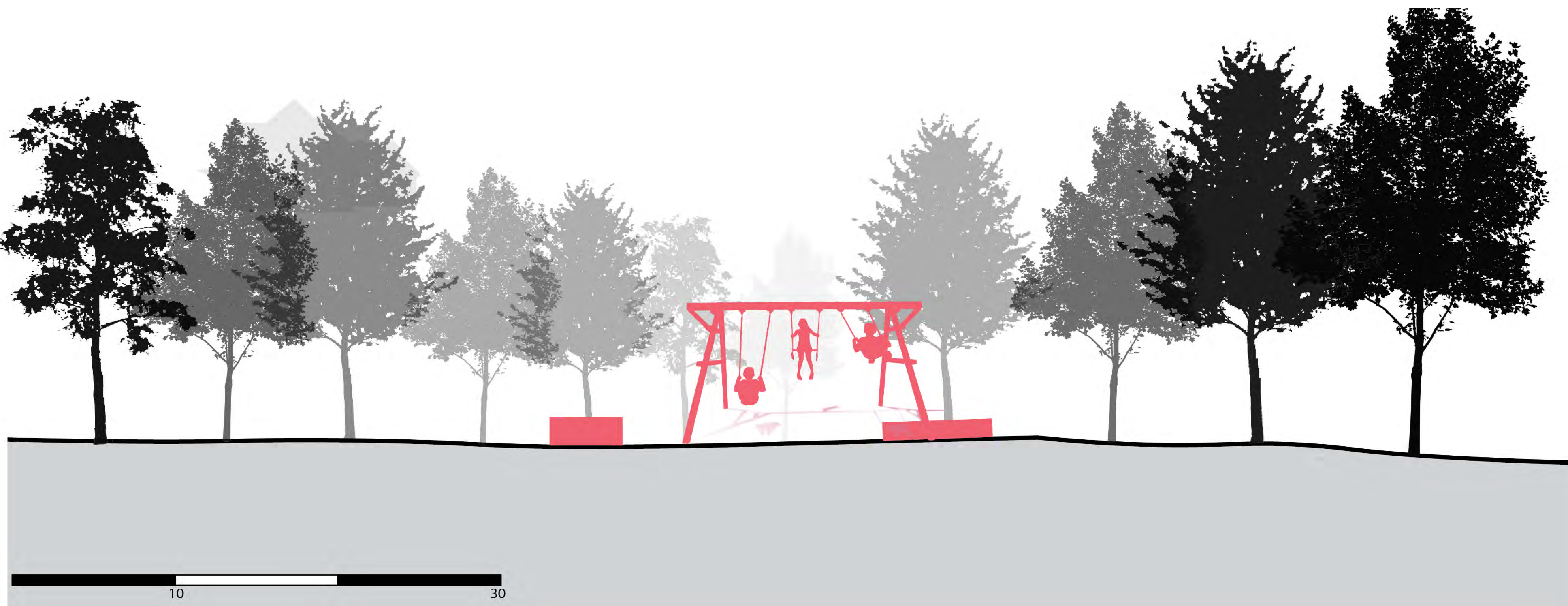
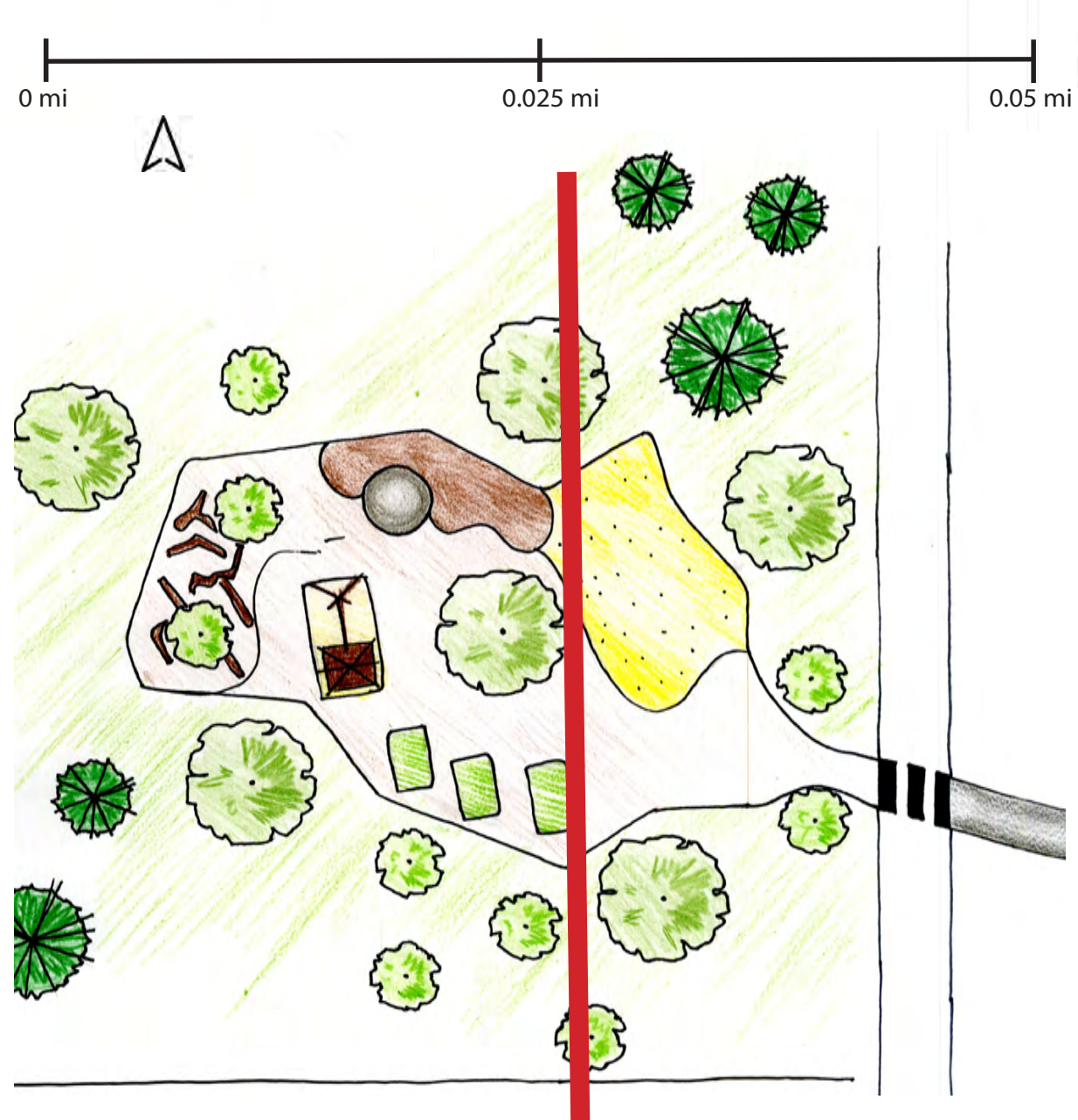
Designed Water Retention/Commercial Connection



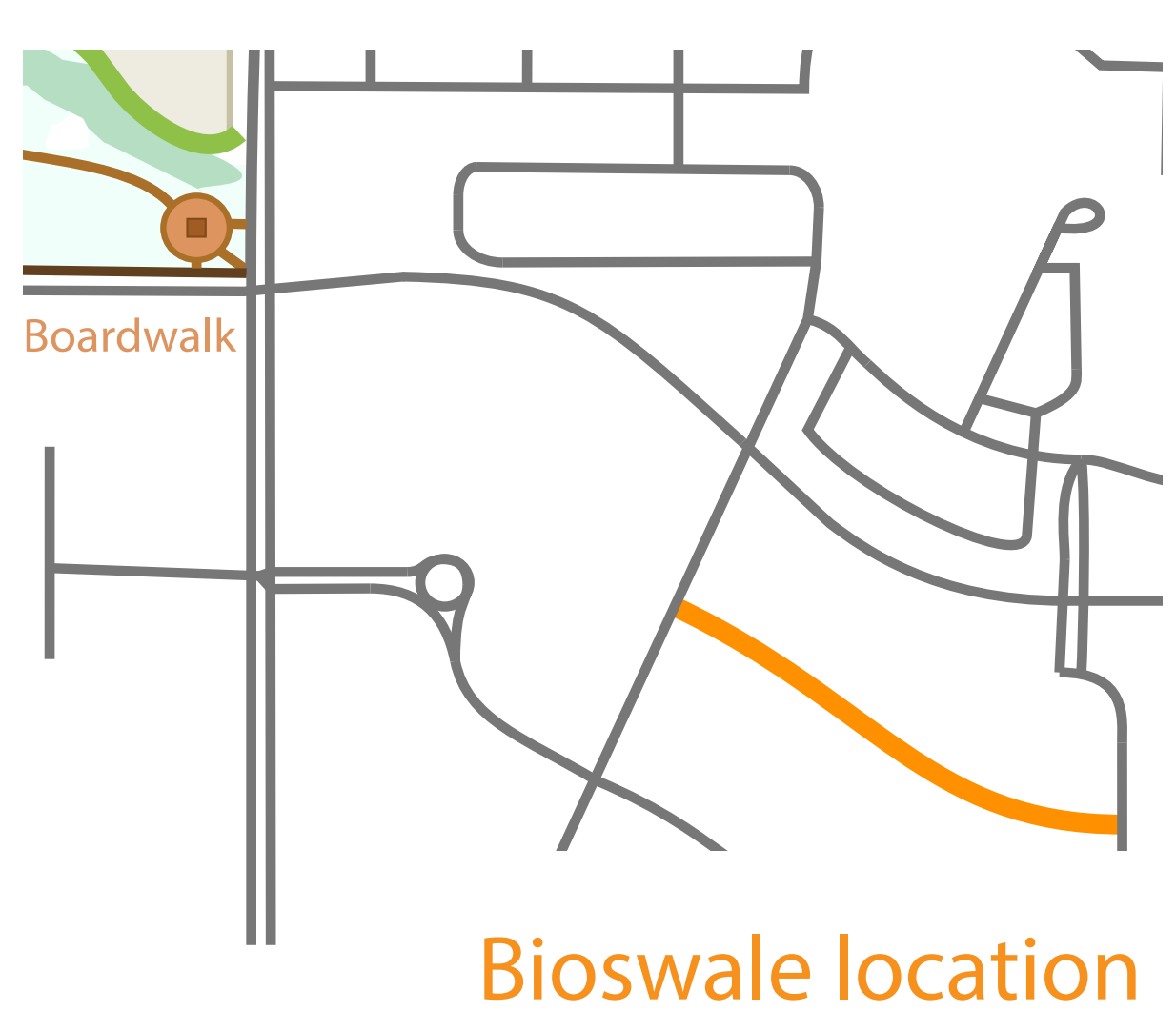
Hammocking Woods



Nature Play



Center Median Bioswale



While not a part of the Itasca Greenway Area itself, the Bioswales are a continuation of the Greenway as it moves towards the COR. Not only does it aid in the retention and filtration of water before entering the adjacent wetlands, it also continues a theme of the harmonious relationship between this urban center and its surrounding natural environment.



LAKE ITASCA GREENWAY PROPOSAL

Hunter Lutz | SUST 3003 | Living Change Project | May 2018

Canvanizer link: <https://canvanizer.com/canvas/rKTR1yGsoGPta>

INTRO

The city of Ramsey has been undergoing a revitalization for the past few years. A few aspects city officials are focusing on is connecting the city, highlighting and preserving natural features, creating recreational amenities, and attracting younger generations while satisfying current citizens. They hope that these strategies will increase resident retention and propel the city into an urban center of importance. One thing Ramsey is looking at is implementing a city-wide greenway system. One section of this greenway is the Lake Itasca Greenway. This section serves to connect the Center of Ramsey (COR) to Lake Itasca which is to the north west.

1 VISION

The vision is to propose a design for a section of proposed greenway in the city of Ramsey in Minnesota. The hope is that the Lake Itasca Greenway will create precedence to be followed in the field of landscape architecture. The themes of the project will be human interaction with nature, learning about natural ecological systems, and the preservation of these ecological systems. The greenway will promote sustainability through sustainable materials, stormwater management, and quality. The most sustainable projects after all are ones that work well and persevere time.

2 CHANGE RECIPIENTS

The champions of the greenway will be the city of Ramsey and its citizens.

Social Benefits: The greenway will effectively create a recreational and learning amenity for the public's use.

Ecological Benefits: Materials used will be sustainably sourced. For example, using reclaimed wood for a boardwalk and bird blind structures. It was realized early on that the Lake Itasca Greenway is perhaps the most important section of the proposed greenway system. It connects one of Ramsey's greatest natural features to what will be the area of highest activity in the city. The corridor itself is an important natural feature as it is mostly covered by seasonally flooded delineated wetland. Not only is the wetland a source of wildlife habitat but it also serves as the main infiltration and recharge for six of the eight municipal water wells in the city. Because of the importance of this site to the local ecology and the water quality of major wells in the city it is in the city's best interest to preserve the natural systems in this specific part of the city as well as others. One way to protect the wetlands is to implement buffers between the wetlands and sources of pollution. Two agriculture fields flank the north side of the wetlands on the Lake Itasca Greenway site. The topography of the fields slopes towards the wetlands meaning that any runoff is flowing right into the wetlands. Currently there is no intervention preventing drainage from these fields into the wetlands, which is extremely concerning. It is proposed that a 100-foot-wide raised berm planted with switchgrass. The berm will act as a barrier blocking debris and runoff

as well as dampening noise from farming operations. The deep root systems of the switch grass will further filter the runoff from the fields.

Economic Benefits: In accommodating the increased number of residents and its following increase in development, the City of Ramsey has set aside land bordering the southside of the wetlands and proposed greenway trail for commercial development. This future development adjacent to the site presents a unique opportunity to make proactively creating a connection between the greenway and any commercial development. This will present a symbiotic relationship, where businesses can benefit from increased traffic through the area, and the businesses can bring more people to the Lake Itasca Greenway. In connecting the trail to the commercial property, there is also an opportunity to create a safe, beautiful space at the back of the commercial property, an area pedestrians usually are not a part of. In adding natural features and more pedestrian welcoming infrastructure such as benches, open grassy areas and plazas, this transition from the biomorphic design of the Greenway, to the hardscape of the commercial area will not only attract more business but could also redefine the public realm around commercial spaces. Lastly, there is an opportunity found in the integration of future commercial development with the existing wetland found on the Greenway property. As found in current Ramsey zoning codes for business districts, retention or detention ponds will be constructed according to the amount of parking lot and rooftop area a new development possesses. In addition, there are policies that require including retention ponds in new commercial developments. First, these retention ponds can be constructed in order to hold water coming from the commercial property and filter it before it enters the wetlands. In addition, they could be built with the intention of becoming an amenity for the public. The area surrounding the pond should have plantings that make it beautiful and offer a visual break from the commercial development with benches and resting spots that view the ponds. This could not only create a beneficial relationship to this particular area, but it could also set a new standard for the way commercial developments are designed, and be an example for other communities to use as a precedent in their local commercial developments. Throughout the whole process of development great care must be put forth to make sure the wetlands are properly protected from possible pollution resulting from the future commercial development.

3 ACTION

The action that will be taken is to implement the commercial connection and wetland protection techniques previously talked about as well as other programming throughout the site: A path and boardwalk system, entrance area, bird blind, hammocking woods, nature playground, and bioswale.

Path

The path layout will not only be able to handle the high foot traffic that is to be expected for this stretch of greenway, but it is also sensitive to the wetland. The asphalt path is comprised of 6-foot-wide walking path, 6-foot biking path, and a 3-foot-wide gravel path for runners (running on asphalt for extended periods of time can cause runners pain, gravel is a more forgiving surface that many runners prefer). The path is also accompanied by a 15-foot buffer which will prevent any runoff pollution from the path from entering the wetland. At the southeast corner of the site (closest to the COR) the existing path that follows Bunker Lake Boulevard is borrowed as to not disturb the wetland. Borrowing the existing path means that filling in a portion of the wetland to build a path upon is not necessary as is any other disturbance that would otherwise occur if the path crossed into the wetland.

Boardwalk

It is important for people to be able to have a closer experience, interact, and learn about the wetland first hand, however with only the current path and buffer this is not being achieved to the extent of its full potential. Therefore, it is advised to add a boardwalk addition to the trail system. It is suggested that the deck of the board walk be constructed out of a composite material rather than wood for increased durability and overall lifespan. A composite material that imitates the look of wood to keep the natural feel is preferable. Precast concrete piers are used to support the boardwalk in the soft hydrologic soil. Concrete is chosen over treated wood because it will hold up better against the wet soils of the wetland. They were also chosen because the boardwalk is already a considerable investment, concrete is more cost efficient than using steel supports or helical piers. However, if they can be afforded helical piers may be a worthy investment. Benches should be strategically placed along the boardwalk with viewsheds that take advantage of the natural landscape. A concept is to have a bench hanging off the edge. This will increase the connection between people and nature as well as increase the views afforded to people. The proposed boardwalk is 10 feet wide and about 3 feet 10 inches off the ground plane depending on the variability of the surface. It is supported every 7 feet 10 inches at the corners of modular panels (that are constructed off site). Aside from the supports which are 6-inch-thick composite posts, the whole boardwalk is made out of standard length 2 by 4 composite planks cut down to size. A composite material was chosen to increase the life span of the boardwalk, but using reclaimed wood is another sustainable option as long as a proper volume of wood is available.

Entrance

Another decision was made to have a larger raised platform located at the southeast corner that would serve as a gathering spot and gateway from the COR to the greenway. It is important for the platform to be elevated off the ground to continue the theme of impacting the wetland to the smallest degree possible. The southeast corner is an important transition point from an urban center to a landscape that emphasizes nature and tranquility. This gateway area will facilitate this transition with visual cues and also serve as a main trailhead for the greater greenway system. These cues can include aspects such as material change and added signage and branding to subtly almost subconsciously let people know that they aren't in a bustling city center anymore, they are in nature and it should be treated with respect. Benches and other seating should be included on this platform to make it more inviting to the public. The gateway platform would also be a place for public postings, info, maps, and any notices pertaining to the greenway (areas of the path being worked on, areas to avoid, etc.). This layout for the path, boardwalk and platform allows for people to still experience the wetland's rich nature while simultaneously protecting it from much of the damage that would occur from the construction of a standard path that cuts through the wetland.

Bird Blind

The abundance of life that the wetland supports makes them a favorite hunting ground for many species of birds. While the site is mostly covered by wetland there are a few stands of trees (primarily aspen) that populate certain areas of the site. These tree canopies offer favorable nesting conditions for birds to raise their young come spring. These conditions should be taken advantage of and a structure should be built that gives people the opportunity to observe and learn about the different birds that frequent the area. A bird blind was designed and placed in a location that provides viewing of both the wetland and the aspen groves to maximize the variety of bird activity to be observed. The blind is secluded from the main boardwalk so birding enthusiasts will be able to observe birds free from the noise other disruptions that could occur along the main boardwalk. The bird blind has two parts, the first is called the Corridor and the second part is called the Nest. The Corridor is within an aspen grove at the center of the site, placed on an existing 2-foot rise in ground elevation. Placing it on this rise will reduce any chance of flooding that might otherwise partially submerge the decking. The walls form a sort of

corridor along a branch of boardwalk that crosses into the aspen grove. Walk through the Corridor and one will reach the Nest which protrudes out and provides viewsheds into the wetland. Like the boardwalk the structure of the bird blind is modular, panels are able to be put together off site for easy construction, deconstruction, and minimal disruption of nature. The bird blinds are also made from the same 2 by 4 composite material as the boardwalk so it all flows together beautifully as one structure.

Hammocking Woods

The hammocking woods are a tranquil place where people can relax in a relatively secluded area. Surrounded by aspen trees, and placed outside of the wetlands, the hammocks will be in the perfect location to view the natural beauty of the area without becoming unstable due to seasonal floods. The hammocks will be hung on 5-8 foot tall reclaimed wooden posts since the surrounding aspen trees are currently too immature to support weight. The posts will be placed 10 feet apart, the average length of a hammock. People will then be able to bring their own hammocks whenever they wish and utilize this space to unwind from their busy lives.

Nature Playground

A nature playground is a great place to let kids be themselves while also learning about some of the resources and materials that the Earth has to offer. The City of Ramsey already has plans to place a nature play within the future residential area across from the Greenway to the west. The plan gives Ramsey an idea about where this nature play could be located and what it could look like. The playground would be placed directly across the road from the exit of the Greenway for optimal access. There would also be a safe crosswalk to the nature play so families can safely make it to this destination. Inside the nature playground, there will be a large sandbox, a swing set constructed from reclaimed wood, and lots of logs and big rocks for kids to climb and sit on. There will also be a couple large raised vegetable garden beds so that children can learn how to grow their own produce at a young age. The whole playground, except for the entrance will be surrounded by Aspen trees as to immerse users into nature even further.

Bioswale

The planned Ramsey Parkway is currently designed with a bioswale filtering runoff along the center median. With the sandy soil of the area allowing for high infiltration rates into the aquifer below, any runoff that is collected must be first filtered, and so in a bioswale, the runoff is filtered through vegetation.

This vegetation must be tolerant of a variety of environmental conditions, most notably salt-laden runoff from winter de-icing operations, exposed conditions, and alternating periods of drought and flood. The goal is to choose plants that were native to either Minnesota or central and eastern North America, as these were the plants that were most likely to thrive in the local conditions and least likely to damage nearby ecosystems. In addition, the focus was specifically on plants that were of value to pollinators and birds, along with general year-round visual interest for residents.

Bolton & Menk had recommended that the ends of the bioswales be planted with more ornamental plantings, with the center stretches seeded with a native plant mix. Doing so reduces long-term maintenance over most of the area while increasing habitat value for birds and pollinating insects compared to lawn or shrubbery. In particular, the seed mixes should be specifically designed for detention basins and other runoff-dominated areas from Prairie Moon Nursery and Prairie Nursery, which have a good mix of grasses and flowering plants native to the Minnesota-Wisconsin area.

One design element of the bioswale is a 5-foot buffer strip of grass. A mix that includes the highly salt-tolerant 'Fults' alkaligrass is recommended, to be mown occasionally and irrigated as needed through the summer.

For the high-visibility ends of the bioswales, the plant selection is kept relatively simple, such that there would be approximately 2 plants blooming per season, from spring to fall, that were of benefit to pollinators. Also included are shrubs for additional flower color, fall color, and fruit for birds around the nearest tree.

The tree selections were focused on those that provided interest through multiple seasons, could tolerate the site conditions, and most importantly were beneficial to pollinators. Other trees such as honey locusts, hackberries, or ginkgos could certainly be included as well.

Overall, this bioswale planting plan is designed to engage both the public and nature in filtering stormwater runoff, reducing pollution of valuable water resources.

4 URGENCY: WE WILL USE THIS BOX AS "PARTNERS"

Key partners would include the city of Ramsey, local rec facilities, local businesses like Ramsey Bicycle, or Adrenaline Sports which is just south of the site across Bunker Lake Boulevard.

5 TARGET STATE

This project is an example of bright green environmentalism because it calls to use innovative pollution mitigation techniques, urban revitalization and design. It calls to change the landscape architecture and urban design industries it can and should be used as an example for similar greenway projects. Making a connection between a commercial intense development and a natural amenity like the wetlands and greenway is something that hasn't been done before at least not in the way this project is being handled.

6 REQUIRED INVESTMENTS: WE WILL USE THIS BOX AS "BARRIERS"

The main thing holding this project back is money. It is always more expensive to build these types of things than originally estimated. This project is estimated at a wide range from \$500,000 to \$2,000,000 in total.

7 BENEFITS

This project will bring many benefits to the city of Ramsey and its citizens.

A few include:

- social interaction,
- recreation,
- prosperity for nearby businesses (especially in the nearby future commercial development),
- learning about nature and wildlife through interaction with nature,

- a break from the bustling urban landscape that Ramsey intends to become,
- it will provide identity and improve the image of the city,
- set a new standard for greenways

8 SUCCESS CRITERIA

Success will be measured upon:

- The amount of use the section of the greenway receives (yearly attendance)
- Any other cities using the Lake Itasca Greenway as a precedent
- Public opinion (important as this is really who the greenway is for)
- Amount of support and interest from local businesses

9 COMMUNICATION

If this project were to be built consistent (monthly, bimonthly, or by request) visits to the site would be necessary to monitor the structures and health of the wetlands. If the wetland's health starts to deteriorate then perhaps a more radical approach to preservation is needed. On the public front, it may be a good idea to have a suggestions box or a visitor survey to get feedback from the public.