

**TRAILBLAZING:
EMPOWERING RURAL YOUTH THROUGH
MOBILE ARCHITECTURE**

by

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ABSTRACT

This thesis proposes a network of small-scale architectural interventions to address a growing issue of youth substance abuse in rural Nova Scotia, Canada. Thorburn, a hub of a larger region of dispersed communities, acts as a testing ground for this proposal.

An extensive system of trails and cabins currently provides both a means of transportation and informal, unsupervised gathering space for youth. Four test sites were chosen to represent a wide range of possible sites. Each exists at an intersection between these trails and the public realm. Each of these sites could not, on its own, sustain an active year-round program. On-site interventions are partnered with a mobile youth centre whose presence at each site is influenced by seasonal use and special events. Each site is modified to create flexible spaces whose function adapts to, but is not limited by, the presence of the youth centre.

ACKNOWLEDGEMENTS

A special thank you to Roger Mullin and Steve Parcell, for allowing me the freedom to explore my ideas, and for their insights and guidance in developing and representing these ideas.

And to my family and friends for providing the distractions I needed to keep me sane, their understanding when long nights in the studio kept me busy, and for their support and encouragement along the way.

CHAPTER 1: INTRODUCTION

Thesis Question

Can a small-scale design approach help communities reverse a growing trend of substance abuse and addiction in rural Nova Scotian youth?

Topic

Architecture has the potential, and responsibility, to influence positive change in our communities, but as a profession it often falls short in this respect. There is an increasing disconnect between this ethical responsibility and the majority of work that is being done, with many architects (in the words of Samuel Mockbee) simply acting as “house pets to the rich”, designing fashionable buildings with little impact.¹ There is, however, a growing number of designers challenging this complacency and returning to the professional tradition of responding to the needs of the less fortunate. Designers of these projects are not interested in producing grand manifestos or utopian theories, but focus instead on small-scale interventions that serve the needs of underserved communities. They share a belief in collaboration with the communities they serve, as well as the conviction that excellence need not be abandoned in the process.² The bulk of the work that is being done is focused on disaster relief projects and assisting developing nations. While these are both worthwhile causes, many communities here at home are being neglected.

This thesis aims to demonstrate that the ability of a small-scale project to empower a community is no less viable here. Using the village of Thorburn, Nova Scotia and the surrounding area as a basis for this investigation, I will explore how issues related to the rural nature of this and many other communities can be addressed architecturally. This isn't a community in a developing nation, it hasn't been ravaged by an earthquake, or been caught in the middle of civil war, it's just a community that has been left behind in a country that prides itself on being a great place to live. It is a community in which there is huge potential for small-scale intervention to influence change.

1 Andrea Oppenheimer Dean, Timothy Hursley and Auburn University Dept. of Architecture, *Proceed and be Bold: Rural Studio After Samuel Mockbee* (New York: Princeton Architectural Press, 2005), 7.

2 Andres Lepik and Museum of Modern Art, *Small Scale, Big Change: New Architectures of Social Engagement* (New York: Museum of Modern Art, 2010), 11.

Regional Context

Often architects and planners rely on the idea that as we progress towards a more urbanised society the people living in these rural communities are moving to cities and suburbs. There is however a very large number of people who, despite the positives associated with relocating, choose to stay where they are (in a smaller city, in a rural community, etc.). A major aspect in this is the idea of rootedness, and the importance of existing connections, whether they be to a place, to friends and family, to a job, or to anything else that is seen as unique and important to the individual.³ Whatever the individual reasons may be, these communities and the issues they are facing will continue to exist.

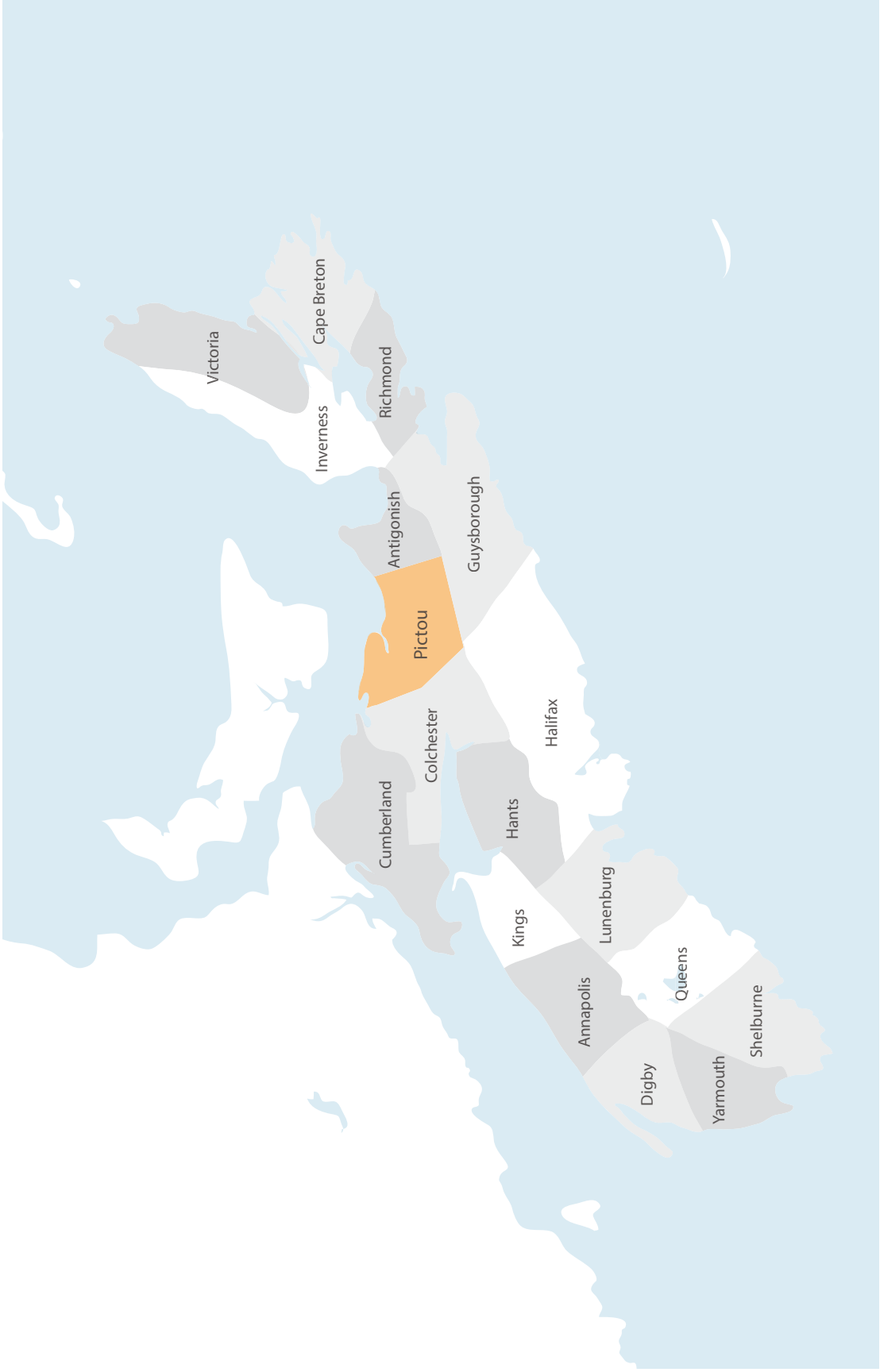
Much of rural Nova Scotia is struggling to contend with growing problems as a result of a shift away from the resource-based economies that they once relied on and declining populations. Pictou County, in particular, is becoming known for many of these problems, with New Glasgow, the largest town in the county, being named the worst place to live in Canada for two years running.⁴ One of the main elements of this rating, along with high unemployment (14%) and a lack of public transportation, is a growing problem of substance abuse and addiction in the area highlighted by recent media coverage of a new designer drug which has become a problem in the county ahead of the rest of the region.⁵ Recent attention does not, however, mean that these are new problems for the area.

More specifically, youth substance abuse is an ongoing problem in these communities where limited options for safe after-school entertainment has led to a large mixing of age groups within the neighbourhood, and an increased exposure to drugs and alcohol early in life. It is not uncommon for children in the area to begin smoking while still in elementary school, and experimenting with drugs and alcohol before reaching high school. All of this has gained the community a very negative reputation, which is reflected within the community's opinion of itself.

3 Richard L. Florida, *Who's Your City?: How the Creative Economy is Making Where to Live the Most Important Decision of Your Life* (New York: Basic Books, 2008), 75-89.

4 Money Sense, "11 Worst Places to Live; Overall Worst City: New Glasgow. N.S.," March 20, 2012, http://www.moneysense.ca/2012/03/20/11-worst-places-to-live/ms_newglasgow/.

5 Josh Visser, "Highly addictive drug blamed for cannibal attack in Miami a growing threat in Maritime Canada," *National Post*, May 30, 2012, <http://news.nationalpost.com/2012/05/30/highly-addictive-drug-blamed-for-cannibal-like-attack-a-growing-threat-in-maritime-canada/>.



County map of Nova Scotia

Substance Abuse and Prevention

The bulk of work being done to address issues of substance abuse in North America focuses on rehabilitation, rather than prevention. Rehabilitation facilities are clearly in need, as prevention is a long-term solution, but this is a field which is quite well developed, with rehabilitation centres providing psychological and emotional support to assist people in working through their illnesses. Our national drug policy and youth drug strategy are beginning to recognise the merits of prevention, but focus more on policy making and restrictions, rather than studying the factors that make drug use appealing. In aiming to address the issue of substance abuse in this community I do not intend to design a rehabilitation centre, but rather to address the very issues that lead to the need for such centres within the community.

Costs of Substance Abuse

The overall social cost associated with substance abuse annually in Canada is \$39.8 billion. Within this, the costs associated with research and prevention amount to only \$147.6 million, or less than one percent of the total costs.⁶ While almost \$40 billion is hard to put into context, it can be understood in relationship to spending in other areas. Health care accounts for \$84.5 billion (over 10% of which comes from costs attributed to substance abuse). Education costs make up for \$63.1 billion. Arts, entertainment and recreation account for only \$11.2 billion.⁷ An increase in spending on prevention and research, which could be tiny in comparison to any of these figures, could (in the long term) lower the costs associated with health care, lost productivity, and law enforcement dramatically.

6 Canadian Centre on Substance Abuse, *The Costs of Substance Abuse in Canada 2002*, accessed Feb. 1, 2013, <http://www.ccsa.ca/2003%20and%20earlier%20CCSA%20Documents/ccsa-coststudy-2002.zip>.

7 Statistics Canada, *Gross Domestic Product at Basic Prices, by Industry*, 2013, <http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/econ41-eng.htm>.

COSTS OF SUBSTANCE ABUSE



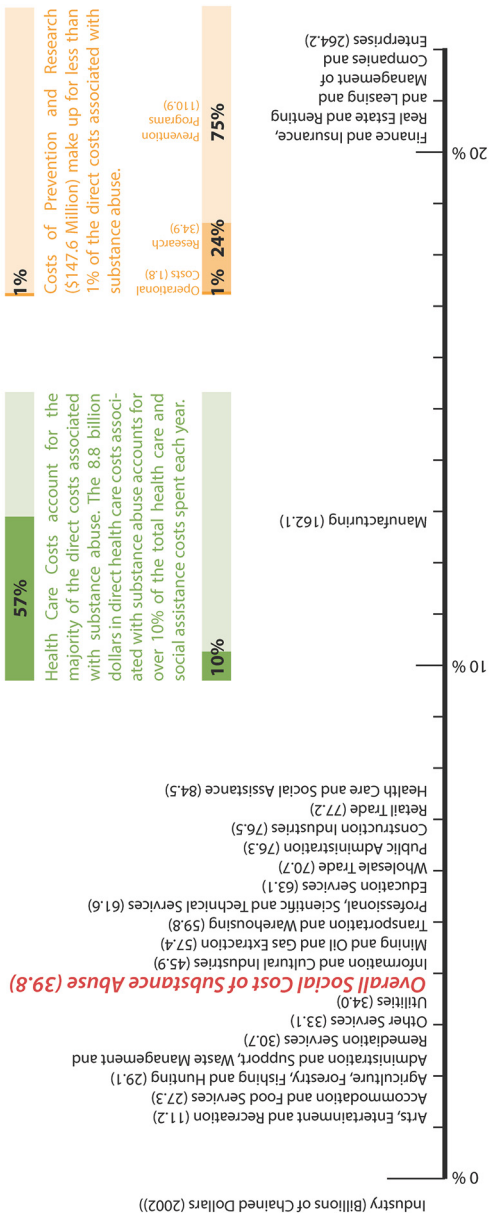
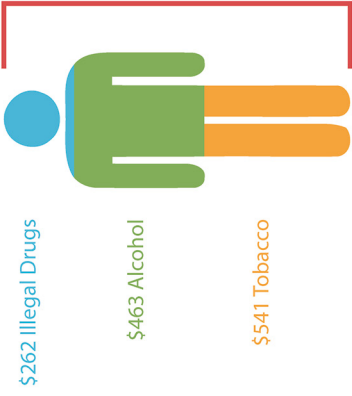
DIRECT COSTS
\$15.5
 BILLION

TOTAL COSTS
\$39.8
 BILLION



INDIRECT COSTS
\$24.3
 BILLION

COST PER CAPITA
\$1267



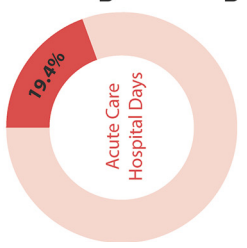
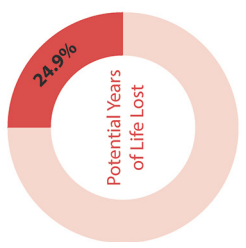
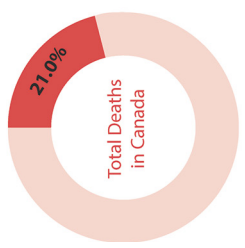
Substance Use Trends

Each year in Canada there are over 47,000 deaths associated with substance use. This number accounts for over 20% of the total deaths.⁸ This is not surprising, considering the age when use begins and frequency with which these substances are used. Over two-thirds of junior high and highschool students in Nova Scotia reported having used alcohol in their lifetime, and one-third had used cannabis. Both of these numbers are on the high end of provincial averages across Canada, and in both cases there is a substantial increase in use between the beginning and end of junior high (grades 7-9). Prevention efforts during this period could have a significant positive effect on students as they move from junior high to high school.⁹

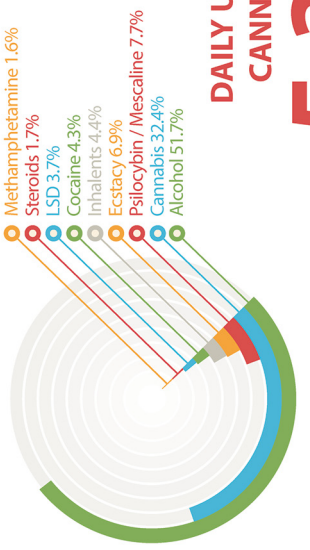
8 Canadian Centre on Substance Abuse, *The Costs of Substance Abuse in Canada 2002*.

9 Matthew M. Young et al, *Cross Canada Report on Student Alcohol and Drug Use: Technical Report*. 2011. http://www.ccsa.ca/2011%20CCSA%20Documents/2011_CCSA_Student_Alcohol_and_Drug_Use_en.pdf .

SUBSTANCE USE TRENDS



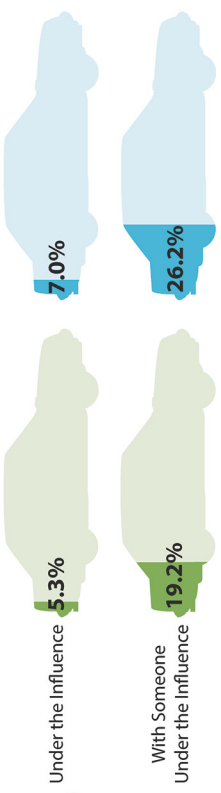
47,007
TOTAL DEATHS ATTRIBUTED TO SUBSTANCE USE



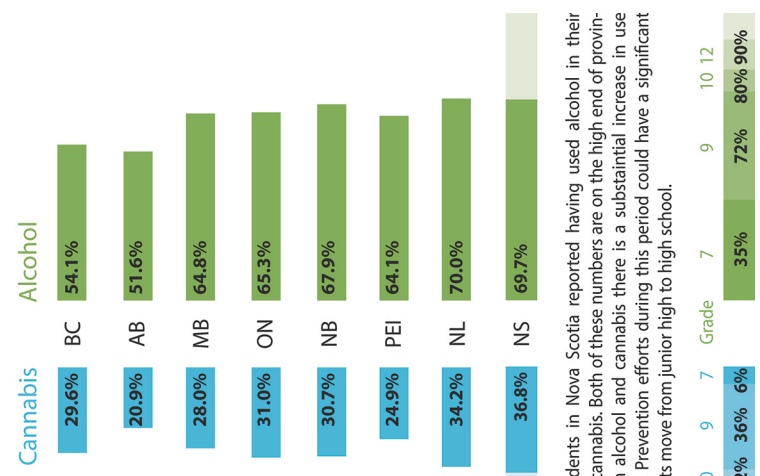
Substance Use (Last 12 Months)

DAILY USE OF CANNABIS
5.3%
OF STUDENTS

1 in 4 students in Nova Scotia reported having driven with someone who was under the influence of cannabis. This number is proportionally much higher than that of alcohol, considering the number of alcohol users is almost double that of cannabis users. The risks associated with driving while high are similar to drinking and driving, but are not perceived to be as serious.



Lifetime Substance Use (Students Grade 7-12)



Over Two Thirds of students in Nova Scotia reported having used alcohol in their lifetimes, and one third cannabis. Both of these numbers are on the high end of provincial averages. With both alcohol and cannabis there is a substantial increase in use between grade 7 and 9. Prevention efforts during this period could have a significant positive effect as students move from junior high to high school.



Substance use trends infographic; data from Canadian Centre for Substance Abuse, Costs of Substance Abuse in Canada 2002 and Student Alcohol and Drug Use

Environment

The Rat Park Experiments performed by Bruce K. Alexander questioned earlier experiments in which rats in isolation were tested to show that there were fundamentally addictive properties in morphine that made it irresistible (and addictive) to rats. Alexander and his research team constructed a “rat park” where rats were free to run around, play and interact with other rats. When these rats, which were living in a more natural environment, were tested against rats living in isolation those in the rat park were significantly more inclined to choose water over a morphine solution if given the choice. The drug only became irresistible when the opportunity for normal social existence ceased to exist. These experiments begin to demonstrate that there is a legitimate scientific basis for addressing environmental and social issues in an attempt to prevent youth from turning to drugs and alcohol.¹⁰

In recognising that this thesis is not going to eliminate substance abuse and addiction in rural communities, the hope is that an architectural intervention could provide the community with a starting point for growth; the means to improve their own lives. In exploring this potential I am focusing mainly on empowering youth, primarily because the effects of isolation in a rural community are heightened in this age group. While they have significantly more free time than adults, they are left with little or no options for how to fill it, as they cannot easily go into town to find entertainment without an adult to drive them.¹¹ The focus on this age group also allows for preventative strategies, rather than rehabilitation, as most substance use begins during adolescence.¹² As the community evolves these young people will become role models for each new group of kids coming up, as well as within their family networks. These strategies will not change the community overnight, but will gain momentum over time.

10 Bruce K. Alexander, *Globalization of Addiction*, Oct. 18, 2012, <http://globalizationofaddiction.ca/>.

11 Patricia Manuel et al, “You want us to do what, where? Investing in youth health through the built environment” (paper prepared for the 48th International Making Cities Livable Conference: True Urbanism: Planning Healthy and Child-Friendly Communities, Charleston, SC, October 17-21, 2010), 7.

12 Canadian Centre on Substance Abuse, *Stronger Together: Canadian Standards for Community-Based Youth Substance Abuse Prevention*, 2010, http://www.ccsa.ca/2010%20CCSA%20Documents/2010_CCSA_Community-based_Standards_en.pdf .

The Search Institute has developed a set of building blocks known as developmental assets which help young people grow up healthy, caring, and responsible. Within this there are three major areas that can be addressed architecturally: engagement in the community, engagement in learning, and empowerment.¹³

Engagement in the Community

Children who are involved in creative activities (music, theatre, art, etc.) and other youth programs (sports, clubs, etc.) are much less likely to engage in substance use.¹⁴ In cases where there are few opportunities for involvement substance abuse becomes more common. Under these circumstances even those who would be involved if given the opportunity are not able to.

Thorburn, a community of approximately 2400 residents, and the hub of many of rural Pictou County's smaller communities, is lacking many amenities. The village is home to Thorburn Consolidated School for grades primary to nine, a hockey rink which has undergone recent renovations, a poorly maintained baseball field, a small retirement home, two churches, a firehall, a small post office, and a pizza place that will soon be closing. Community members are forced to travel to the town of New Glasgow (which is anywhere from ten minutes to upwards of 45 minutes by car depending on which community you are from) to attend high school, buy groceries and find employment, as well as for any type of entertainment. While adults have the ability to commute to work, the youth of the community are left with few options for how to fill their free time.

There is a need to create opportunities for children to feel a sense of inclusion and belonging.¹⁵ It is important to create spaces that are responsive to changing conditions: to allow the space not only to accommodate a variety of uses with only minimal reorganisation, but also to remain active throughout different seasons.

13 Search Institute, *40 Developmental Assets for Middle Childhood*, accessed Feb. 1, 2013, <http://www.search-institute.org/40-developmental-asset-middle-childhood-8-12>.

14 Ibid.

15 Canadian Centre on Substance Abuse, *Stronger Together*.

Engagement in Learning

The quality of, and engagement in, education directly influence a child's likelihood of experiencing mental health problems, and engaging in substance use.¹⁶ Within many alternative education philosophies there are ideas about how to engage children. Two of the more prominent theories - Montessori education and Waldorf education - have similar views on the subject. A typical day at a school following either of these philosophies would expose the child to a variety of subjects and types of learning. Practical life skills (knitting and agriculture) and other non-academic subjects (art, music, drama, etc.) are taught alongside traditional subjects (math, science, etc.).^{17 18}

This type of alternative education also lends itself to skill development, which gives students who may not plan to continue on to college or university both an understanding of their own capabilities and an exposure to different fields which may interest them. It is important that within this there is a focus on skill building rather than results, as a means to building confidence and a feeling of capability in the student.¹⁹

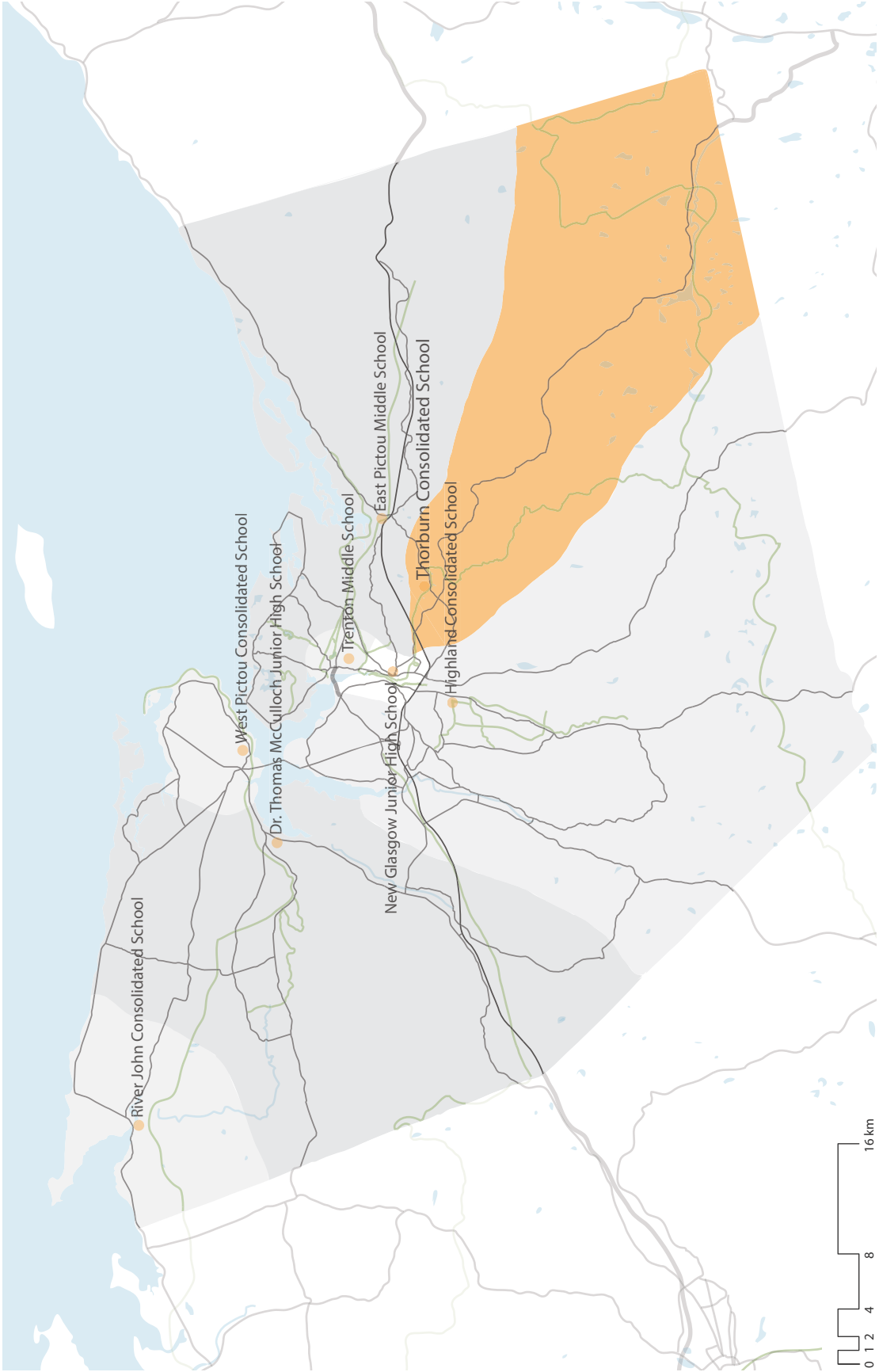
Thorburn Consolidated School brings together children from kindergarten to middle school, from a region that extends up to 60km from the school. The school's population hovers just under 300 students, with one or two classes per grade. With such a small population, and steady cutbacks to funding, the school is unable to maintain a consistent curriculum of non-academic courses. These activities are missing in many rural schools, and therefore in many rural communities, and are not likely to be re-incorporated as budgets cuts continue. As such, there is a need to incorporate these activities into public spaces within the community.

16 Ibid.

17 Thomas R. Hille, *Modern Schools: A Century of Design for Education* (Hoboken, N.J.: John Wiley and Sons, 2011), 50, 346-348.

18 Christopher S. Jolley, "Waldorf Architecture: A Pedagogy's Relation to Design" (MARCH Thesis, University of Cincinnati, 2010), 12-32, http://rave.ohiolink.edu/etdc/view?acc_num=ucin1276954474 .

19 Canadian Centre on Substance Abuse, *Stronger Together*.



School zone map of Pictou County

Empowering Youth

Many of the existing facilities in this and similar communities are often inconveniently located, poorly maintained, or both. The few facilities that are available are often over-booked, like rinks where ice times are allocated to sports teams with no time dedicated to public skates. This gives the impression that the users - mainly youth - are not a valued part of the community.²⁰ It is through creating well-maintained, accessible spaces for children that they begin to feel that they are an important part of the community, and become empowered, giving them the confidence to make positive changes in their lives.²¹

In an attempt to fill the existing void in amenity spaces in Thorburn the youth have developed a system of self-built structures that exist along the trail systems. Involvement in creating these structures gives them a sense of ownership over the spaces, but in its current form this culture perpetuates the growing issue of drug use, as these structures are remote and detached from any sense of supervision.

The network of all terrain vehicle (ATV) and snowmobile trails that support this system is extensive, and connects the most rural communities and the more populated villages. It takes on the role of a secondary transportation network, and allows for youth to be independently mobile within the region.



Photographs of youth-built hangouts along the trails

²⁰ Patricia Manuel et al, "You want us to do what, where?", 10.

²¹ Search Institute, "40 Developmental Assets for Middle Childhood".

A Day in the Life

As in any population the isolation and lack of amenities that characterise rural life manifest themselves into different routines for the individuals that live there, depending on their interests, personalities, social circumstances, etc. Some students are able to maintain a healthy lifestyle; others are prone to engaging in risky activities; and others feel pressured to join their peers in these activities. The narratives that follow outline the daily activities of three junior high students who react differently to their environment.

A Day in the Life of Corey

Corey's day begins early in the morning. He eats a quick breakfast with his parents, then catches the bus to school. After almost an hour on the bus he gets to school in time to talk to friends before class. Over the lunch break a classmate offers him a cigarette, but he brushes the offer off with a joke, then joins another group of friends for a basketball game. Throughout the afternoon Corey answers a few questions when called on by the teacher and does all of his work. When he gets home from school his mother has dinner ready for him. He eats quickly, then they pick up his neighbour and head back to Thorburn for a hockey game. Afterwards they talk about the game for the long drive home. They spend the rest of the evening doing homework and playing video games until it is time for his friend to go home for the night.

A Day in the Life of Trevor

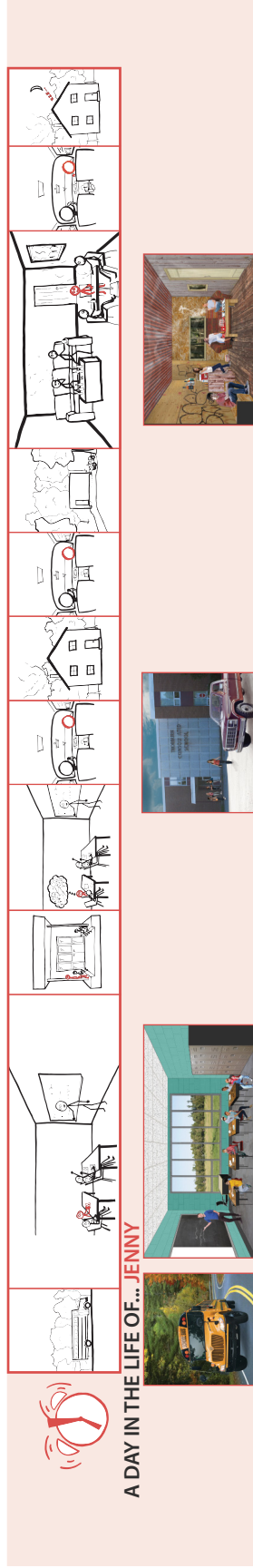
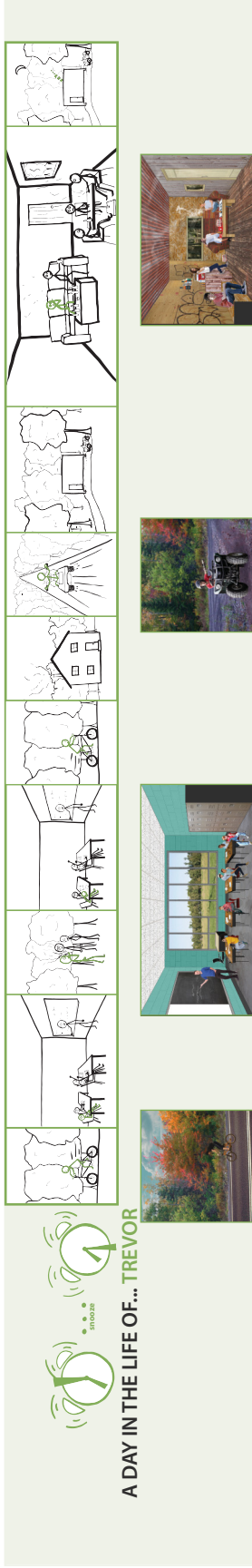
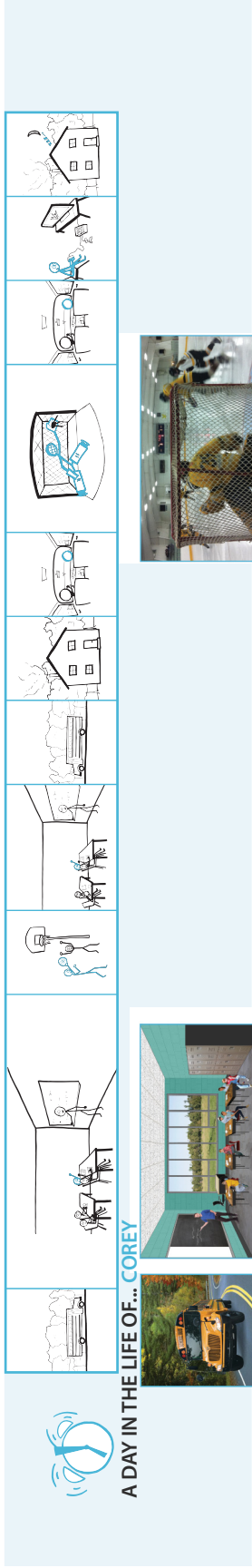
Trevor's alarm goes off early in the morning. He hasn't had much sleep so he turns the alarm off. When he eventually gets up his parents have already gone to work and he has missed the bus. He isn't in any hurry to get to class so he takes his time getting ready. Luckily he lives pretty close to school, so he is able to ride his bike there. He gets to school long after class has begun and isn't really interested in what is being taught. Over lunch he meets up with some friends to have a cigarette, then spends the rest of the afternoon texting, listening to music on his iPod, and eventually drifts off to sleep on his desk. After school he takes his 4 wheeler out for a ride. After touring around the trails for a bit he makes his way to a friend's cabin. He plans to stay for only a little while, but has a few drinks and ends up taking turns playing guitar and singing late into the night.

A Day in the Life of Jenny

Jenny wakes up just in time to catch the bus. Her bus gets to school in time for her to have a quick breakfast in the cafeteria before the morning bell rings. During class Jenny is sketching in her notebook, with the teacher's lessons in the background. When it comes time to do classwork she finishes quickly then moves on to her homework, finishing it in class to free up time in the evening. Her boyfriend picks her up after school. After grabbing a bite to eat at his house they head to a party at a friend's cabin. When everyone in the room is having a drink, and her friends keep saying, "Hey Jenny, want a beer?" she finds it hard not to say yes or to say, "I'm not getting in the car with you," after her boyfriend has had a couple of drinks and decides to drive home. After going to a few parties and seeing this type of thing happening each time, it seems normal to Jenny.

Daily Life Comparison

The daily lifestyles of most youth in this region align loosely with one of these characters. The first character, Corey, is self-confident and completely uninterested in smoking, drinking, etc. He has some idea of what he wants to grow up to be, and has access to activities that allow him to explore these interests and fill his free time. The second character, Trevor, isn't interested in what is being taught in school, and hasn't been exposed to any other type of skill development that would give him an idea of what his life could be. Because there isn't really anything to do or very many kids his age in his community he has grown up around older kids and has been partying with them since a young age. Substance use is just a normal part of life to him. The third character, Jenny, lies somewhere in between Corey and Trevor. She does well in school. She doesn't seek out drugs or alcohol but has a hard time avoiding them, as almost all of her friends are experimenting with them. Peer pressure overcomes her instinct to say no. Simply put, boredom and over-exposure have led to unnecessarily high numbers of youth drinking, smoking and doing drugs.



Timelines of a day in the life of three students.

CHAPTER 2: ARCHITECTURAL RESPONSE

In acknowledging the factors that contribute to the trend of substance use one can start to explore the possibilities for an architectural intervention that addresses them. It is evident that there is a need for safe, drug-free spaces where kids can take part in a variety of activities. The programming of these spaces provides an opportunity not only to create activities that youth can take part in, but to also begin to reintegrate the subjects that are missing from the school system into the community.

This proposal recognises the impact that the trail network has had on students in the area, and could have on them in the future. Siting the project in relation to these trails not only makes the intervention accessible to as many students as possible, but also connects it to the tucked-away spaces that they have already taken ownership of. The placement of the trails has been led partially by the existence of both formal and informal gathering spaces in the community. These spaces often act as intersections between this secondary youth transportation network and the more public primary transportation network. The distributed nature of these destinations (along with their seasonal activity) does not lend itself to a single permanent solution, but rather to a series of smaller mobile interventions that move between sites and take advantage of existing activities and landscapes.



Collage of current conditions

Former user warns of dangers of bath salts drug

A new synthetic drug that moved across the border from Maine into New Brunswick appears to be taking hold in the Maritimes and concerns that the designer drug, illegal in some countries and some U.S. states, remains legal in Canada.

The bath salts, which are sold in some stores under the name 'bath salts', are a synthetic drug that can be injected, smoked, snorted and used in other ways.

Police shortage heigtens Nova Scotia drug epidemic

By Patricia Armstrong
Special to the Star

Police in Nova Scotia are also concerned about the shortage of officers. The province's police force is facing a shortage of officers, which is making it difficult to deal with the drug epidemic.

Door closes on TrentonWorks miller plant in Pictou

The TrentonWorks miller plant in Pictou, N.S., is set to close. The plant has been a major employer in the area for many years.

Westray remembered: explosion killed 26 N.S. coal miners in 1992

On May 9, 1992, at the town of Plymouth, N.S., a coal mine exploded, killing 26 miners. The explosion was one of the deadliest in the history of the coal industry in Nova Scotia.

Trenton Works reeling over derastat

After decades of success, Trenton Works is facing a crisis. The company has been hit hard by the derastat scandal, which has led to a loss of trust and a decline in sales.

Do New Glasgow cops need Cowans? cops reeling

The department is struggling to deal with the influx of new synthetic drugs. The police are asking for more resources to handle the growing problem.

COAL MINE CLOSES

THORBURN N.S. HIT

The coal mine in Thorburn, N.S., has closed. The closure is a significant blow to the local economy, as the mine was a major source of employment.

Highly addictive drug blamed for cannibal attack in Miami a growing threat in Maritime Canada

The drug is highly addictive and has led to a series of violent incidents. It is now considered a major threat to public safety in the region.

Thorburn Consolidated School

The school is a prominent building in the community. It has been the site of several incidents related to the drug problem.

Thorburn N.S. Hit

The town of Thorburn, N.S., is being hit hard by the drug problem. The streets are filled with addicts, and the local businesses are struggling.

Thorburn Consolidated School

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Mobility

Mobile Precedents

Portable Architecture

Creating portable architecture presents issues of not only designing spaces, but designing them in such a way that they can be easily moved between sites. Designs often rely on small-scale, lightweight structures that can be towed, carried, or reassembled in place. Richard Horden designs and teaches micro-architecture, experimenting with the additional constraints of working in remote locations. The designs rely on non-traditional forms of transportation like helicopters and snowmobiles to transport the lightweight structures.²² Aberrant Architecture's portable projects work within much more urban conditions. The small-scale spaces they introduce into the urban environment activate the spaces they are in and are easily towed behind any vehicle with a trailer hitch.²³



Richard Horden, Ski Haus, Gobba di Rolin, 2004; from *Micro Architecture*



Aberrant Architecture, Tiny Travelling Theatre, Clerkenwell, 2012; from *Aberrant Architecture*

Repurposed Transportation

Another common approach is adapting existing forms of transportation: things that are already built to move. These types of projects often allow the space to be self-sufficient in terms of mobility, not needing to rely on the introduction of machinery or access to specific vehicles to relocate. Projects like Productora's A47 Library and Raumlabor's Space Buster take advantage of the inherent spatial capacity of cargo trucks. Both of these projects also act to address a larger space than that which is enclosed in the vehicle. The A47

²² Richard Horden, *Micro Architecture* (London, UK: Thames & Hudson, 2008).

²³ AberrantArchitecture, *Aberrant Architecture*, accessed June 1, 2013, <http://aberrantarchitecture.com>.

Mobile Library does this by opening up the envelope to blend the space with its surroundings. The Space Buster takes a different approach, storing an inflatable structure in the truck that expands the interior space when on-site.^{24 25}



Productora, A47 Library, Mexico, 2012; from *Productora, Mobile Art Library A47*



Raumlabor, Space Buster, New York City, 2009; from *Raumlabor, Space Buster*

Mobile Youth Centre

Each year the school board that Thorburn Consolidated School belongs to retires approximately 15 buses as they become too expensive to operate on a daily basis. These buses are sold for a few thousand dollars and present an opportunity to create affordable, mobile architecture within a form that is very familiar to students. The use of school-buses also provides a symbolic connection between the school system and the cabin culture, emphasising the potential of this new mobile space.

Program

Program Precedents

Boys and Girls Clubs of America

The Boys and Girls Clubs of America is a national charitable organisation that has many locations across the United States. They are funded by a wide variety of corporate, government and local sponsors, and operated by dedicated staff locally. Along with providing space for youth to just hang out in a safe environment they also provide a range of programs that address education and career development, character and leadership, health

²⁴ Productora, *Mobile Art Library A47*, accessed June 1, 2013, <http://productora-df.com.mx/projects/147/?s=2>.

²⁵ Raumlabor, *Space Buster*, accessed June 1, 2013, <http://www.raumlabor.net/?p=1799>.

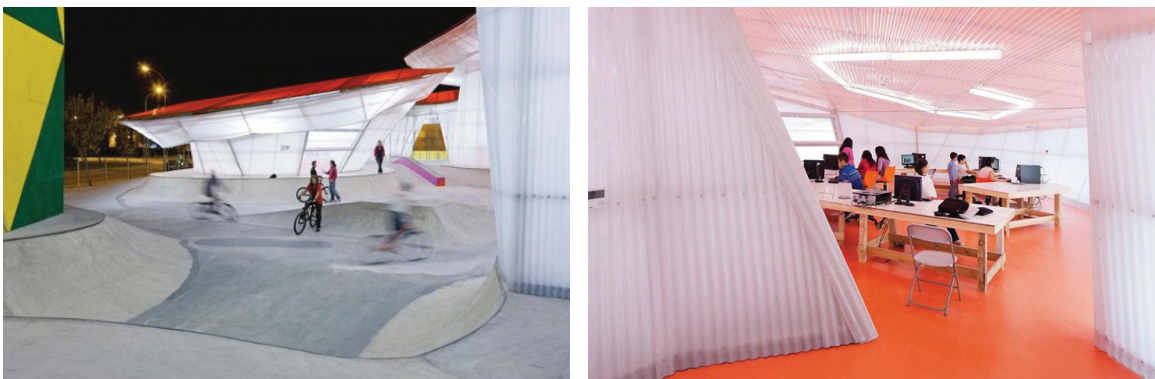
and life skills, arts programs, sports, fitness and recreation and other specialised programs. These programs are well developed and innovative, including activities like robotic design that reach a broader audience than typical programs.²⁶



Rural Studio, Akron Boys and Girls Club, Akron, AL, 2007; photographs by Luke Han

Factoria Joven (Youth Factory)

Spain's Youth Factory is an attempt to introduce non-competitive activities for youth such as skateboarding, hip hop dancing, graffiti, rock climbing, electronic music, etc. into the urban environment, creating a teenager's playground that has something for everyone. Almost half of the site is dedicated to a skate park which meanders between the translucent interior volumes that house computer labs, meeting rooms, dance studios, etc. and support rock climbing walls on the exterior. The new centre, owned and operated by the local government, serves upwards of 150 teens on a daily basis. Its inviting and fun atmosphere and range of programming make it a very attractive place for youth.²⁷



Selgascano Studio, Youth Factory, Mérida, Spain, 2011; from *Magnificent Factoria Joven*

²⁶ Boys and Girls Clubs of America, *The Official Site of the Boys and Girls Clubs of America*, accessed May 14, 2013, <http://www.bgca.org/>.

²⁷ Inhabitat, *Magnificent Factoria Joven Skate Park is a Luminous Oasis in Mérida*, last modified July 11, 2011, <http://inhabitat.com/magnificent-open-skate-park-by-selgascano-brings-cool-and-healthy-playfulness-to-a-spanish-city/>.

Youth Republic

Youth Republic is a Turkish marketing company run entirely by youth. The office space attempts to maintain a young atmosphere, while emphasising the strength of the young team. The space is split into a variety of open and semi-enclosed spaces that encourage creativity, brainstorming, concentration and relaxation. Colourful and dynamic furnishings are spread throughout the industrial atmosphere of the office to allow for continuous thinking and creativity. The business demonstrates the ability of youth to form and run an organisation. ²⁸



Kontra, Youth Republic, Istanbul, Turkey, 2012; from *Turkey's Award Winning Youth Marketing Agency*

Mobile Program

This thesis will attempt to combine portions of these precedents that lend themselves to a mobile youth centre in rural Nova Scotia. Support from the local schools and school board (which could range from an informal partnership and oversight, to the donation of buses to act as the basis for the design, to integration of the program into the curriculum) would provide a starting point for operating the mobile youth centre. The proposal provides a range of programmatic elements that enhance the existing facilities in the community. There are a range of other potential partners and funding sources that include (but are not limited to) local government, organisations promoting the arts (i.e. PAINTS, Canada Council for the Arts), organisations promoting healthy, active lifestyles (i.e. Participaction, Thrive!), and donations from local businesses and individuals.

The mobile youth centre will house programs that brings youth together to explore arts

²⁸ Youth Republic, *Turkey's Award Winning Youth Marketing Agency*, accessed June 1, 2013, <http://www.youthrepublic.com.tr/>.

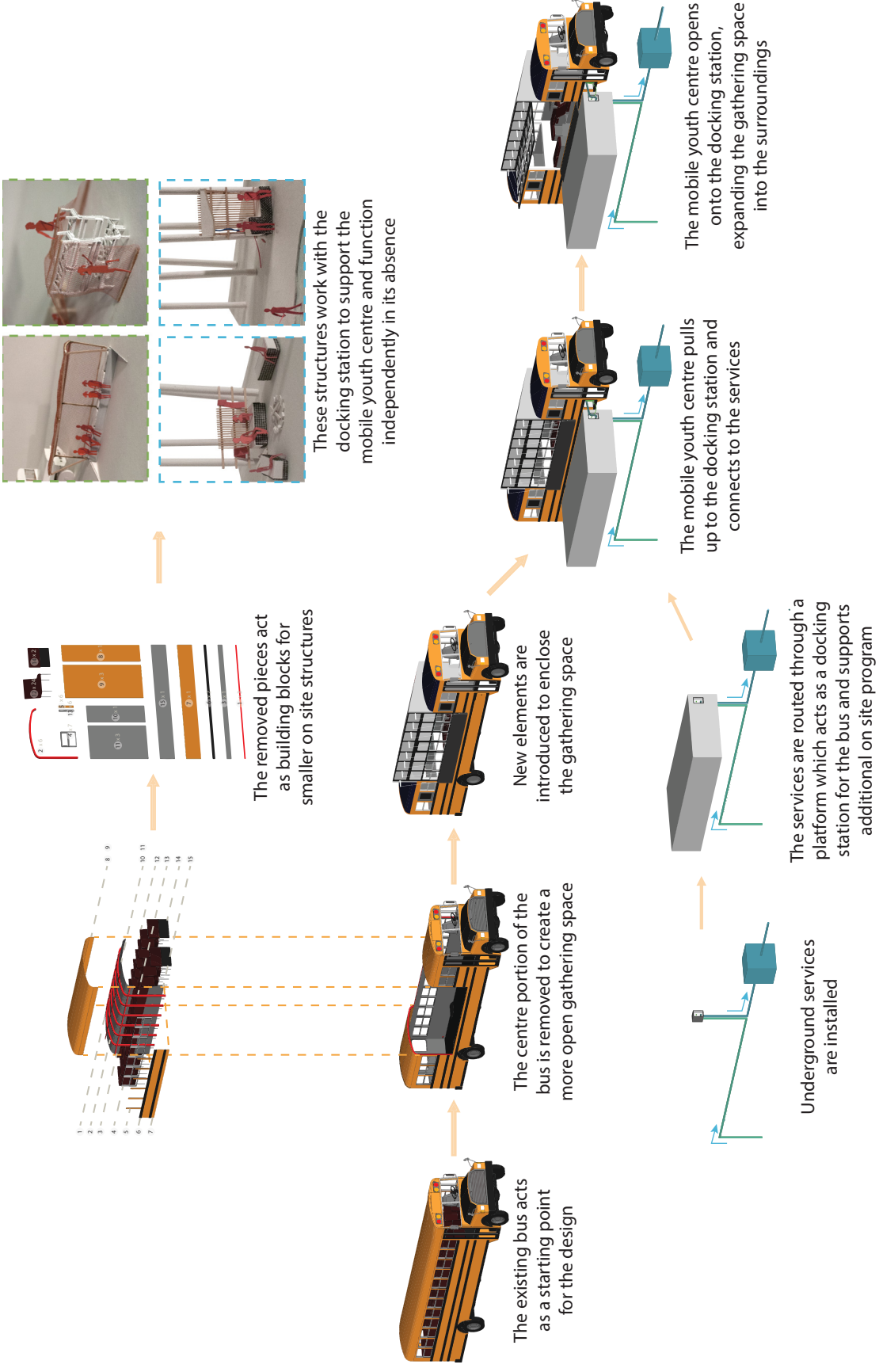
and other skills development that is missing from the school system, as well as to just hang out and have fun. The centre will also house a small cafe, creating a position for a student to work as well as providing supervision and a source of income for the centre. Instruments and other equipment can also be rented out to recuperate their own costs. This is a general program that will follow the mobile centre from site to site.

In addition to the mobile program there will be a series of on-site interventions that support the youth centre. These interventions will also create spaces which can be used for different activities when the bus is not present. Each of these on-site interventions will address more specific site conditions, as well as providing programming that is derived from current use and the potential to introduce new activities to the area.

Design Concept

The existing bus acts as a starting point for the design. By removing portions of the existing structure and envelope the interior space becomes much more open and connected to its surroundings. The structure is maintained at either end of the bus where the more private spaces (washrooms, canteen and driver's seat) are located. A new structure is built into the opening in the bus which emphasises the connection to the exterior.

The removed portions of the envelope, structural members, and seating become key components of smaller on-site structures that enhance the existing program, as well as new furnishings within the bus. Each site also houses a structure which acts as the docking station for the bus, with electrical and water hookups, as well as working with these smaller structures to build on the sites' existing facilities.



Design concept diagram

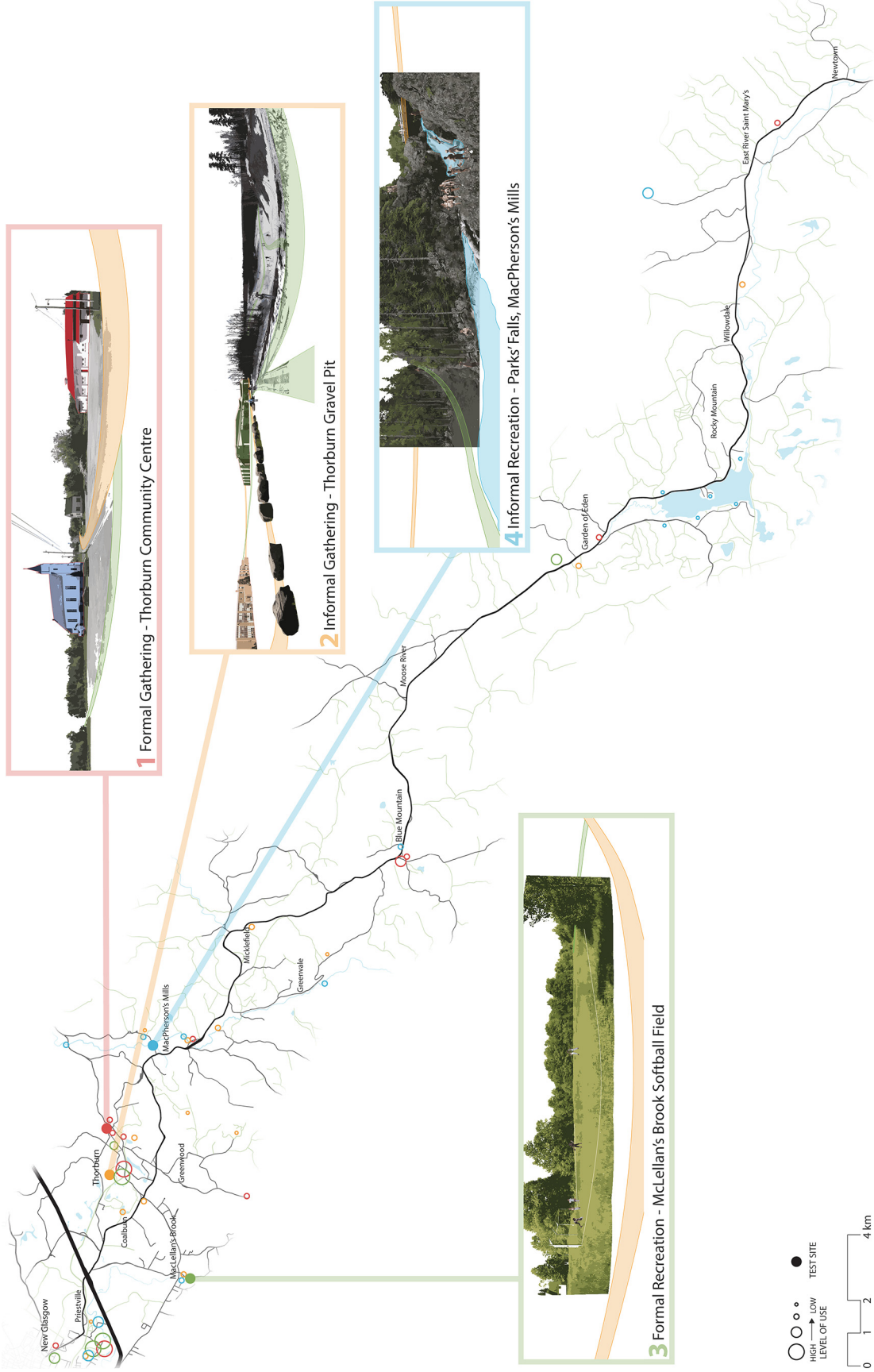
Site Selection

Four test sites have been chosen to demonstrate the applicability of the design strategy across a range of sites. Possible sites were categorised by their similarities in terms of existing program, level of use, and location. They are all spaces that exist at intersections between the network of trails and the public realm and show potential for introducing new program to the community.

The activities that currently take place at each of these sites are often seasonal and could not support a year-round program, but together with a mobile centre moving between them they create a system which provides youth with flexible entertainment and education opportunities.

Potential sites have been identified that spread through the communities that are served by Thorburn Consolidated School. This region stretches along 60 km of country roads. Within this area it is possible, but not always practical, to travel along trails from the most distant communities to Thorburn and its neighbouring communities. The four test sites are concentrated more locally within a region that is easily accessible by over half of the youth population of the area. The proposed interventions on these sites can be used as a basis for designing on similar sites that are identified in the more distant communities.

Each potential site fits into one of the following categories: formal recreation (hockey rinks, baseball fields, gymnasiums, etc.), informal recreation (swimming holes, trails, open fields, etc.), formal gathering (schools, churches, fire halls, community centres, etc.) and informal gathering (gravel pits, cabins, abandoned industrial sites, etc.). In rural communities many of the most well used spaces for youth include elements of both recreation and gathering, so in activating the chosen sites there will be an attempt to introduce an element of recreation into gathering spaces and vice versa.



Test site map of Thorburn school zone

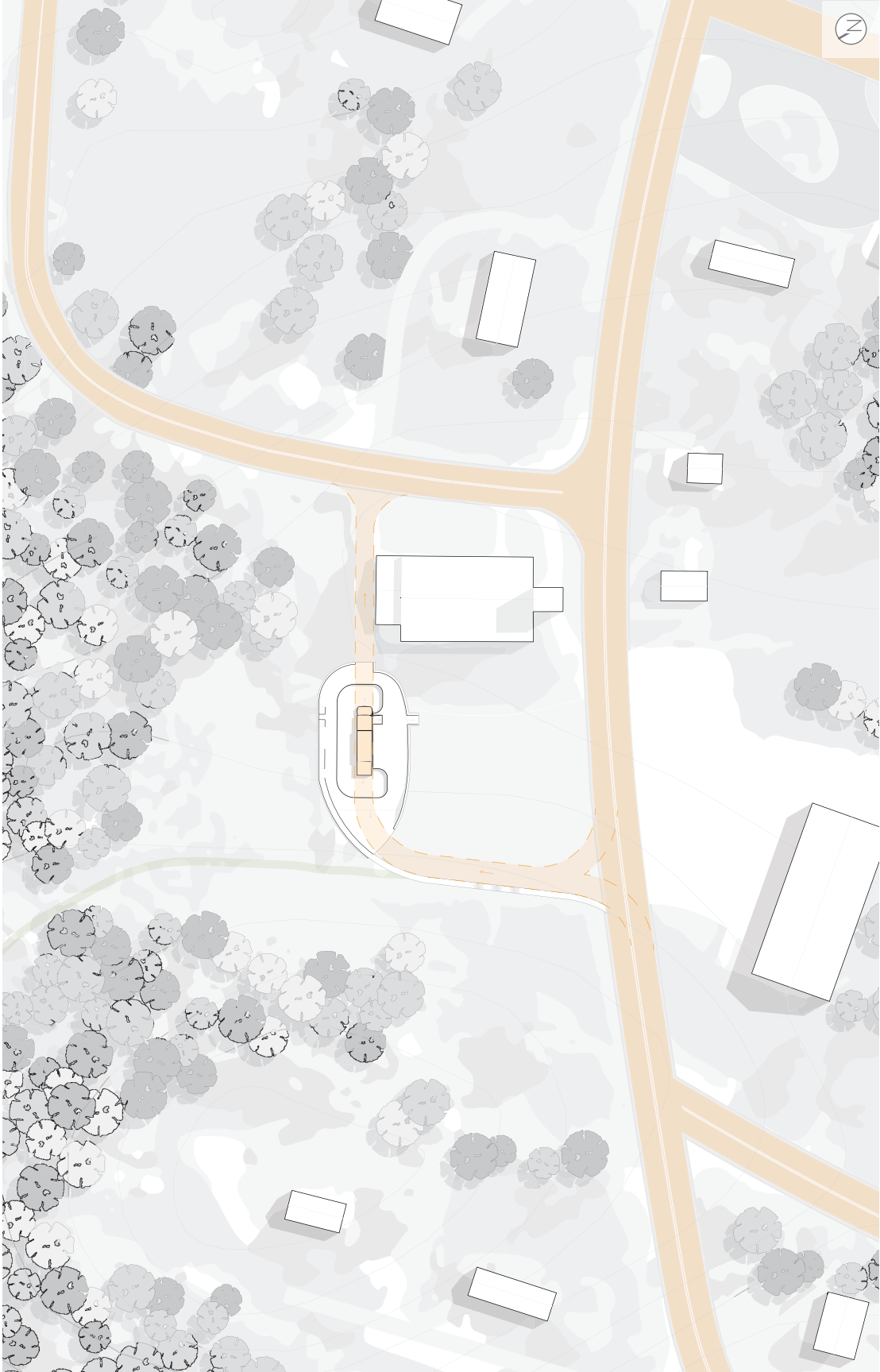
Formal Gathering: Thorburn Community Centre

In Thorburn, as in many rural communities, the central gathering spaces are limited, consisting of a church and fire hall. While these spaces host infrequent parties and Sunday school classes, they offer very little in the way of space or activity for youth. There is a need to create a space within this centre for youth, providing them not only with somewhere to spend their free time, but also with a sense of inclusion that comes from the feeling of being valued by the adults in the community.

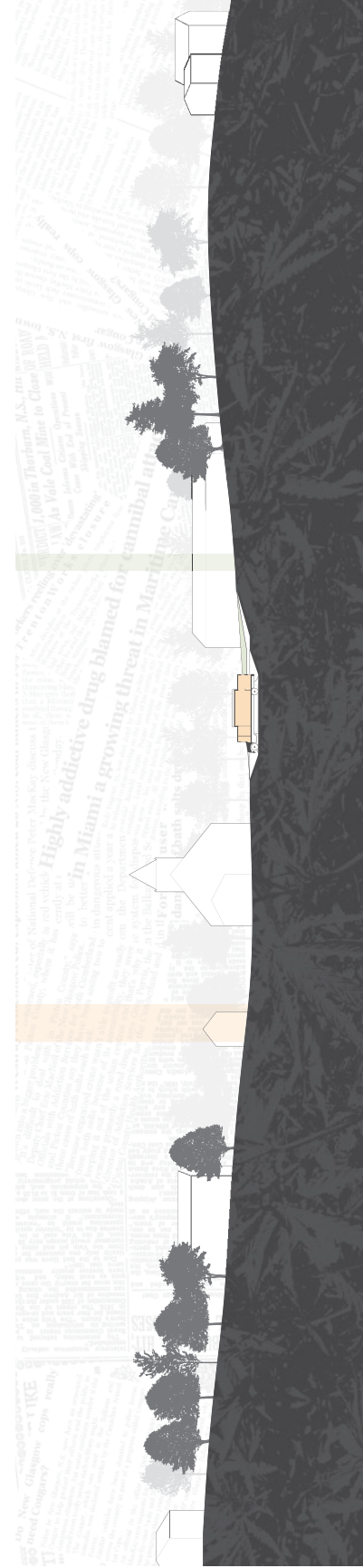
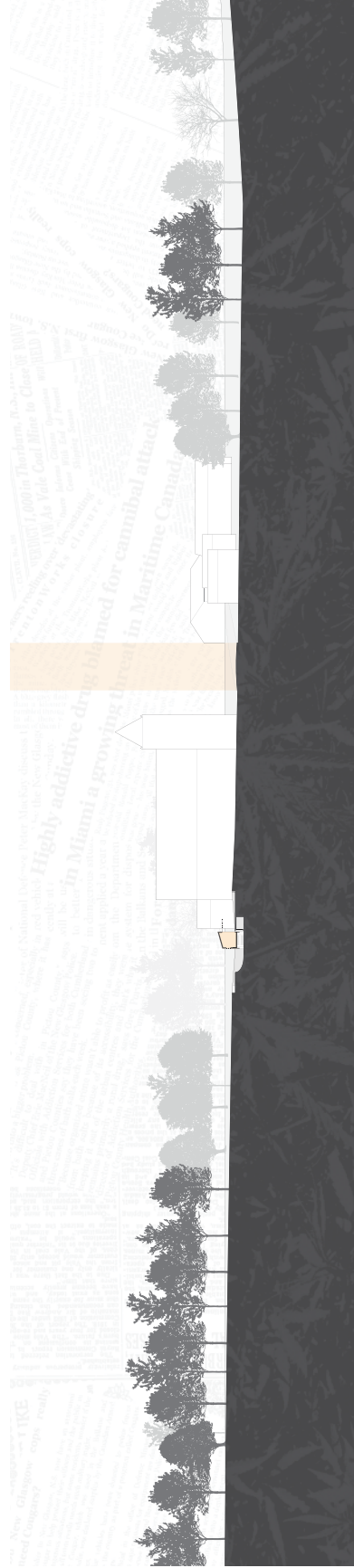
The on-site modifications will allow for a small outdoor classroom/theatre for use by the church and other groups, as well as a bmx/skateboard park. The design will also allow the youth to expand the skate-park to suit their needs.



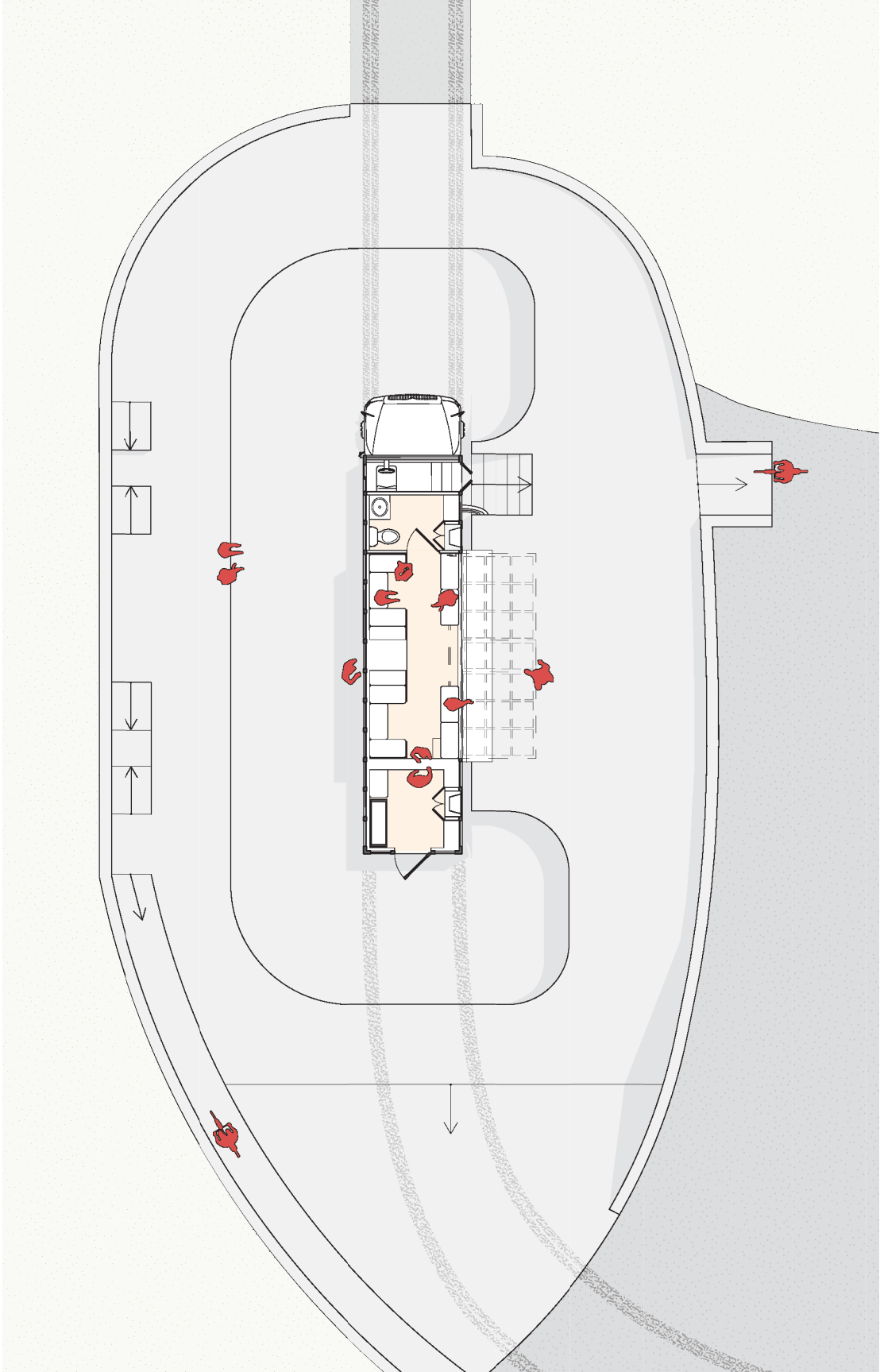
Thorburn community centre site collage



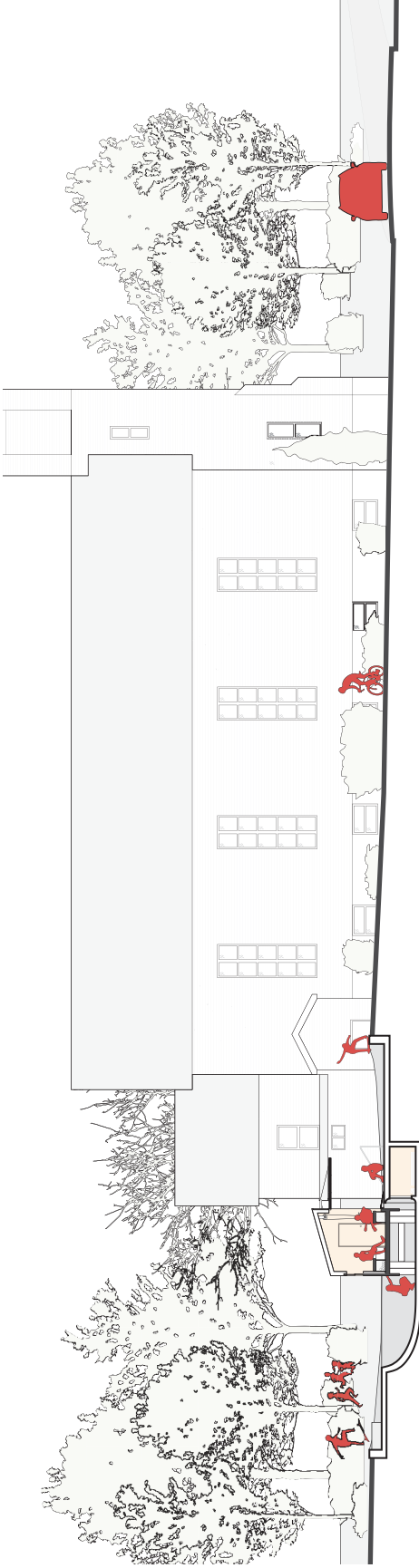
Thorburn community centre site plan



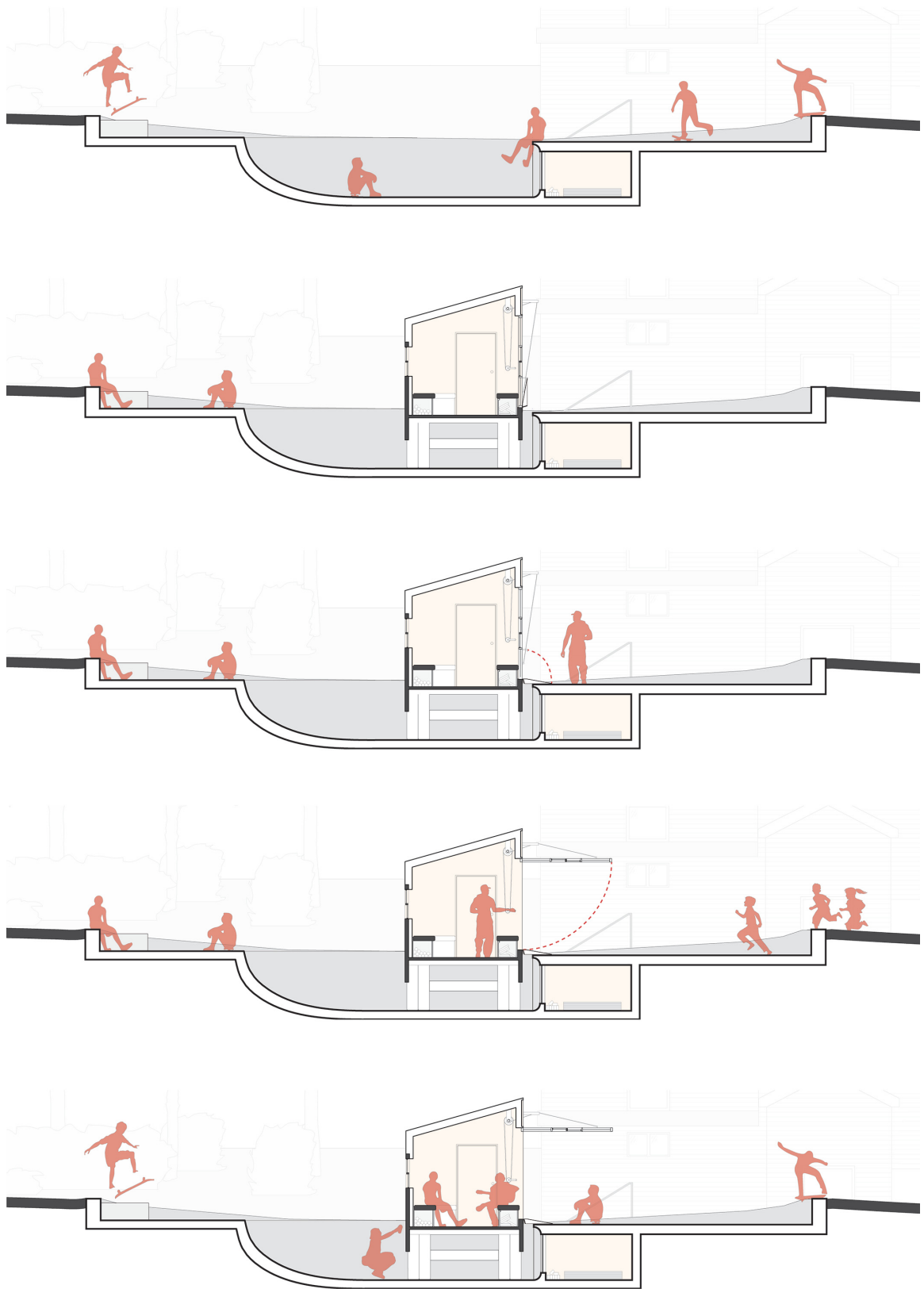
Thorburn community centre site sections



Thorburn community centre plan



Thorburn community centre sections



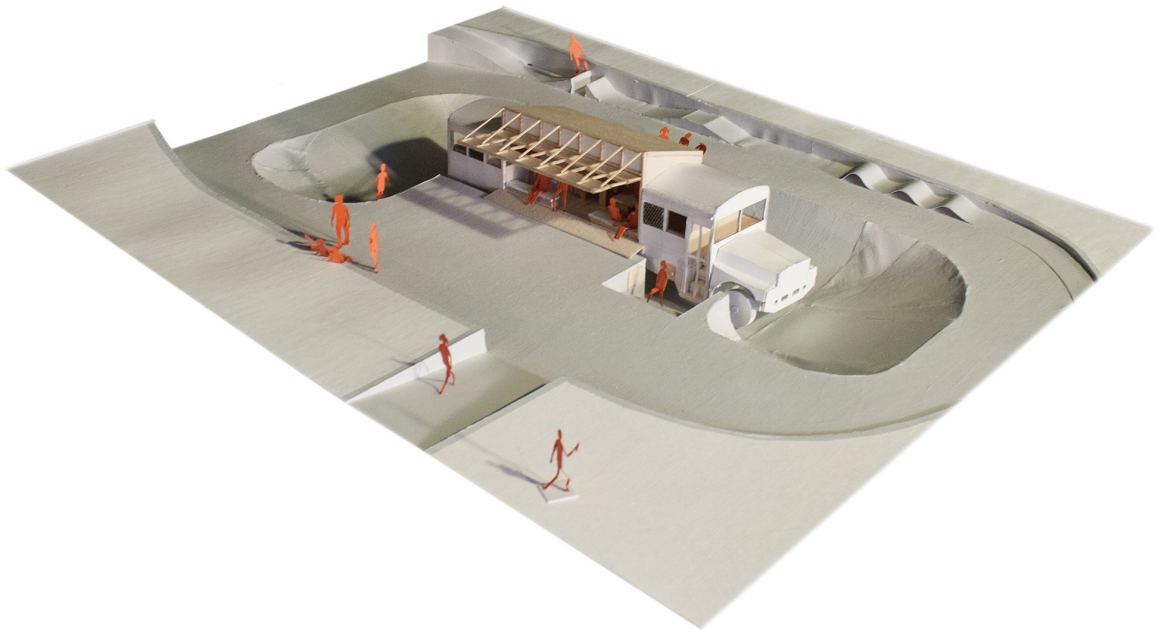
Mobile youth centre arrival diagram



View from interior of mobile youth centre



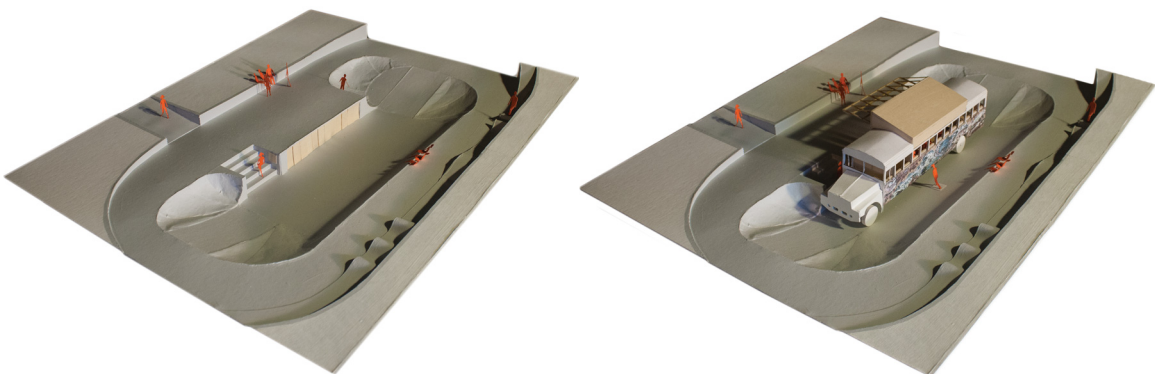
Site model photograph



Model photograph of mobile youth centre at Thorburn community centre



Model photograph of view as you approach the mobile youth centre

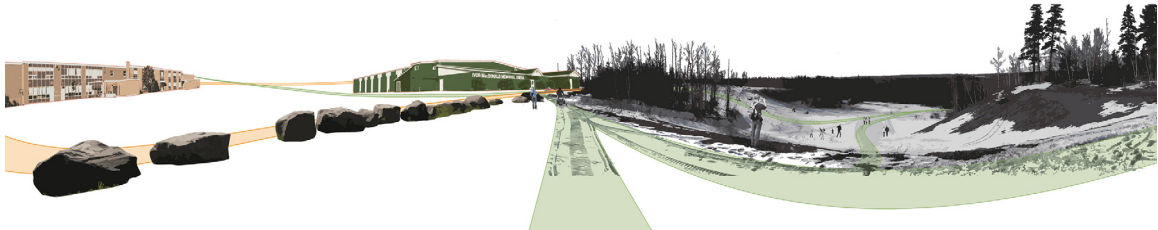


Model photograph comparison of site with and without the mobile youth centre present

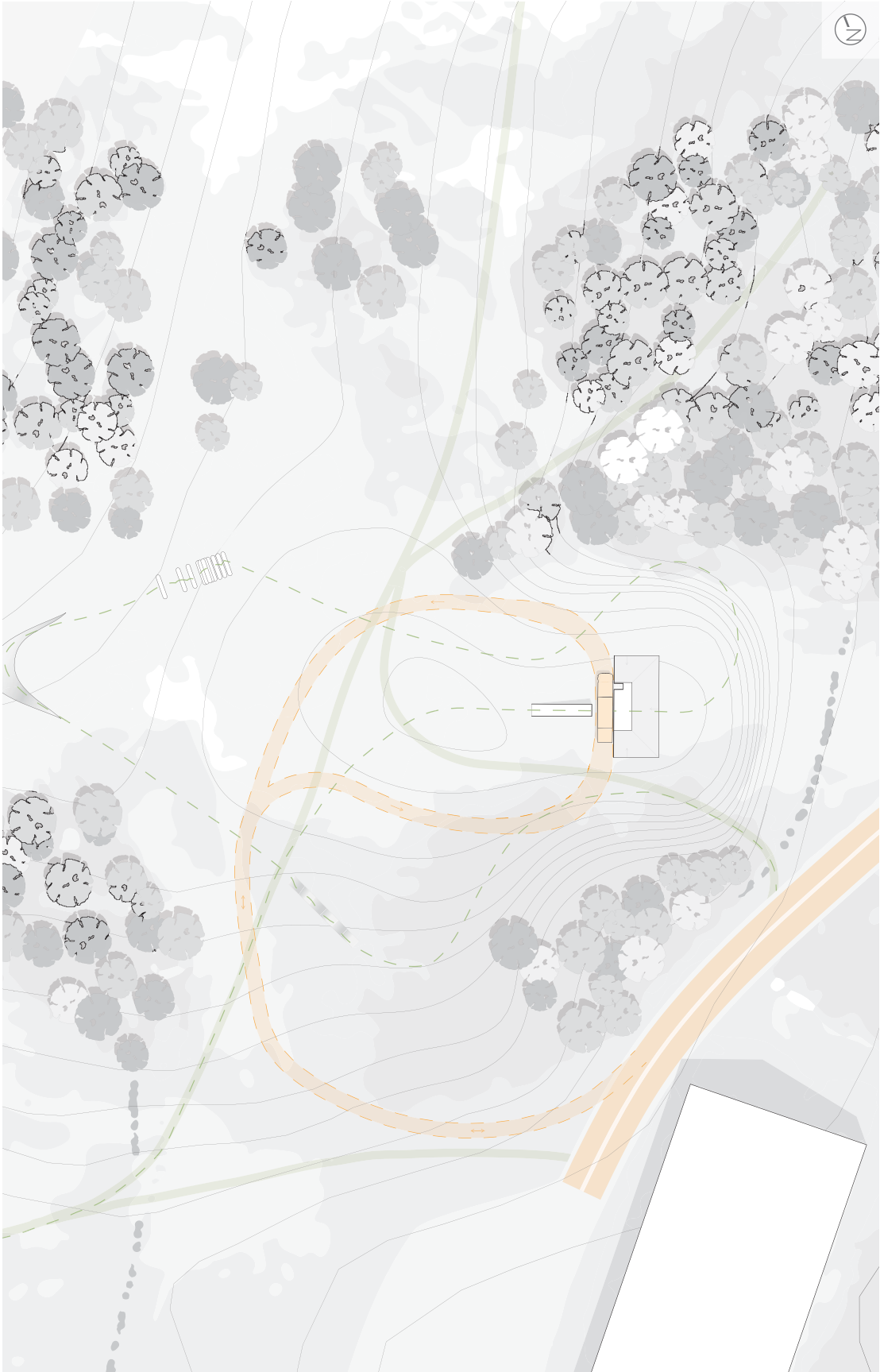
Informal Gathering: Thorburn Gravel Pit

Due to its proximity to the rink and school, as well as its connection to the trail system the gravel pit is used as an informal hangout year round. Kids meet up here, drive their ATVs through the landscape, and party. The on site interventions here aim to emphasise the ATV activity, creating obstacles and ramps that can be used by enthusiasts for fun, as well as acting as a training facility for new riders.

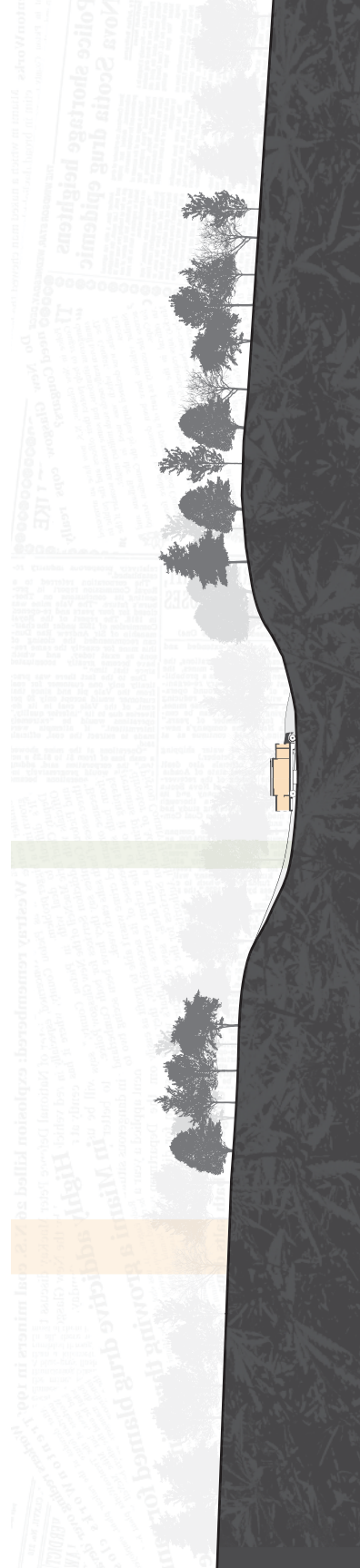
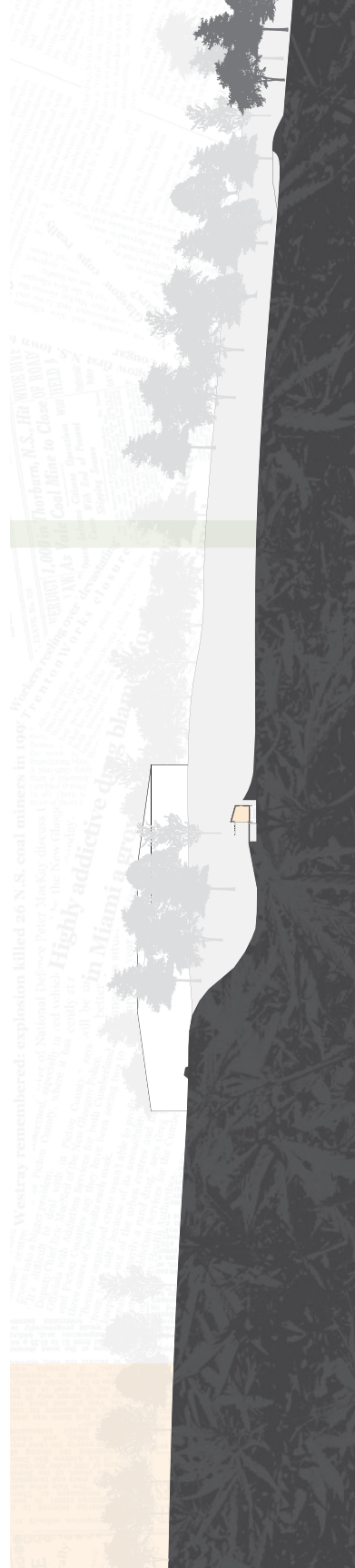
The form of the gravel pit also creates an amphitheatre focused at the low point of the pit. The mobile youth centre, positioned at this point, acts as a backdrop for large performances, video projections, etc. During the winter months the mobile centre can also provide much needed shelter from the elements to enhance the existing activities.



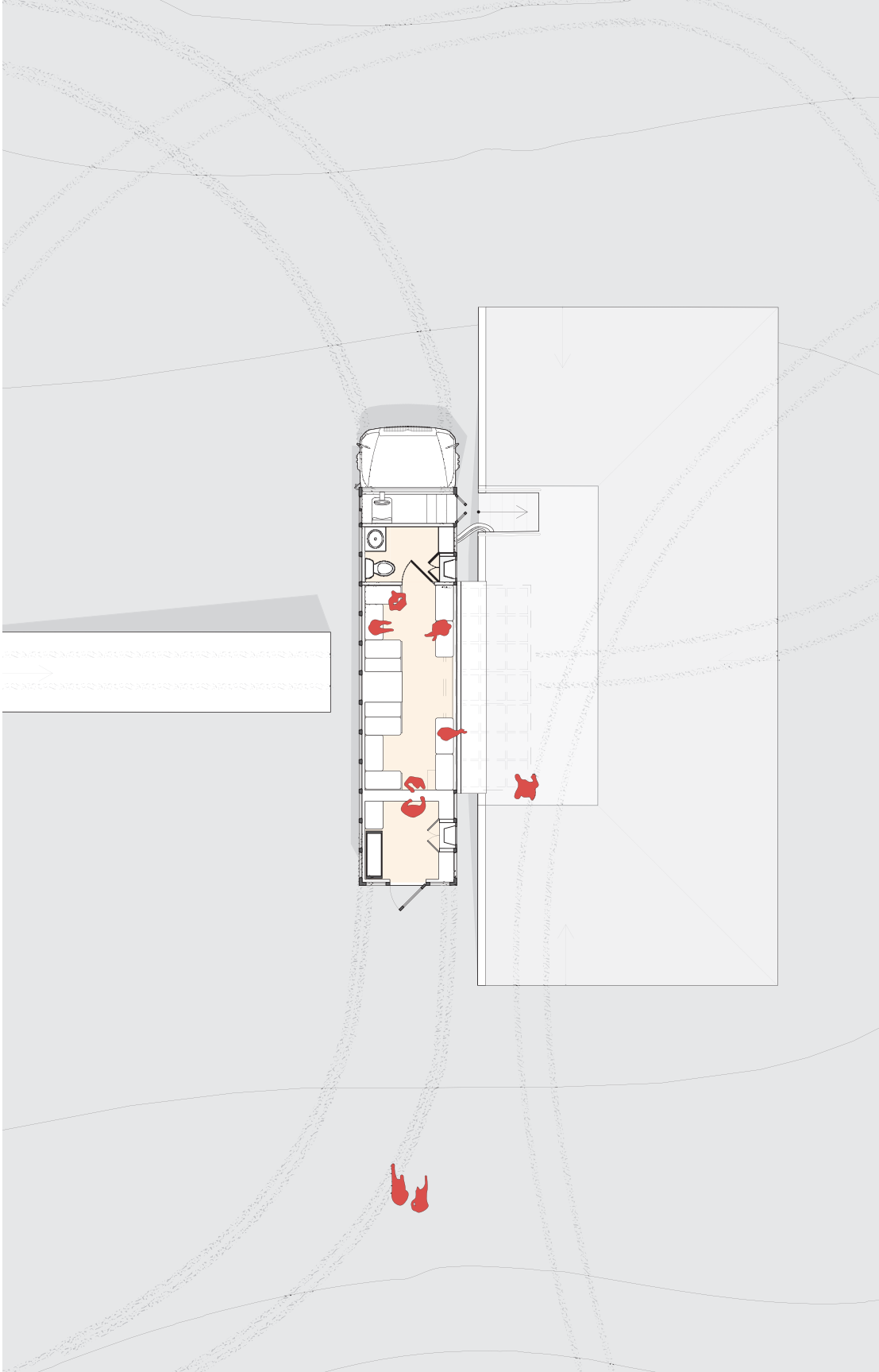
Thorburn gravel pit site collage



Thorburn gravel pit site plan



Thorburn gravel pit site sections



Thorburn gravel pit plan



Thorburn gravel pit sections



Mobile youth centre route through Thorburn gravel pit diagram



Thorburn gravel pit view from above



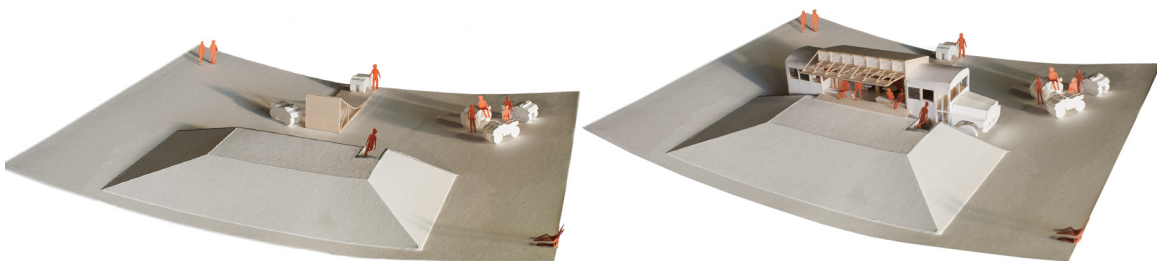
Site model photograph



Model photograph of mobile youth centre at Thorburn gravel pit



Model photograph of activity around mobile youth centre



Model photograph comparison of site with and without the mobile youth centre present

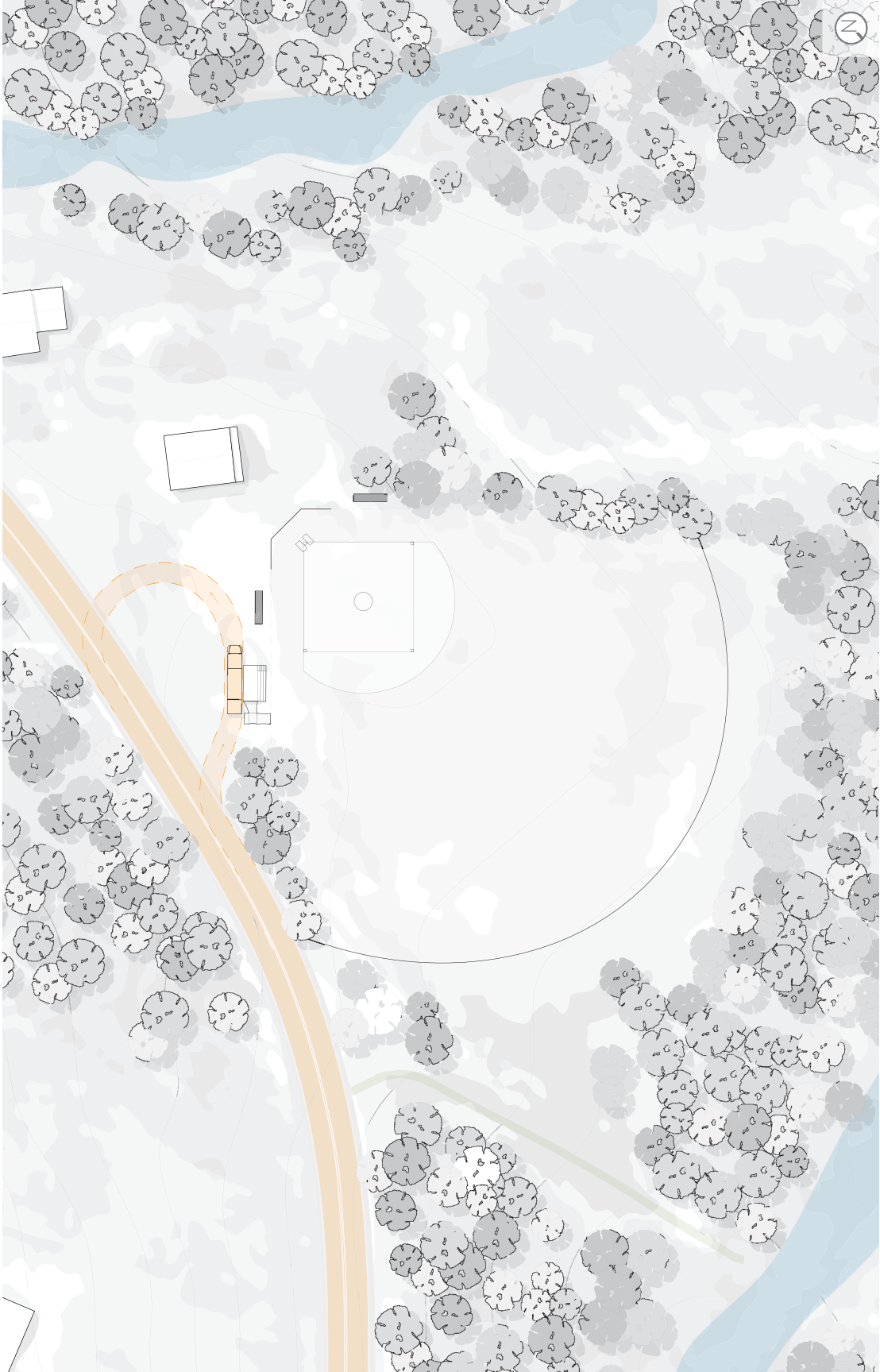
Formal Recreation: McLellan's Brook Softball Field

The softball field, like most outdoor recreation facilities, is used seasonally during the warmer months. The site lacks the most basic amenities that are typically expected, such as washrooms, bleachers and a canteen. During the busy season the mobile youth centre can provide these to the athletes and spectators. Unlike the overbooked hockey arena the softball field is not in consistent use, so in creating a space for youth on-site it not only becomes more inviting during games and tournaments, but also creates an additional draw to the site when it isn't booked.

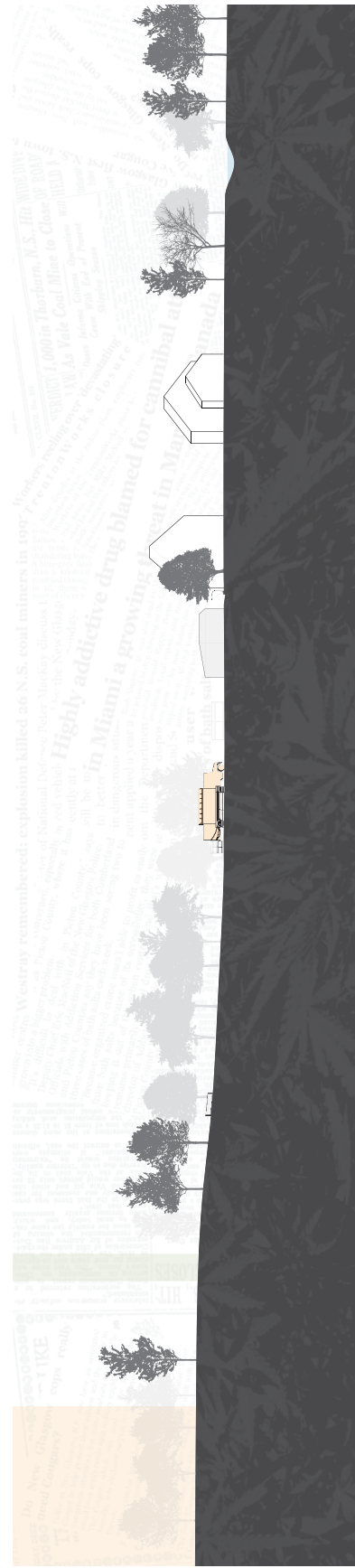
The intervention aims to take advantage of both the existing program and the large space that has been dedicated to it. The on-site intervention works with the idea of a typical set of bleachers that often become an unofficial jungle gym, and uses the structure to create play spaces that bring people into the site when the bus is absent.



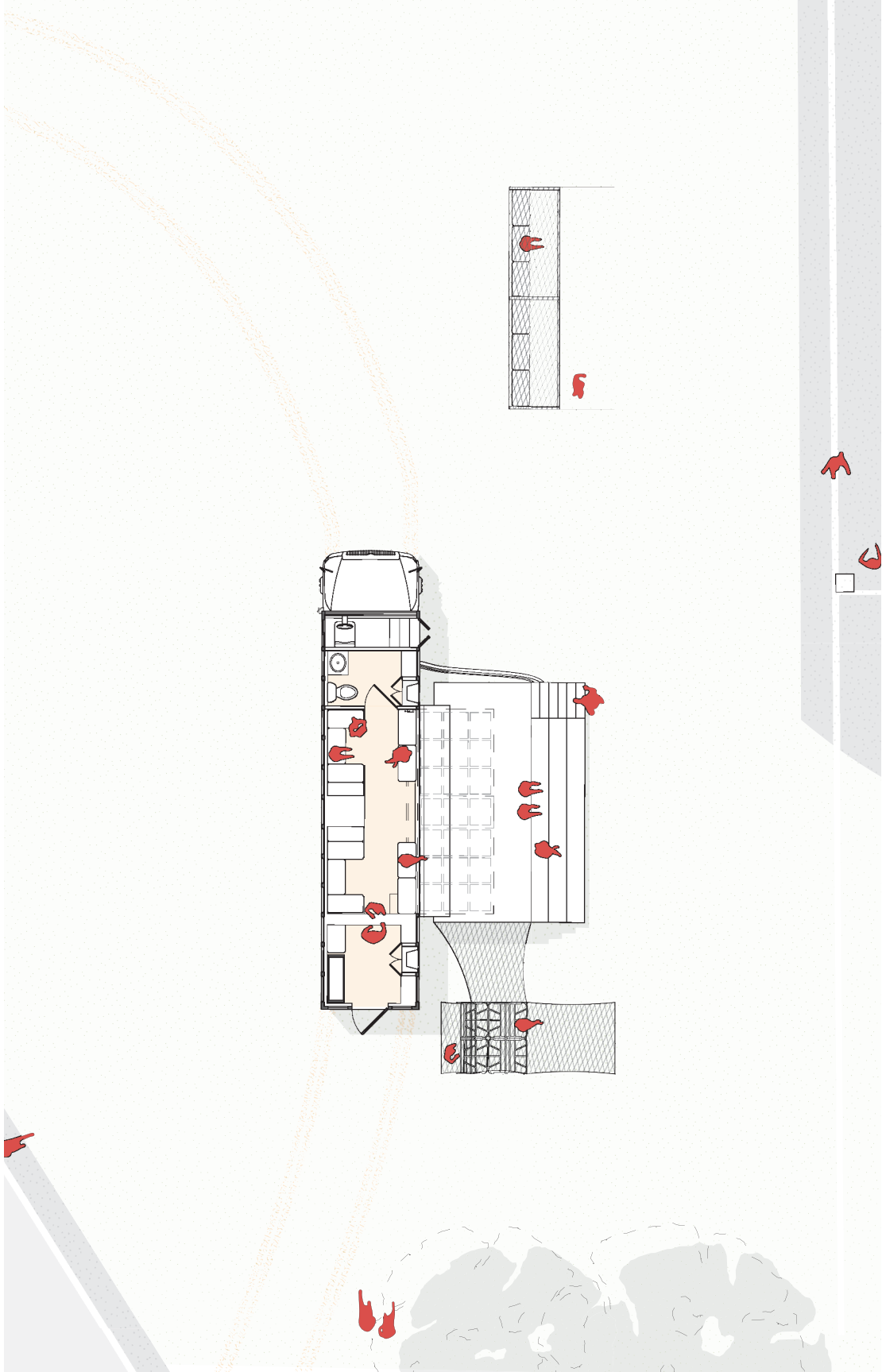
McLellan's Brook softball field site collage



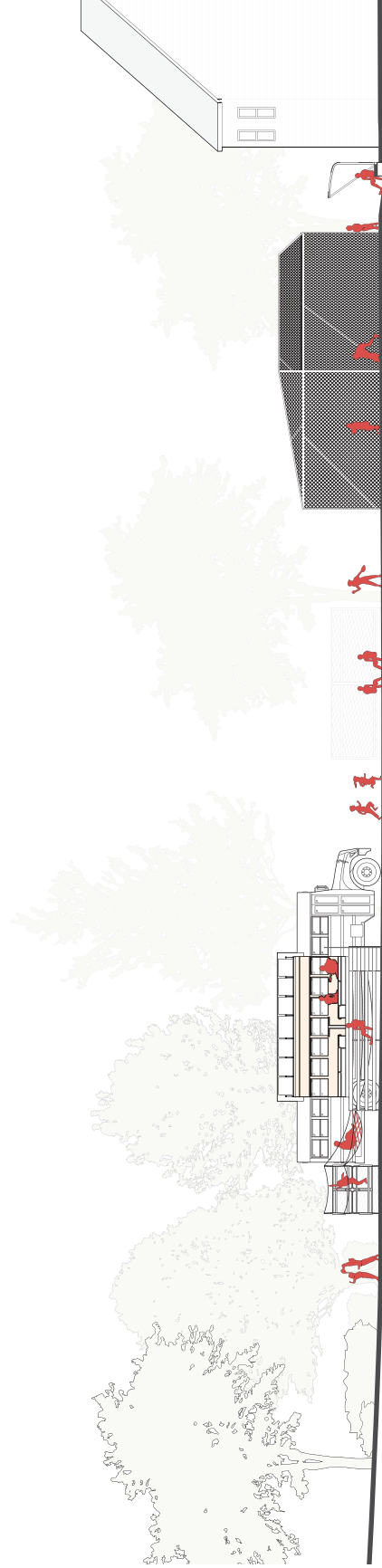
McLellan's Brook softball field site plan



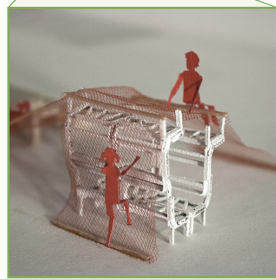
McLellan's Brook softball field site sections



McLellan's Brook softball field plan



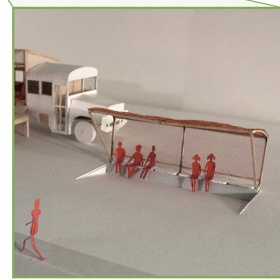
McLellan's Brook softball field sections



PLAY STRUCTURES

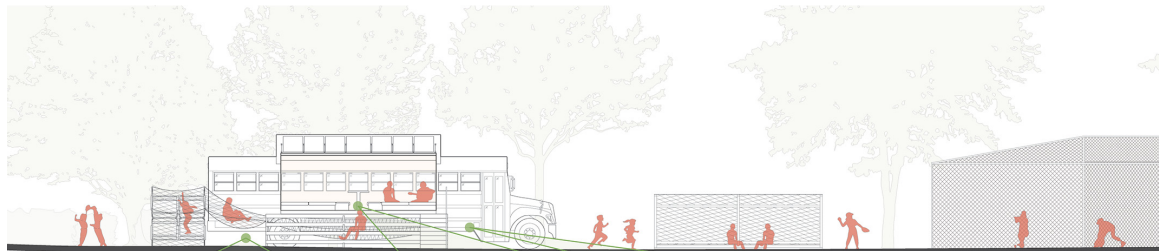


BLEACHERS



DUGOUTS

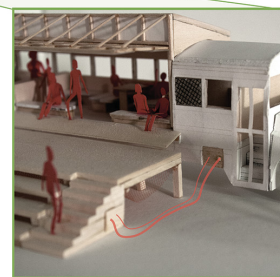
ON SITE INTERVENTIONS



ART



GATHERING



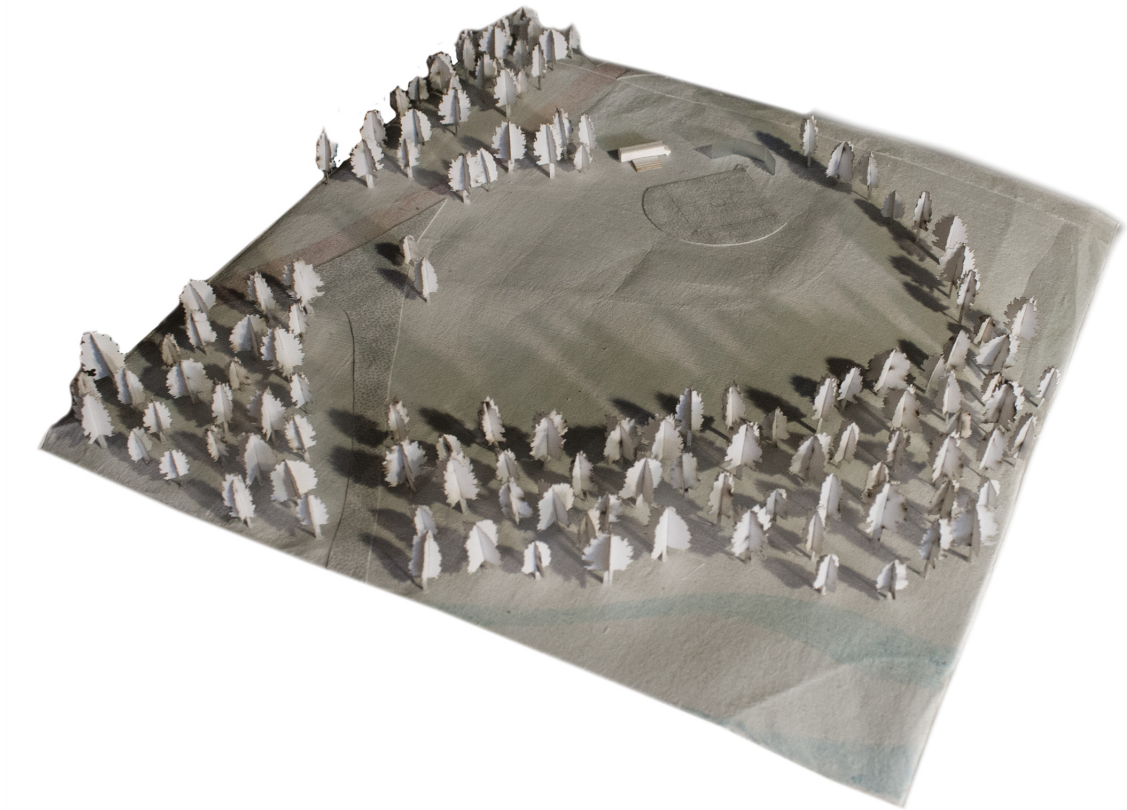
SERVICES

MOBILE YOUTH CENTRE + ON SITE INTERVENTIONS

McLellan's Brook softball field on site interventions and mobile youth centre diagram



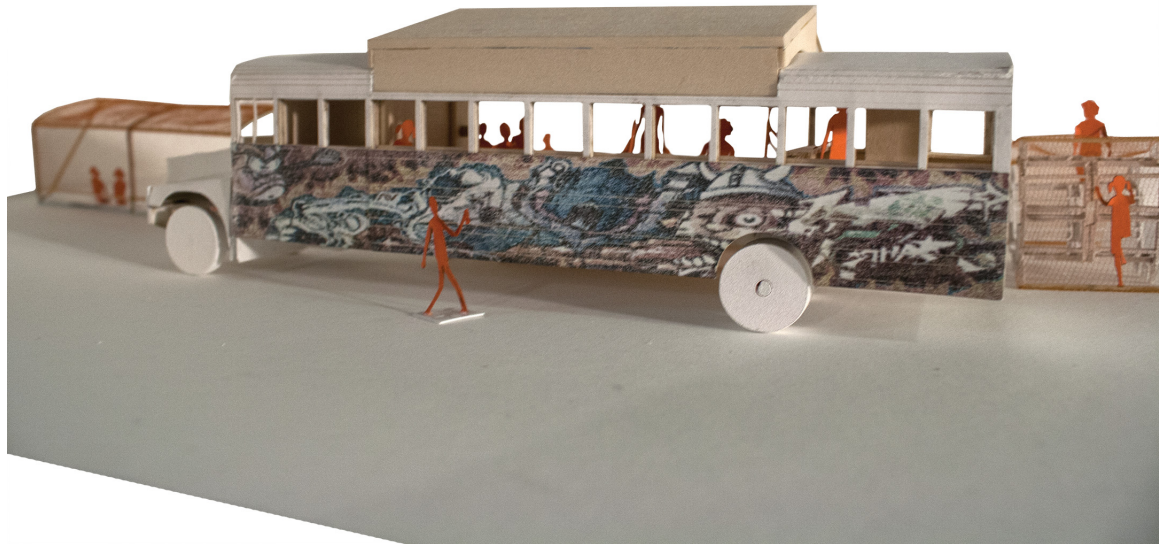
McLellan's Brook softball field approach from street



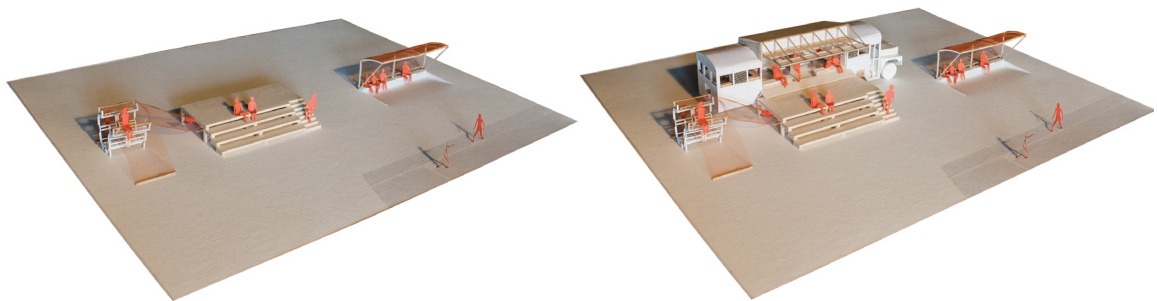
Site model photograph



Model photograph of mobile youth centre at McLellan's Brook softball field



Model photograph of mobile youth centre graffiti wall



Model photograph comparison of site with and without the mobile youth centre present

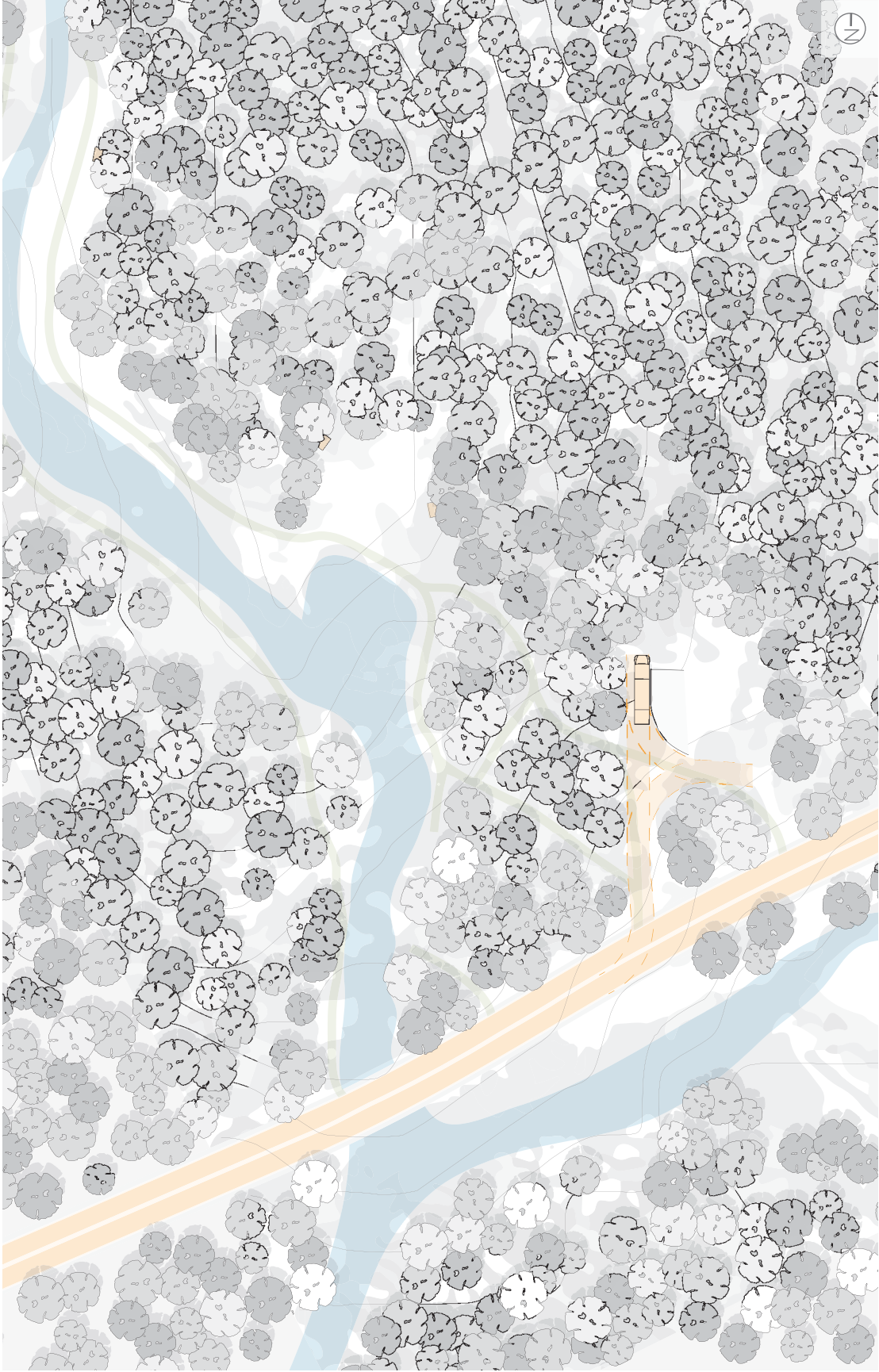
Informal Recreation: Parks' Falls, MacPherson's Mills

Parks' Falls is a popular summer destination for both locals and tourists. While the main attraction, swimming, is dependent on hot summer weather, other activities like fishing, hiking, photography, etc. can happen at any time. The bus will create a space that allows users to spend the entire day there, get out of the sun, eat, use the washroom, then go back out and explore the surroundings.

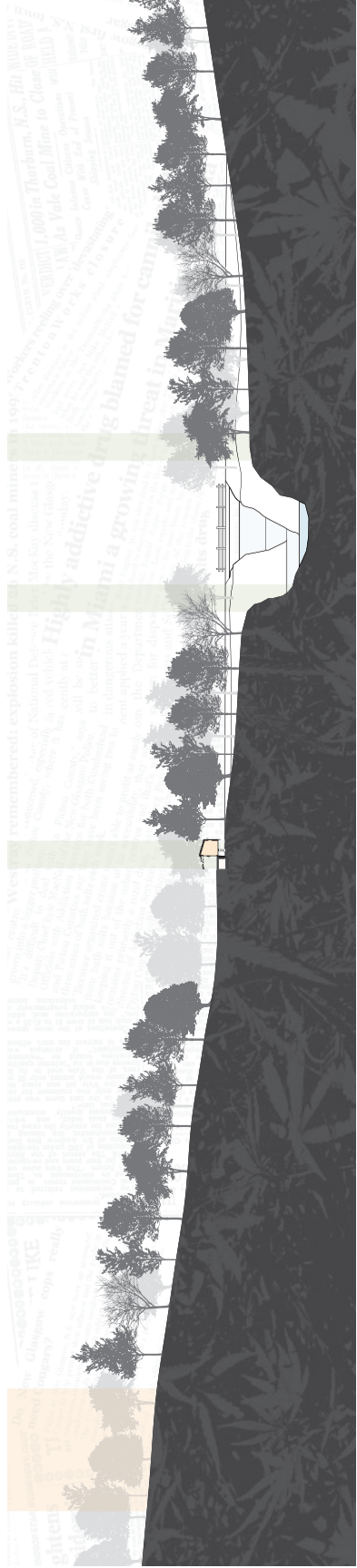
The spread out nature of the spaces and activities on site lend themselves to a similar design approach, with the main gathering space located at the entry to the site and smaller structures distributed deeper into the site to expand the existing program. Taking advantage of the natural surroundings the main intervention will allow users to form obstacles and barriers, creating structures for paintball, climbing, and other play.



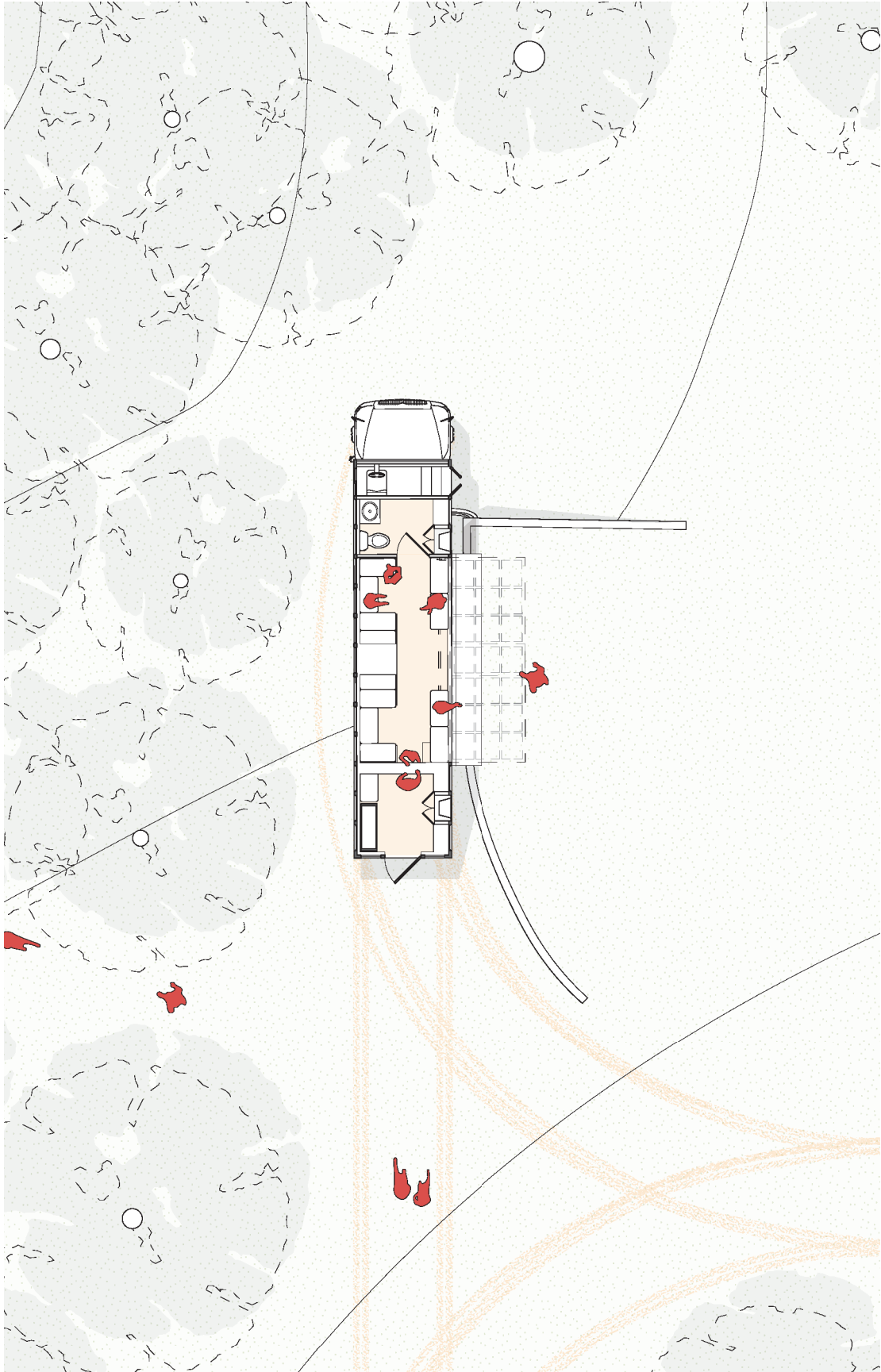
Parks' Falls, MacPherson's Mills site collage



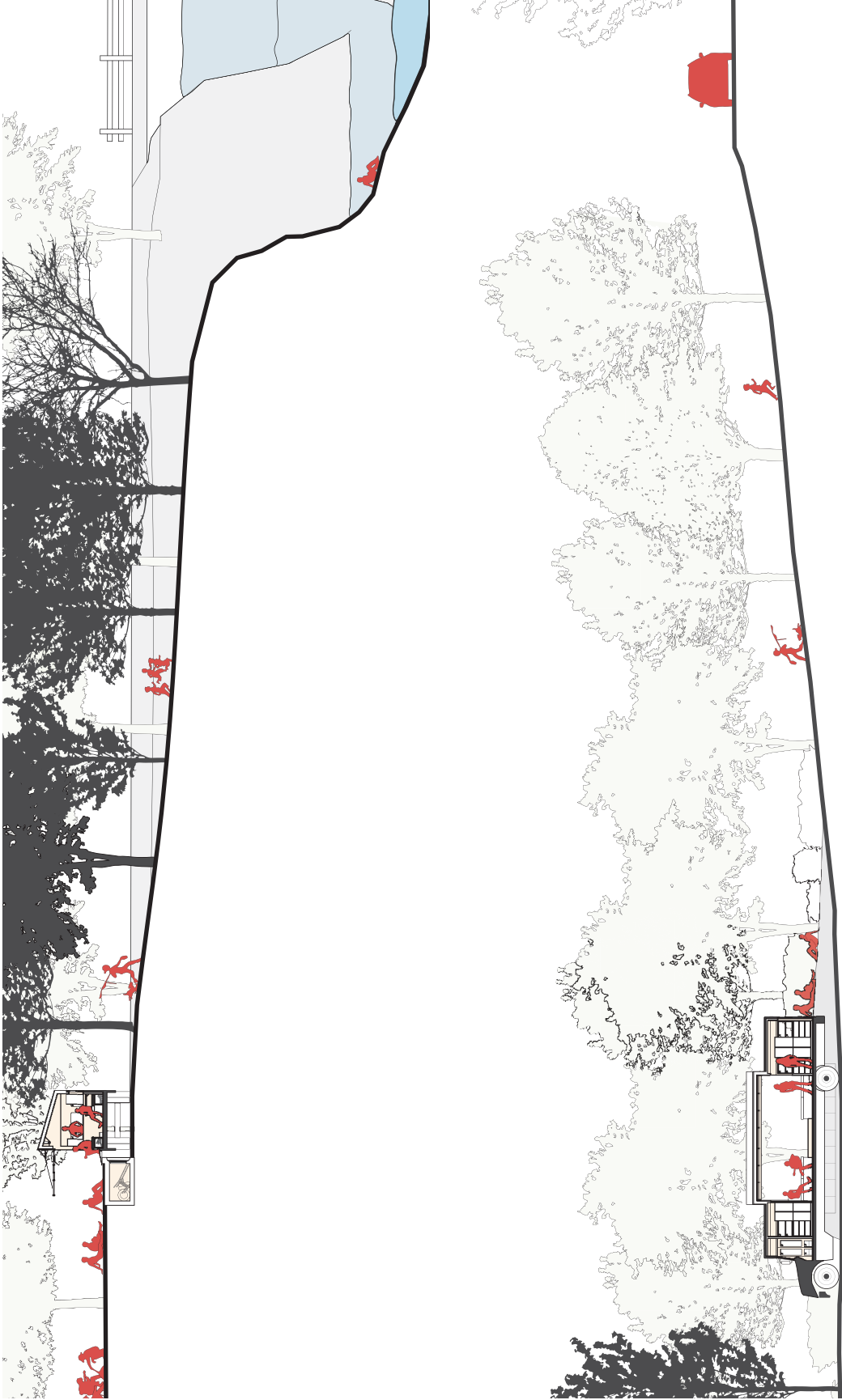
Parks' Falls, MacPherson's Mills site plan



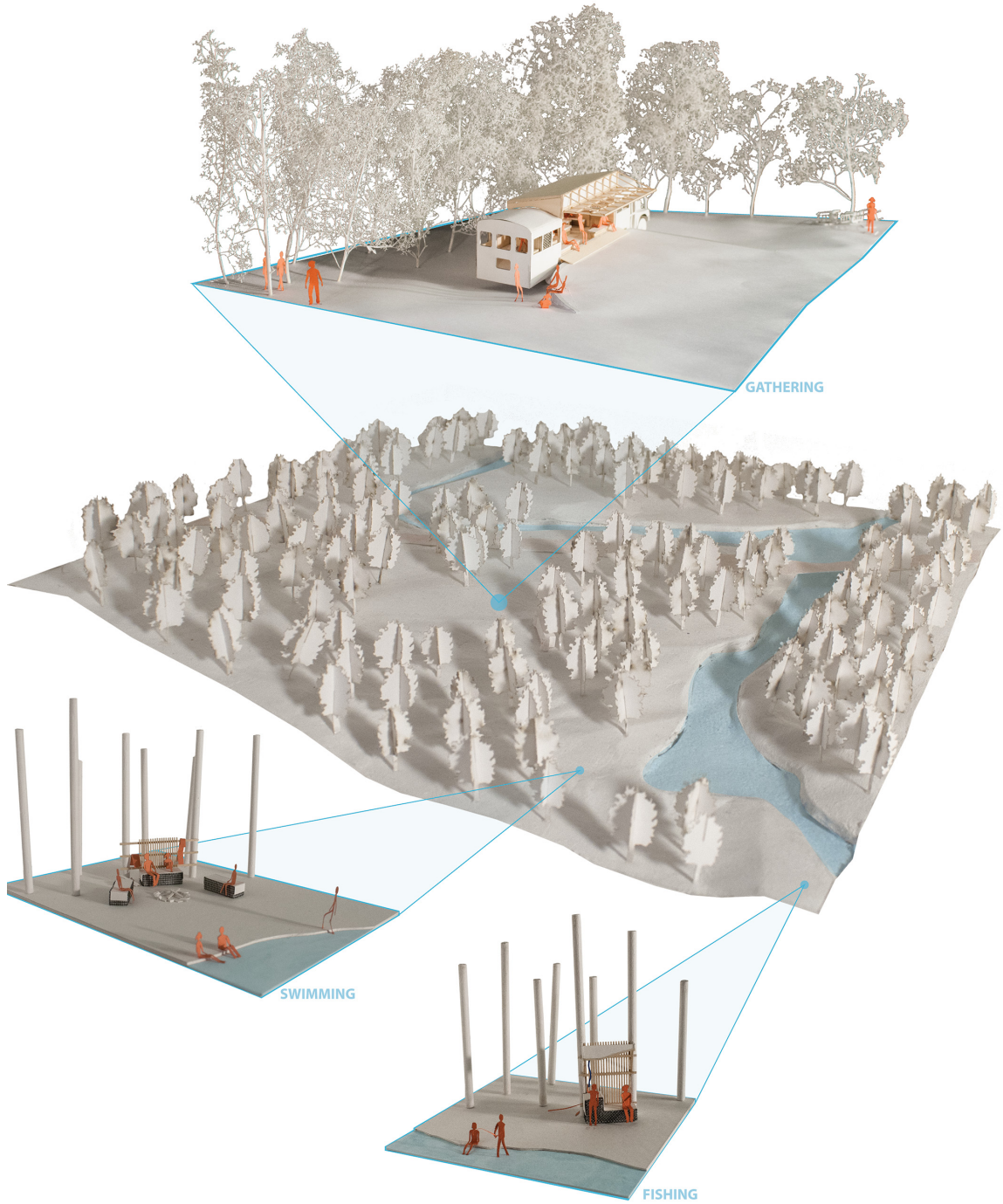
Parks' Falls, MacPherson's Mills site sections



Parks' Falls, MacPherson's Mills plan



Parks' Falls, MacPherson's Mills sections



Parks' Falls, MacPherson's Mills dispersed program diagram



Mobile youth centre at entry to site



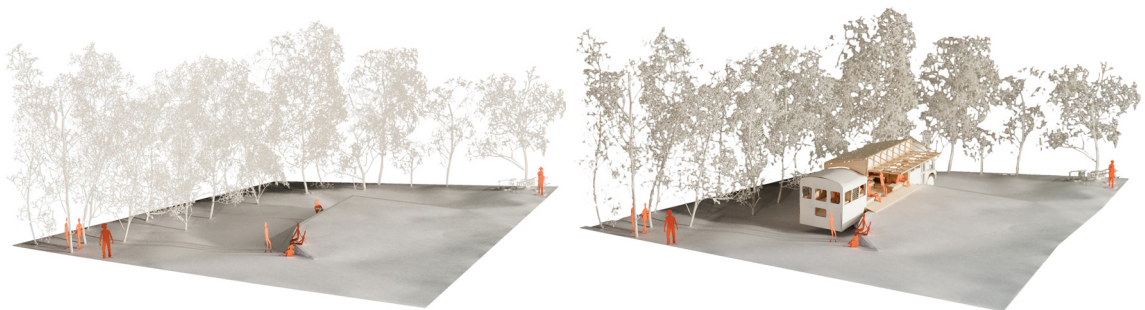
Site model photograph



Model photograph of mobile youth centre at Park's Falls, MacPherson's Mills



Model photograph of users expanding the on site activity when the mobile youth centre is absent



Model photograph comparison of site with and without the mobile youth centre present

CHAPTER 3: CONCLUSION

In designing each on site intervention there was an attempt made to look at the specific site conditions in relation to the more general design strategy, rather than attempting to achieve consistency across the sites. This has allowed me to look at the design strategy that was developed for each individual site, and recognize both intentional and unintentional correlations between similar sites, which begin to highlight key design ideas that can be carried over to other sites.

Both the informal and formal gathering spaces introduce similarly programmed recreation spaces, with a level of formality and permanence that is proportional to the site they exist within; the skate park is much more formal than the ATV course, which relies more heavily on the existing landscape and simple modifications to it and is of a more temporary nature. Both of these spaces also attempt to introduce performance spaces that take advantage of the current use of the sites as gathering spaces. The skate park creates a more intimate stage, and the existing amphitheatre form of the gravel pit is used to create a larger scale performance space using the bus as a backdrop for the stage.

The two recreation sites both have much less concentrated approaches, with smaller structures disbursed throughout the sites to support existing activities. There is an attempt to introduce a variety of meeting points on site (the dugouts, play structure and bleachers at the softball field and the smaller structures for swimmers, fishers, etc. at Park's Falls), providing a range of interactions and gathering spaces to activate these sites.

There still exists an interesting potential modification to the design of the mobile youth centre which would allow it to function without these on site interventions, allowing it to stop at virtually any site. Combining this possibility with on site interventions at certain sites would allow for both the flexibility inherent in being able to be anywhere, as well as providing consistent spaces and activities for the community. These spaces could house the bus more permanently (for a week or a month at a time) and allow the bus to stop at other sites more sporadically, for an hour or a day at a time. This flexibility would lend itself to a system in which multiple buses are used, and can move freely between sites, with the interactions between these buses at a given site offering a further catalyst for design. The use of multiple buses could also provide an opportunity to expand upon the program that

exists within the mobile youth centre. Multiple buses could allow for more specific activities to take place in each bus, allowing the different programs more space to expand.

The development of this strategy, and the range of possibilities that could be explored to further it, begin to demonstrate the potential of a project of this type to influence positive change in communities in need. In this case, the creation of a range of spaces and activities for youth provides them with an alternative to experimenting with alcohol and drugs. The ability of a small-scale design to effect a given community is largely dependant on the design process. Understanding the current conditions of the place (i.e. recognising the trail network as a key component in the everyday life of youth in this area), managing expectations (i.e. providing possible alternatives for youth, rather than attempting to cure issues of widespread addiction overnight), and experimenting with local solutions (i.e. allowing the availability of the buses to become the basis for the design) are all key in this process.

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