

**Confronting Hegemony:  
Architectural Dialogues in Northern Ontario**

by

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## Abstract

The aim of this thesis is to assert the role of architecture as an active mediator in shaping the social, physical and economic space of the indigenous reserve of northern Ontario. This contested region, bounded by the end of all-season roads and the northern tree line, is populated by remote indigenous communities whose lived counter-hegemony cannot be reconciled with the existing capitalist agenda of resource development in their traditional territory.

This thesis challenges a cultural/colonial relationship that remains at odds with both nature itself and a people whose historical existence and culture is based on a respect of nature. The project speaks to notions that lie between *map* and *territory*, understood both in a fixed geographic and material sense and as a transitory condition, based in cycles of memory and seasonal change. In this way the dialectic creates a dialogue which aims to reconcile this reading of the territory with both the everyday needs of community and the invisible boundaries of the much broader political space of mining and extraction.

## Acknowledgements

This thesis is dedicated to the people of Eabametoong that welcomed me into their community and helped inspire me to make this thesis as grounded as possible in their stories, experiences and hopes. To Charlie, Stella, Georgina and Fred, who humorously adopted me into his family, thank you. To Quincy and Lena who provided a hapless traveller with a place to stay, temporarily, and a friendship that I hope will prove to be anything but temporary. Quincy, I promise not to trample on any rabbit trails when I'm next in Eabametoong. To Dorothy, who reached out to me after my first visit to Eabametoong and allowed me to share my work with her and partake in the community's off-reserve Christmas festivities, thank you.

To Joseph Boyden who generously returned my emails and helped connect me with people in Moose Factory all the way from New Orleans. From my time in Moose Factory, a special thanks to Joe and Alice for easing my first trip to the North with a bed to sleep in and more importantly with their kindness and generosity. I will learn to make a palatable pot of coffee before my next visit.

I would also like to thank Cheryl Chetkiewicz and David Peerla who met with me on short notice in Thunder Bay as well as the team at Matawa Four Rivers - Kim, Kathy and Paul - who provided me with much of the insight that guided this work.

Here at Dalhousie, thank you to Catherine for putting up with me and my less than stellar track record with deadlines, and to Richard for agreeing to advise my work and share your wealth of experience with me. It was an ambition of mine to work with you since the early stages of my undergraduate degree and I am grateful the stars aligned as they did.

To my friends and colleagues in the Master's program, thank you for making life in studio a fun and collaborative journey even when the going was tough. A special thanks to Ben and Nicole for providing their hands and minds to assist me in building the truss mock-up on a cold but sunny day in March.

Finally, thank you to my parents and my brother. It goes without saying that this thesis couldn't have happened without you. And so its been said.

## Chapter 1: Introduction



Net-fishing on frozen Eabamet Lake (December 2015)

Allow me to explain... the way the present situation has come about is something like this. An Indian was sitting on a log feeling very comfortable because he had all the room he needed. A white man came along and said that he has been running a long time and was terribly tired. The bishop's men wanted to burn him alive and the king's soldiers were chasing him with guns. Could he please have a little place on the log so that he might rest from his awful journey. The Indian willingly shared a piece of his log with the white man. But the white man felt like stretching himself and asked for a little more room. The Indian let him have a little more of his log. The white traveller was satisfied for a short while but then felt he wanted some more space. The Indian gave it to him. Of course, the guest did not go hungry or cold. Like a decent host, the Indian shared his pemmican and furs with the poor, harassed foreigner. As time passed, it just so happened that the stock of food and clothing came under the control of the white man, the Indian was cold and hungry and barely holding on to the end of the log. Now the white man did not at all fancy the idea of sharing his log with such a miserable and sickly creature. It deeply hurt his sense of property. So he told the Indian to get off the log, but in his vast charity he suggested that the Indian could sit on a stump further away in the bush. Since 1871, the Ojibway of north-western Ontario has been sitting on the stump. In the last few years, we have begun to panic because the white man on the log is casting his eyes on our stump. Granted, the stump is small and damn prickly but at least we have a place to sit and occasionally we have been able to grab a bit of the game and cast a line for a fish. [...]

Mr. Commissioner, it seems to me that the stranger from the sunrise beyond the lakes just keeps coming back. Each time he promises us perpetual repose and gluttony, and leaves us with famine and disease. It also appears that, as the years go by, the circle of the Ojibway gets bigger and bigger. Canadians of all colours and religion are entering that circle. You might feel that you have roots somewhere else, but in reality, you are right here with us. I do not know if you feel the bear is your brother with a spirit purer and stronger than yours, or if the elk is on a higher level of life than is man. You may not share the spiritual anguish as I see the earth ravaged by the stranger, but you can no longer escape my fate as the soil turns barren and the rivers poison. Much against my will, and probably yours, time and circumstance have put us together in the same circle. And so I come not to plead with you to save me from the monstrous stranger of capitalist greed and technology. I come to inform you that my danger is your danger too. My genocide is your genocide.

To commit genocide it is not necessary to build camps and ovens. All that is required is to remove the basis for a way of life.

Grand Chief John Kelly

We Are All in the Ojibway Circle  
Kenora, Ontario, 1977  
Testimony before the Royal  
Commission on the Northern  
Environment

**Confront -**

Face up to and deal with (a problem or difficult situation)

**Hegemonic -**

Ruling or dominant in a political or social context

**Dialogue -**

Take part in a conversation or discussion to resolve a problem

**Dialectical Worldviews**

This thesis has been most formatively influenced by two trips to northern Ontario in the summer and winter of 2015 and aims to be but the start of a more lasting engagement with both the land and the people of the region. The initial trip spanned over almost a month, taking me from Toronto to the Cree reserve of Moose Factory on the southern shores of James Bay and then some thousand kilometres by car southwest to Thunder Bay, ultimately travelling by plane to the remote Ojibwa community of Eabametoong (Fort Hope). The second trip was an opportunity to experience firsthand the seasonal



Trans-Canada Highway:  
250 kilometers of wilderness and  
road between Hearst and Long Lac.

changes in the land and the community of Eabametoong from late summer to the cold of the winter months. It is the personal experience of this truly awesome territory, which remains both out of sight and out of mind to the vast majority of Canadians, and my interactions with the people of Eabametoong, unremittingly generous and inspiring, that gave rise to this work.

This thesis, both in the research and its architectural expression, aims to mediate between western and indigenous worldviews. It is therefore vital to the positioning of my work to address the inherent implications of being a white Canadian from an urban upbringing when engaging ideas of indigenous culture and its philosophies. I will try to address this formative layer of bias as critically and transparently as possible throughout the work.

In one sense, there is a growing chorus of voices that are actively seeking to align these two knowledge sets. This is namely seen in facets of the environmental movement which have rejected the human-centrist viewpoint adopting instead, as indigenous cultures have always understood, a holistic approach in which humanity is but a part of nature and in which the complex and interrelated effects of human occupation of the environment necessarily demand equally non-linear solutions. On the topic of such mediation, John Ralston Saul tells us that it is in fact “the indigenous idea of what is now called environmentalism [that] produced the concept of minimal impairment.”<sup>1</sup> However, the risk here is in grossly simplifying the relationship between western and indigenous ontologies to a matter of environmental policy or, in the world of architecture, to the appropriation of traditional forms under the guise of reasserting cultural continuity.

Indeed, these are not questions of policy but of their underlying

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1. John Ralston Saul, *A Fair Country: Telling Truths about Canada* (Toronto: Viking, 2008), 81.



Flying to Eabametoong First Nation: resource road through the muskeg of northern Ontario.



worldviews and therefore requires a deeper exploration of human experience, our understandings of reality and our relationships with the natural world. This thesis, within the context of my architectural education, will hardly scratch the surface of these deeper questions of ontology. The ambition here is certainly not an attempt to add to the anthropological discourse. Rather it is to be as cognisant as possible of the implications of these inherent methods of understanding the world and their role in shaping the project's approach to material and its relationship to environment. I am therefore drawing on the words of indigenous thinkers and the ideas shared with me by community members during my time spent up north as well as those non-indigenous figures that have in their work sought to navigate these twin orbits.

Anastasia Shkilnyk, in her significant book entitled *A Poison Stronger Than Love* on the relocation of the Ojibway community of Grassy Narrows, cautions that our orientation to space and time is “such a fundamental dimension of our experience and is so central to the ordering and coordination of human activity [that] we often take



it for granted and assume that people with whom we come into contact share our own spatial and temporal perception.” It is these cultural precepts, she notes, that “assist in determining not only how a people will think and act but also what they will imagine, and hence what they will create, in the realm of arts, fantasy, and myth.”<sup>2</sup>

The work of social anthropologist Tim Ingold in interpreting the firsthand account by A. Irving Hallowell of the worldview of the northern Ojibwa from the 1960s was particularly helpful in guiding my own reflections on and interpretations of my own experiences with the people and the land of northern Ontario. Grappling with the mediations of these seemingly disparate worldviews, Ingold notes:

Turning our backs on what Ojibwa people say, we continue to insist that ‘real’ reality is given independently of human experience, and that understanding its nature is a problem for science. Must we then conclude that the anthropological study of indigenous understandings, whatever its intrinsic interest, can tell us nothing about what the world is really like, and that it therefore has no bearing on natural scientific inquiry?<sup>3</sup>

He goes on to describe the Ojibwa concept of knowledge as analogous of that of the skilled craftsman with his material:

[K]nowledge does not lie in the accumulation of mental content. It is not by representing it in the mind that they get to know the world, but rather by moving around in their environment, whether in dreams or in waking life, by watching, listening and feeling, actively seeking out the signs by which it is revealed. Experience, here, amounts to a kind of sensory participation, a coupling of the movement of one’s own awareness to the movement of aspects of the world.<sup>4</sup>

In this sense, it is the ambition this project and its architectural expression to move beyond the level of ‘intrinsic interest’ while aware



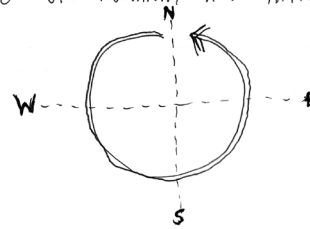
Painting by Anishinaabe artist Randy Charbonneau (from cover of Rupert Ross’s *Dancing with a Ghost*)

2. Anastasia Shkilynk, *A Poison Stronger than Love: The Destruction of an Ojibwa Community* (New Haven: Yale University Press, 1985), 64
3. Tim Ingold. *The Perception of the Environment: Essays on Livelihood, Dwelling & Skill* (London; New York: Routledge, 2000), 95
4. Ingold, *The Perception of the Environment*, 99

WESTERN CULTURE IS BASED IN TIME  
IT IS LINEAR & FOCUSED ON ENDLESS PROGRESS



ABORIGINAL CULTURE IS BASED IN SPACE  
IT IS CIRCULAR & ROOTED IN THE BALANCED  
COEXISTENCE OF HUMANITY AND NATURE



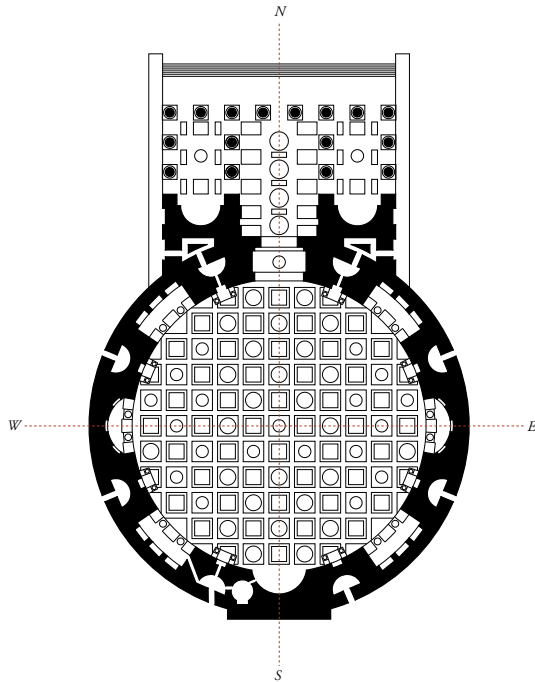
Duality of worldviews (from trip sketchbook)

that the speculative nature of the work necessarily relegates it to the periphery of this truly relational worldview. It is perhaps the writing of former Ontario Crown attorney Rupert Ross, informed by decades of work and observation as an outsider in the communities of northern Ontario, that most succinctly illustrates the relevance of these differences in perception to the world of architecture. Elaborating on the dialogue between the shape of existence being not linear and evolving but rather circular and revolving he suggests:

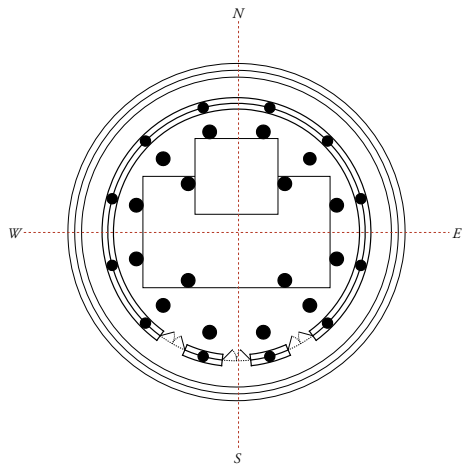
The stories about us would not fade, because their relevance would not diminish. Our lives and the lessons we learned would live on in those stories, a part of our children's lives as they covered the same ground. In a sense, they would relive our lives, as we had relived those of our ancestors, experiencing what we experienced where we experienced it. The only imperative, then, would involve not leaving a monument but instead an undefiled terrain, as suitable for their use as it was for ours.<sup>5</sup>

In this light, the politics of mining and extraction represent then but the scaffolding of the much broader underlying issue that is the reconciliation of two vastly different worldviews whose mutual history until now has been defined by the suppression of the Indigenous world under the regime of colonialism, whether in its more explicit historical forms or the more entrenched and perhaps invisible contemporary forces of hegemony. This thesis seeks to engage these fundamental issues at three scales, from the geographic

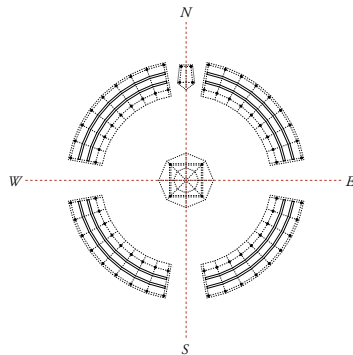
5. Rupert Ross, *Dancing with a Ghost: Exploring Indian Reality* (Markham, Ont.: Reed, 1992), 105



*Pantheon - Rome  
126 AD*



*Hall of Prayer for Good Harvest - Beijing  
1420 | 1545 | 1751*



*Eagle's Earth Ojibwa Pow-wow Grounds*

Plan studies of circular monument buildings across eras and cultures comparing notions of permanence and symbolic divisions of space as expressed through structure. The pantheon in Rome and the traditional pow-wow arbour demonstrate two fundamentally different architectural expressions of culture, and therefore of humanity's relationship to the land.

territory to the architectural detail, threading through the project a confrontation of architecture's "tendency to abstract the human, the social and the political."<sup>6</sup> Each scale forms a chapter of the project and has been given a title that reinforces the dialectics at play, in this way creating a dialogue between the social and the physical and conversely between the everyday needs of community and the broader political space of cultural/colonial relationships:

**1: 100 000 000** | Between Map and Territory

**1: 10 000** | Between Grid and Land

**1: 100** | Between Space and Time

Chapter two and three function as independent essays that provide the theoretical and historical basis of the thesis respectively. The subsequent chapters then unpack these dialectical themes in the context of the design work that aims to demonstrate the potential agency of architecture on this highly political stage.



Serpentine system of streams and lakes that shape the ecosystem of the northern Ontario muskeg.

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6. Jeremy Till, "Here, There and North of Nowhere", *Building Materials* Vol.18 (Dublin: 2009),19.

## Chapter 2: The Diamond/Water Paradox

John Ralston Saul describes our current times as a period of interregnum; that is an extended period of stagnation in which the ideologies of neoliberal globalism have failed but yet a new direction has not been put forward – a citizenship locked in arrested development. Our technological lives in the major cities across southern Canada allow us to slip into the belief in a post-modern future based on the principles of globalism and yet ironically our economy is more dependent on commodity markets and the large scale extraction of natural resources than in any other period of history. Eighty percent of the Canadian population lives within a few hundred kilometers of our southern border. Yet, while the ‘South’ invokes the image of the populated and active city and the ‘North’ that of the disconnected and barren expanse, absent from the conversation is the *in-between* territory: a region between the end of all-season roads and the tree line that is quickly becoming the most productive part of the economy. Perhaps most significantly, it is also home to the majority of the First Peoples of Canada.

By means of precedent in understanding the complexities of future development in Matawa traditional territory, the much publicized relationship between the northern Ontario Cree community of Attawapiskat and the development of the DeBeers Victor diamond mine 90 kilometers to its west illustrates all too well the consequences of the economic model this country has fallen subservient to. Nevertheless, it equally demonstrates the doggedness of the indigenous worldview to disrupt this status quo that has passively been accepted into Western belief systems.

Mining projects are based on an arc of establishing temporary settlement, extracting resources and moving on, leaving behind a legacy of both environmental and societal damage. These permanent

consequences of an otherwise transient venture are defined by our economic system as externalities. There exists centuries of historic precedent to inform us of the consequences of commodity based industries. They are fundamentally non-egalitarian economies in which a few corporations enjoy the wealth while acting as profoundly destabilizing forces on the local environment. Indeed this is why developing countries are ideal for corporations involved in extraction and consequently why the IFC was driven to establish performance standards for companies that include protocols from the critical notion of free, prior and informed consent to rules for pollution abatement.<sup>7</sup> The irony here is that these protocols do not apply to developed countries on the assumption that existing regulations are in place to control the actions of corporations. In reality these assumed environmental protection laws are being actively weakened and in cases dismantled by our government, guided by a delusional utilitarianism aimed at maximizing foreign investment in resource development on Canadian soil. This persisting colonial system illustrates the fundamental fallacy of expansionist economic thought which, by virtue of supplanting theory for reality, necessarily divorced economics from ethical and moral considerations. What is left is the moral failure of a system that pushes costs onto others and defines them as “externalities”, as if minor aberrations of an otherwise perfectly efficient model.



Community:  
Elder & child on snowmobile in  
Eabametoong

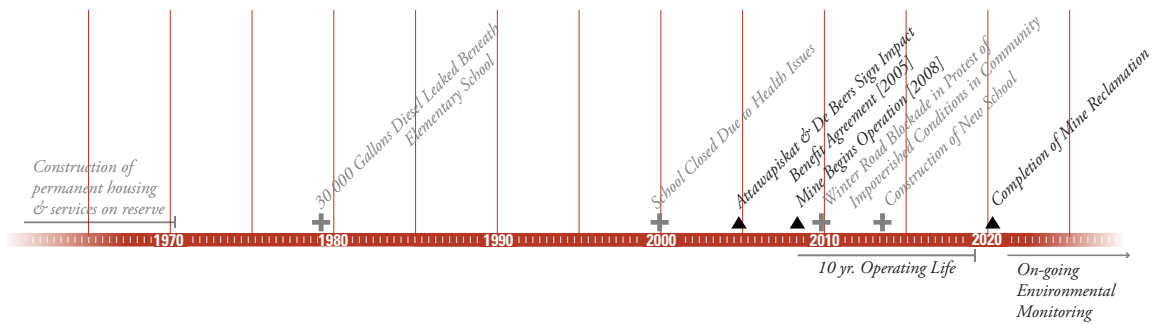


Industry:  
Fuel supply trucks on James Bay  
winter road

In the case of the De Beers diamond mine and the community of Attawapiskat, Adam Smith’s eminent diamond/water paradox transgresses mere illustration of the role of marginal utility in economic valuation. Here, for the community of Attawapiskat, this logic is perverted, the extraction of each additional diamond leading to, based on empirical scientific evidence, increasing levels of mercury in the Attawapiskat river watershed, surpassing safe

7. John Van Nostrand, “If We Build It, They Will Stay,” *The Walrus*, September 1, 2014, accessed December 10, 2015, <http://thewalrus.ca/if-we-build-it-they-will-stay/>.





Community & Industry Timeline

levels for human consumption and standing to destroy the vast bird and fish populations that the Cree rely on for subsistence living. Through the lense of the orthodoxy, these deep-seeded social and environmental consequences of diamond mining in the region are but externalities of an industrial success story that will generate approximately \$1 billion for the Canadian GDP over its ten year life span.

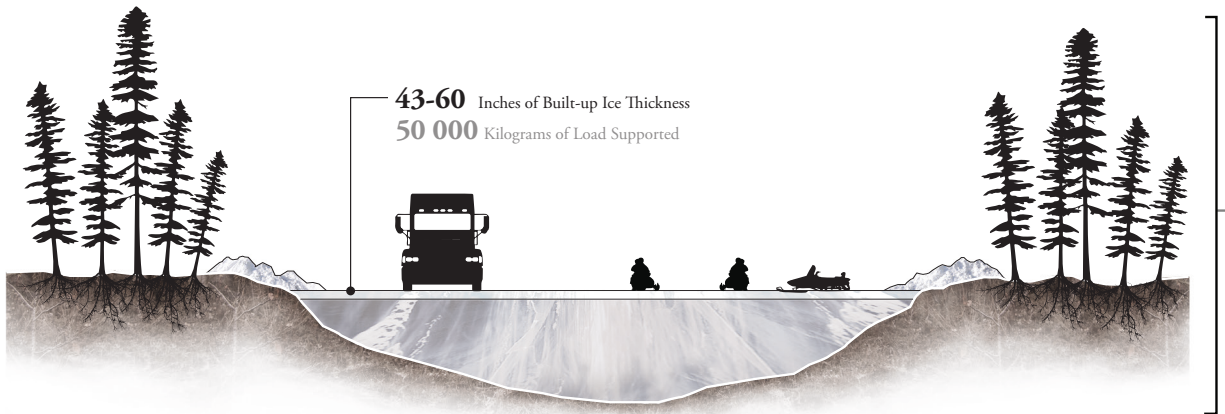
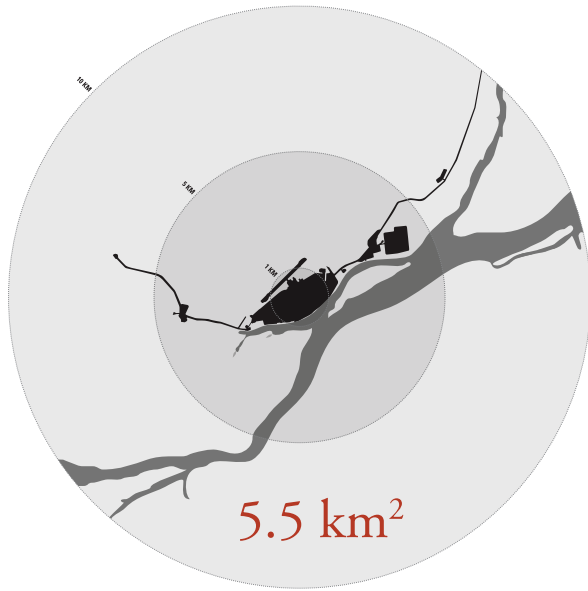
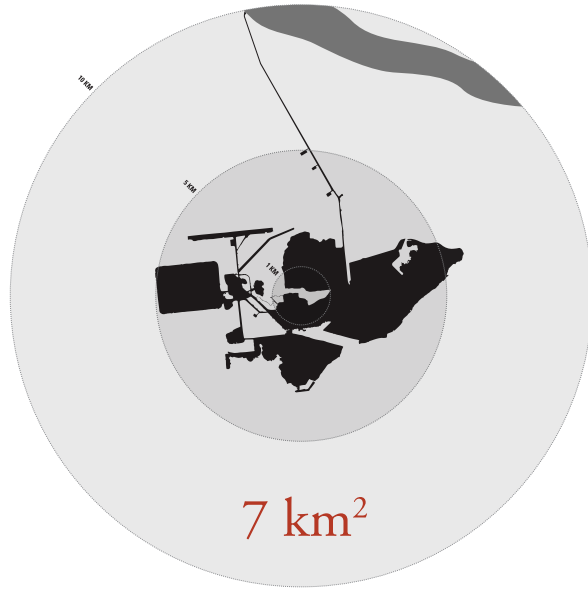
Clive Spash reminds us that “sustaining something, or increasing its resilience, does not answer the fundamental question of why and what for.”<sup>8</sup> If we dig deeper, we find that this question hinges on the fundamental humanist assertion of the Enlightenment period that humankind has mastered the natural world. This thesis argues that underlying this debate is an imperative to reconsider the role of morality and ethics in socio-economic thought. Indeed technology will be an essential tool in addressing issues of climate change but the utilitarian belief that technological advancement alone will compensate for the depletion of natural resources is a myth that must be dismantled.

If we do not abandon the idea of globalism then we must persist under the assumption that everything is in flux, thus stripping away the essential relationship between belonging and the possibility of action. William Rees argues that while technology has supplanted



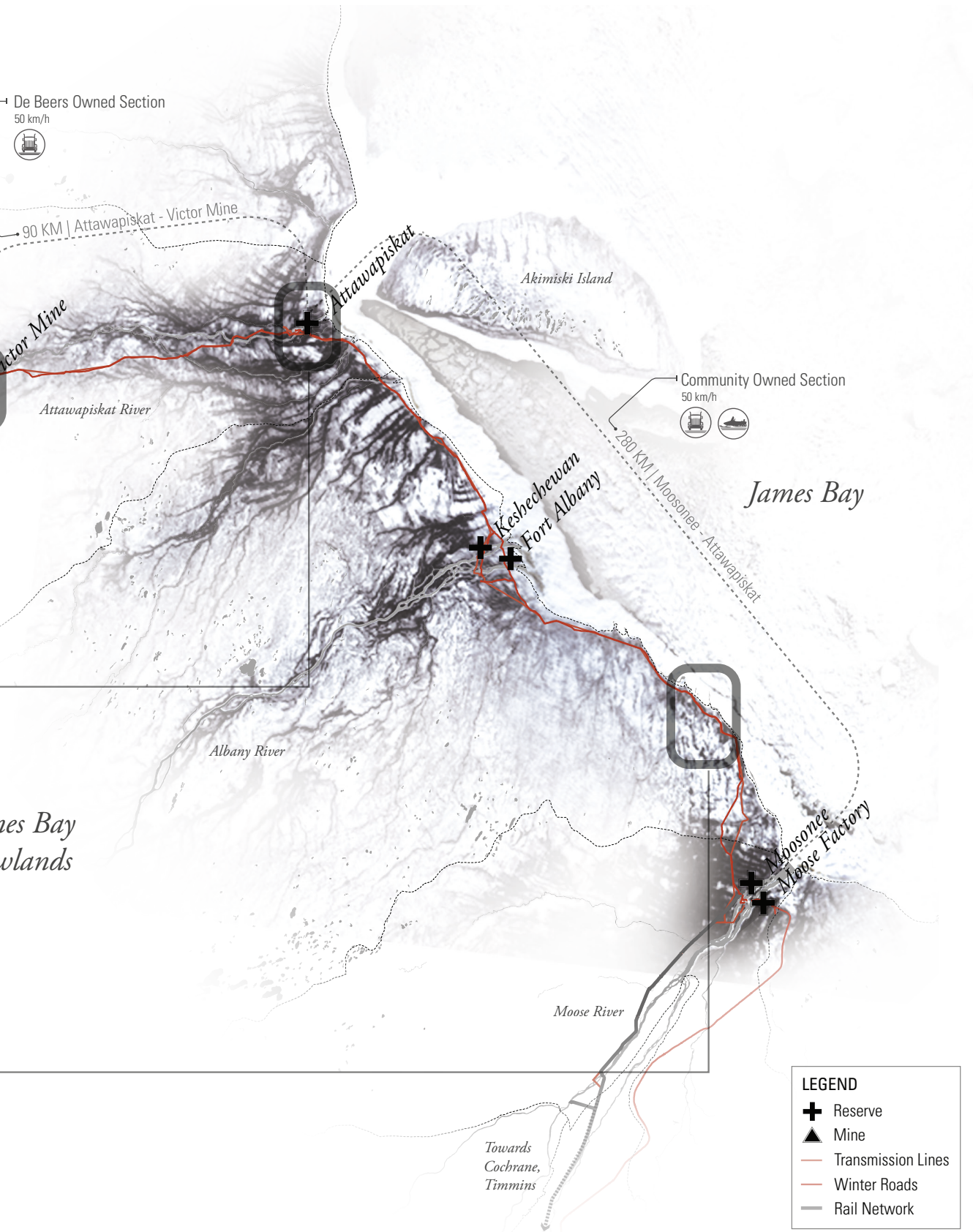
Road signs on the James Bay winter road.

8. Clive L. Spash, “Social ecological economics: Understanding the past to see the future”, *American Journal of Economics and Sociology* 70 (2011), 357.



Jam  
Low

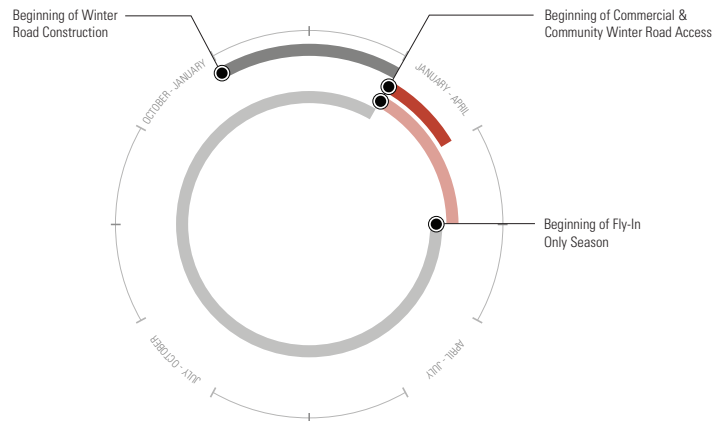




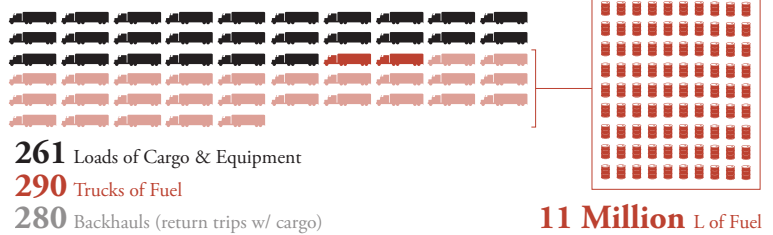
Attawapiskat & DeBeers Victor diamond mine | James Bay winter road & footprint comparison

Diagrammatic case study demonstrating the economic and resource disparity between the operation of the Victor diamond mine and the community of Attawapiskat.

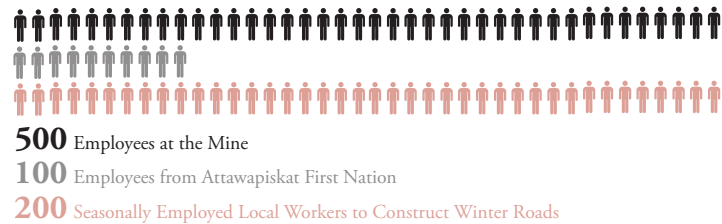
**WINTER ROAD SEASON**



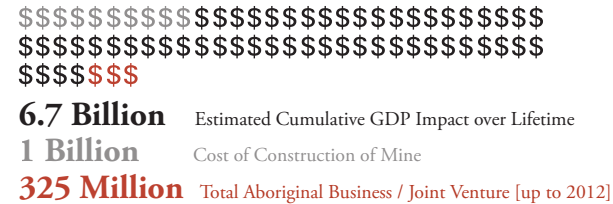
**WINTER ROAD USE**



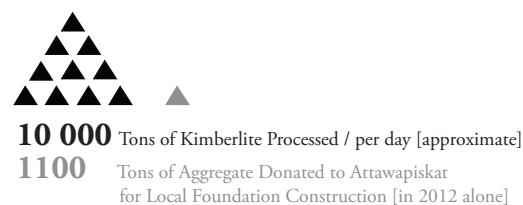
**EMPLOYMENT**



**ECONOMIC IMPACT**



**MINE PRODUCTION**



**LEGEND**

- 10 Truck Loads
- 10 000 L of Fuel
- 10 Workers
- 1000 Tons of Rock

religion as the foundation of western industrial culture, our “modern society is as myth-bound and mystical as any that preceded it.”<sup>9</sup> What is unique about the Canadian condition is the presence of an alternate myth that carries very different philosophies about humanity’s relationship with nature and thus the ends of economics. The critical concept here is that, in the face of large scale industrial projects across the vast reservoirs of land and water of the Canadian landscape, there remains the opportunity to seek out a new myth born out of the friction between these vastly different worldviews. Returning to the work of Tim Ingold, the clinch point of these two worldviews differ in their basic assumption of what it means to be human. Through the lense of modern science, what distinguishes humanity from other organisms is our ability to remove ourselves from the “traffic of [our] bodily interactions in the environment” in order to position ourselves to know and reflect upon the nature of our own existence.<sup>10</sup> This essential abstraction of humanity from nature is entirely foreign to indigenous philosophy. For the Cree and Ojibwa of northern Ontario, knowledge is defined relationally; experience is accumulated through sensory participation within an ever emergent environment. Life, nor consequently its economics, can be described by an absolute model against the backdrop of a nature that is fixed but rather must concede to the complexities of *real world* experience and must therefore be constantly re-evaluated.

This dialectic might be best thought of through analogy. The current paradigm can be thought of as a road, linear and utilitarian, running brashly alongside and over top of the winding, dynamic river of the natural environment – humanity embedded within it. But as Harold Innis famously argued, Canada exists not despite its geography but because of it – our myth unfolding along the



River carving its way through the muskeg (view from plane from Thunder Bay to Eabametoong).

9. William Rees, “An ecological economics perspective on sustainability and prospects for ending poverty”, *Population and Environment* 24 (2002), 16.

10. Ingold, *The Perception of the Environment*, 90.

complex and uncertain waterborne paths of the fur trade. If one has ever paddled these rivers, the liquid highways of Canada's north, it is clear that there is nothing abstract about the complexities of these systems. Here, the diamond/water paradox dissolves through a rediscovering of economy as river, negotiating with its surrounding eco-systems, blurring the bounds from its immediate shorelines and the organisms it sustains, to its larger watershed territory and ultimately its participation in global cycles of water flows and evapotranspiration. The social and environmental impacts of industrial development are not externalities of the economic system but rather the irreconcilable consequences of a delusional model that does not reflect any meaningful metrics of human well-being. Economics is not a science – a linear road – but rather a river, and rivers after all are much more complex than roads, certainly more interesting.

Aerial view of Attawapiskat First Nation reserve



Aerial view of the DeBeers Victor Diamond Mine site





## Chapter 3: Charting Hegemony

...there is an Ariadne's thread that would allow us to pass with continuity from the local to the global, from the human to the nonhuman. It is the thread of networks of practices and instruments, of documents and translations....the two extremes, local and global, are much less interesting than the intermediary arrangements that we are calling networks.<sup>11</sup>

While Bruno Latour's notion of networks offers a useful late 20<sup>th</sup>C insight into the paradox of local and global, this chapter aims to make the argument that it is precisely this cultural/colonial thread of networks that has shaped the human, social and political space of far northern Ontario since the time of treaty-making in the late 1800's. Whereas the influence of the networks that shape the contemporary urban condition are often so entrenched that they remain invisible to the everyday experience, this relationship is paradoxically subverted on the remote reserves of northern Ontario. Flying over the endless mosaic of lakes and stunted black spruce, a land that remains impenetrable except by canoe and by plane, the government imposed matchbox housing, property lines enscribed from western zoning plans and the rigid framework of national building codes characteristic of the reserve settlement all make visible these networks, the literal embodiment of the forces of colonialization.

This chapter will not delve in depth into the history of northern Ontario (John Long's book *Treaty No. 9* has done this in insightful and methodical detail), yet it is vital to the pursuant design work to explore the development of these cultural/colonial relationships in order to confront them decisively through architectural response. Furthermore, the particular focus here is on the spatial implications of these relationships through time. This study can best be understood through three relatively distinct time periods:

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11. Bruno Latour, *We Have Never Been Modern* (New York: Harvester Wheatsheaf, 1993), 121.

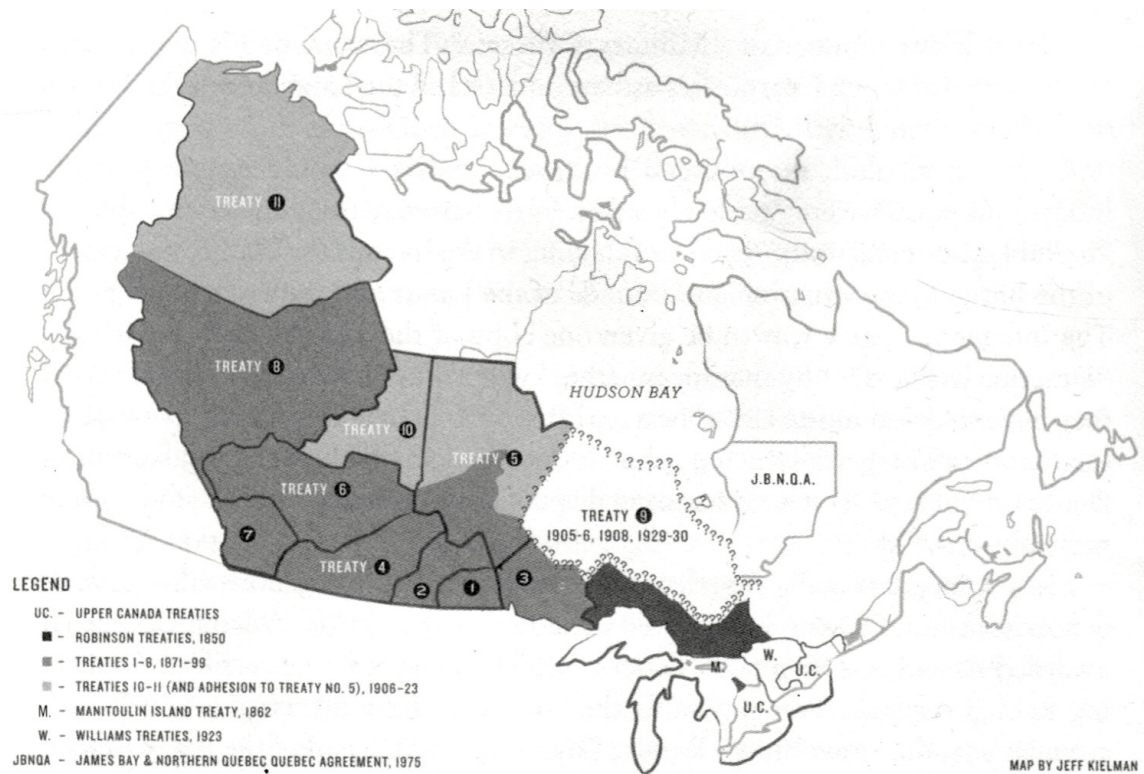
the establishment of trading and treaty-making from the 17<sup>th</sup> to early 20<sup>th</sup>C, the increasing incursions by state and industry in the mid to late 20<sup>th</sup>C that would result most significantly in the forced relocation of many northern indigenous communities, and finally the current condition of Ontario's 'Far North', best described broadly as a period of interregnum. In each of these historical periods, I will trace through the dialectical readings of the land and its people from the western/colonial worldview and the indigenous/relational worldview. As previously mentioned, this duality is described through the competing notions of the *map*, referring to aspects that are fixed, geographic and material, and the *territory*, which implies a condition that is transitory, based in seasonal change and cycles of oral memory.

This first period surrounding the establishments of treaties in northern Ontario illustrates perhaps most clearly the socio-political agency of the map over the territory. Gwilym Eades describes this period as guided by the "soft" ideology of consolidation. He explains that the colonizing governments of the New World were guided by the Lockean view that "the default position of the earth, like that of the mind, was the blank slate," while "at the same time, the natural world was conceived as external to humans."<sup>12</sup> Conversely, the indigenous worldview is fundamentally devoid of this notion of blank slate, the acquisition of knowledge understood to be entirely relational, space being "constitutive of ecological webs of relationships."<sup>13</sup> Where the colonizing idea of space is represented by abstract grids and lines, legitimized through their inscription in maps and political documents, the indigenous concept of space is structured through the places, stories and experiences of an oral culture in symbiotic relationship with an ever-emergent environment.

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12. Eades, *Maps and Memes*, 85.

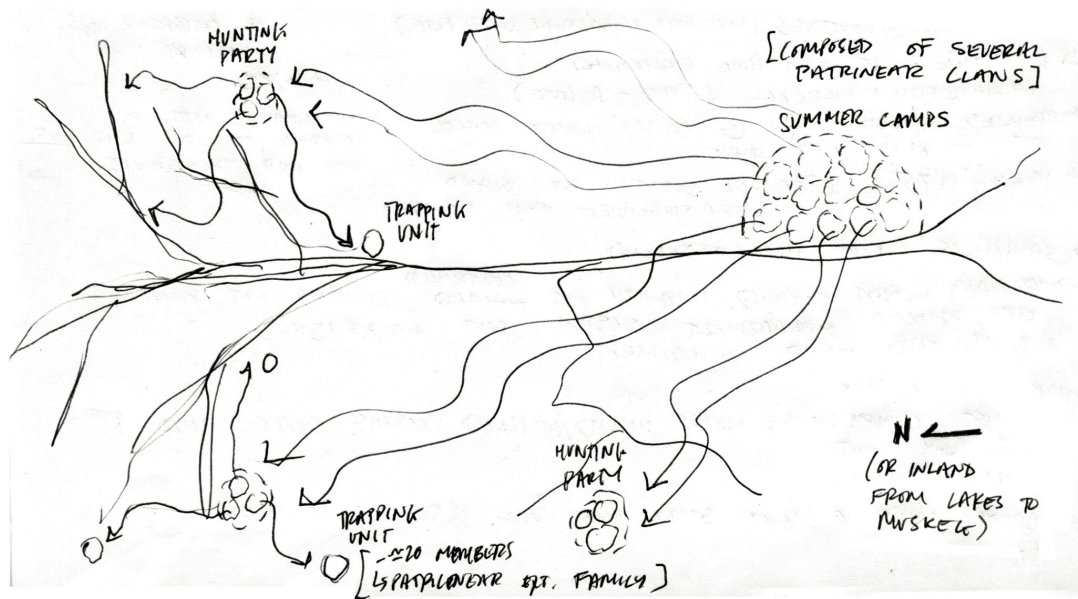
13. *Ibid.*, 85.



Approximate Treaty Areas. Map by Jeff Kielman from *Treaty No. 9* by John Long

Previous to the proliferation of the fur trade in northern Ontario, Ojibwa society was structured spatially around this cyclical environment. In the summer, large camps composed of reuniting patrilineal clans were established at significant lakes or rivers where fish was plentiful and could support larger groups. Conversely, the winter months were dictated by the hunting of moose and caribou requiring rapid movement across a vast inland territory only made possible by the division into smaller groups, these eventually giving way to even smaller hunting parties during spring break-up and fall freeze-in when the soft muskeg was the most impenetrable.<sup>14</sup> As a result of the increasingly westward expansion of the Hudson's Bay Company (HBC) in the 17<sup>th</sup> and 18<sup>th</sup>C, the Ojibwa territory shifted north from Lake Superior. Their spatial structure was adapted into smaller trapping units that leveraged these new networks of trapping

14. Edward S. Rogers, "Ojibwa Culture: The Traditional Culture History," in *Kenora 1967, Resolving Conflicts - A Cross-Cultural Approach* (Winnipeg: University of Manitoba, Department of University Extension and Adult Education, 1967), 35.



Sketch of spatial organization of the Northern Ojibwa during the competitive period of the fur trade.

and trading by maximizing mobility, ensuring the health of the animal populations while protecting their bargaining power through movement between multiple trading posts. What is significant about this era under competitive conditions, described by Richard White as a “middle ground”<sup>15</sup>, is that it permitted a substantial “period of compromise and common understanding,” that allowed both cultures to prosper, the HBC “by amassing its wealth, the Indigenous peoples of far northern Ontario by redistributing theirs among kinfolk and friends.”<sup>16</sup>

While the fallout of the monopolization of the fur trade by the HBC in the early 19<sup>th</sup>C played a significant role in the erosion of the social and spatial organization of the northern Ojibwa, it was with the transfer of Rupert’s Land to the new Dominion of Canada in 1870 that this middle ground would be extinguished,

15. Richard White, *The Middle Ground: Indians, Empires, and Republics in the Great Lakes Region, 1650-1815* (New York: Cambridge University Press, 1991).

16. John S. Long, *Treaty No. 9: Making the Agreement to Share the Land in Far Northern Ontario in 1905*, Rupert’s Land Record Society Series; 12 (Montreal: McGill-Queen’s University Press, 2010), 21.





Treaty No. 9 commissioners fleet, from John Long's *Treaty No. 9*.

“its long-established and mutually understood system of exchange unilaterally abrogated by settler government”<sup>17</sup> through much broader treaties of land surrender. What is important to stress here, a reality that is perhaps lost on the vast majority of Canadian society, is that these treaties, specifically Treaty No. 9, still represent some hundred and twenty years later the primary vehicle through which the socio-political space of northern Ontario is shaped. The principles for treaty-making were set out in the *Royal Proclamation of 1763* which theoretically acknowledged aboriginal title and a fiduciary duty of the Crown towards indigenous peoples. However, the process of negotiating and implementing treaties would reveal a paradoxical agenda of protection and extinguishment. This inherent contradiction was fueled by a growing rift between the responsibilities of the federal government and an aggressive policy of industrial expansion by the provincial government of Ontario. Historian David Calverley explains that Ontario’s victory in the *St. Catherine’s Milling Case 1883*, a dispute over the granting of a timber license that ultimately deemed indigenous land rights to have been all but extinguished by treaty, “essentially removed Natives from the path of Ontario’s economic progress.”<sup>18</sup> It would not be until

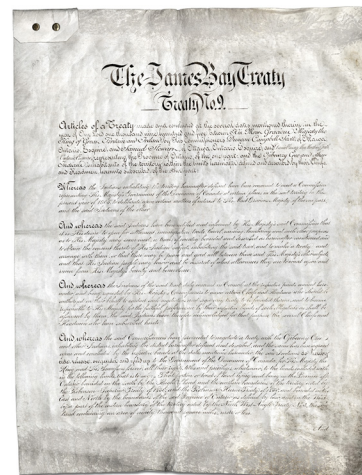


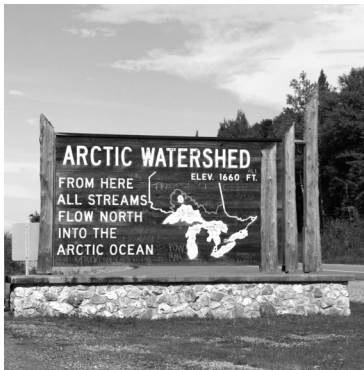
Image of the Treaty No. 9 Parchement, from John Long’s book *Treaty No. 9*.

17. Long, *Treaty No. 9*, 23.

18. David Calverley, “Who Controls the Hunt? Ontario’s *Game Act*, the Canadian Government and the Ojibwa, 1800-1940” (PhD diss., University of Ottawa, 1999), 106-07.

the 1960's that the notion of treaty rights would be revisited by the courts in any meaningful way, having devastating effects on the indigenous populations of the region.

The indigenous peoples of northern Ontario were led to believe that the 1905-06 Treaty was a continuation of the “middle ground” under which hunting and fishing rights would be protected and life would not be restricted to the newly allotted reserves. In reality, the abstracted maps and parchments of the Treaty would become the tools through which distant centers of political power would socially reconstruct this un-surrendered territory as “a ‘wilderness’ to be preserved for tourism or exploited by extraction of its resources.”<sup>19</sup> The first half of the 20<sup>th</sup>C saw the progressive erosion of traditional ways of life as a result of government policy through the Indian Act and the increasing control of social and educational structures by the Christian missions. The imposition of a system of registered traplines, commercial fishing licenses and wild rice license areas by the Ontario government were all demonstrative of the subjugation of the indigenous philosophy of land to one aimed to fragment, quantify and exploit natural resources. In other words, government turned its back on the indigenous belief that “[t]rapping was not just a commercial activity; it was a way of life.”<sup>20</sup> However, due to the lack of physical infrastructure networks tying north and south, barring rigorous transport by canoe and portage or prohibitively expensive air travel, the communities above the height-of-land, roughly delineated by the Albany River, remained somewhat buffered from the strangulating forces of colonialism. This condition of relative autonomy would rapidly end in the 1960s, specifically in the case of the Fort Hope Band communities (whom would later become



Northern watershed boundary on highway 599 north towards Pickle Lake.

19. Jocelyn Thorpe, “To Visit and Cut Down: Tourism, Forestry, and the Social Construction of Nature in Twentieth-Century Northeastern Ontario,” *Journal of the Canadian Historical Association* n.s. 19, no. 1(2008).

20. Shkilynk, *A Poison Stronger than Love*, 115.



Image of a typical street in the relocated community of Fort Hope (Eabametoong) in the 1970s from *When Freedom is Lost*.

separate reserve communities represented by the Matawa Tribal Council), when the Department of Indian Affairs built schools at Fort Hope (Eabametoong), Lansdowne House (Neskantaga) and Webequie. The establishment of day schools, replacing the larger satellite residential schools, rendered traditional life all but impossible as families were forced to settle permanently while their children attended school in order to “restore the intimate family relationships that the residential school system had destroyed.”<sup>21</sup> The basic fact that this education system made no attempt to negotiate the seasonal migration to northern traplines led directly to the rapid establishment of government planned communities near the original HBC trading posts.

Up until the 1960s a lot of these people didn't live in what are now their present communities. Although there were some small settlements in the area, most of the Indians lived out in the bush on their traplines, and once in a while they would come to the Bay for flour, lard, and tea. Then they would leave again for another three or four months.

But when the modern education system was established, we told the band they would have to send their kids to

21. Paul Driben and Robert S. Trudeau, *When Freedom Is Lost: The Dark Side of the Relationship between Government and the Fort Hope Band*, Canadian Electronic Library (Books Collection Toronto: University of Toronto Press, 1983), 26.

school because this was a requirement under the law. We told them they could be penalized if they didn't comply, and so they established permanent settlements near the schools.<sup>22</sup>

[Indian Agent of the Fort Hope Band, 1975]

Eades explains that the “[r]esettlement, relocation, and reserves spatially constricted [indigenous] lives under both external and internal colonial rule and the writing of power upon their very bodies has led to changing conceptions of identity.”<sup>23</sup> This relationship between the social and the spatial is what this historical study of indigenous occupation of the land has been attempting to reveal. The western/colonial worldview understands the development of social life first and foremost through the abstracted, historical and linear axis of time.<sup>24</sup> Conversely, indigenous social space is based primarily on the dynamic relationship of physical places in their environment and time is understood not as linear but cyclical, marked by seasonal change. Through this lense, it is clear how inextricably linked the “spatial constriction” caused by government imposed communities is to the complex social, political and economic fallouts that resulted. In the wake of the federal government’s 1969 White Paper, the Department of Indian Affairs adopted a policy of community development that broadly overlooked this fundamental disparity of worldviews and ways of life, aiming to fix the “Indian problem” through the aggressive modernization of reserve town-sites. Anastasia Shkilnyk describes this misguided ideology noting wryly that “if only these communities could be upgraded by new houses, new facilities, new roads, and better infrastructure, the problem of Indian poverty would be resolved.”<sup>25</sup> In reality, this massive infusion of government



Image of a log home built outside of government regulation in Summer Beaver (Nibinamik) in the 1970s from *When Freedom is Lost*.

22. Ibid., 26.

23. Eades, *Maps and Memes*, 10.

24. Edward W. Soja, *Postmodern Geographies: The Reassertion of Space in Critical Social Theory*, Haymarket Series (London; New York: Verso, 1989).

25. Shkilnyk, *A Poison Stronger than Love*, 135.



funding and programming for economic development entrenched a system of almost total government dependency, especially in the more isolated northern communities where sedentary life fuelled by welfare handouts took hold. Within the complexities of this hegemonic paradigm, the hinging issue that this thesis tries to reveal is the mechanism through which these reserve communities became divorced from the shaping of their own physical space. A society once embodied through a rich material culture in the form of dwelling structures that both technically and symbolically expressed a deep relationship with the land now constricted by the very worst of western suburban housing typologies, delineated by property lines that hold no bearing in the reserve context, and a system of material provisioning from construction goods to food supplies that is entirely at the mercy of the federal government.



Image of the Fort Hope Development Corporation office in the 1970s from *When Freedom is Lost*.

You have to remember that just twenty years ago our people saw no social workers, no welfare administrators. No police force was stationed on our reserve; no teachers lived on our reserve. The first white doctors started flying in to treat tuberculosis cases only in the 1950s, just before the Mennonites came.

Suddenly, after we moved to this new reserve, we saw government people all the time. They came to tell us how we should build our houses and where we should build them. They came to tell us how we should run our Chief and Council. They told us about local government, and they told us we had to have a band administration to take care of the money and the programs that were going to come from government.

Within a few years of the move to the new reserve, we had social workers taking our children away to foster homes.<sup>26</sup>

[A respected elder, former chief from Grassy Narrows First Nation]

The final section of this chapter jumps ahead to the contemporary condition of far northern Ontario in the wake of the provincial government's 2010 'Far North Planning Initiative' and seeks to unpack the current paradigm of "consultation". Returning to the

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26. Ibid., 120.

words of John Long on the underlying motives of treaty-making at the turn of the 20<sup>th</sup>C, he notes: “[it] is not an act of benevolence but a shrewd investment to be repaid in land sales, transportation mega projects, or natural resources.”<sup>27</sup> In the context of the struggle between the Matawa First Nations and the development of large scale mining projects in their traditional territory, the language of enhanced consultation on the part of industry and government reveals a jarring similarity to the ideology of a century ago.

It was not that the Ojibwe and Cree were “opposed to all development, [...] but we are opposed to being offered the so-called choice between massive development schemes which will ruin our land and our life-style, or the equally unacceptable choice of welfare dependence. This is like being asked which method of suicide we prefer.”<sup>28</sup>

[Andy Rickard, President of the Grand Council of Treaty No. 9, 1977]

It is important to note however that several key rulings through the court system over the recent decades have made significant strides in re-establishing the validity and meaning of aboriginal and treaty rights, though their enactment on the ground remains much contested. The protection of these rights under Section 35 of the *Constitution Act 1982* and subsequently the acknowledgement of First Nations right to government through the *Royal Commission on Aboriginal Peoples* in 1991 are not without merit in reasserting the indigenous voice on the national stage. The fallout of these policy changes has led to modern land settlements over historic hydroelectric development grievances, impact benefit and revenue sharing agreements between First Nations and mining corporations and the protection of at least 225, 000 square kilometers of boreal forest in far northern Ontario. Nonetheless, the ideology of consultation is still emblematic of the disparity between the western and indigenous worldview and arguably takes the form

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27. Long, *Treaty No. 9*, 48.

28. Andy Rickard, *Basic Issues and Priorities of Grand Council Treaty #9: Summary of Activities* (Cobalt: Highway Book Shop, 1977), 18-26.

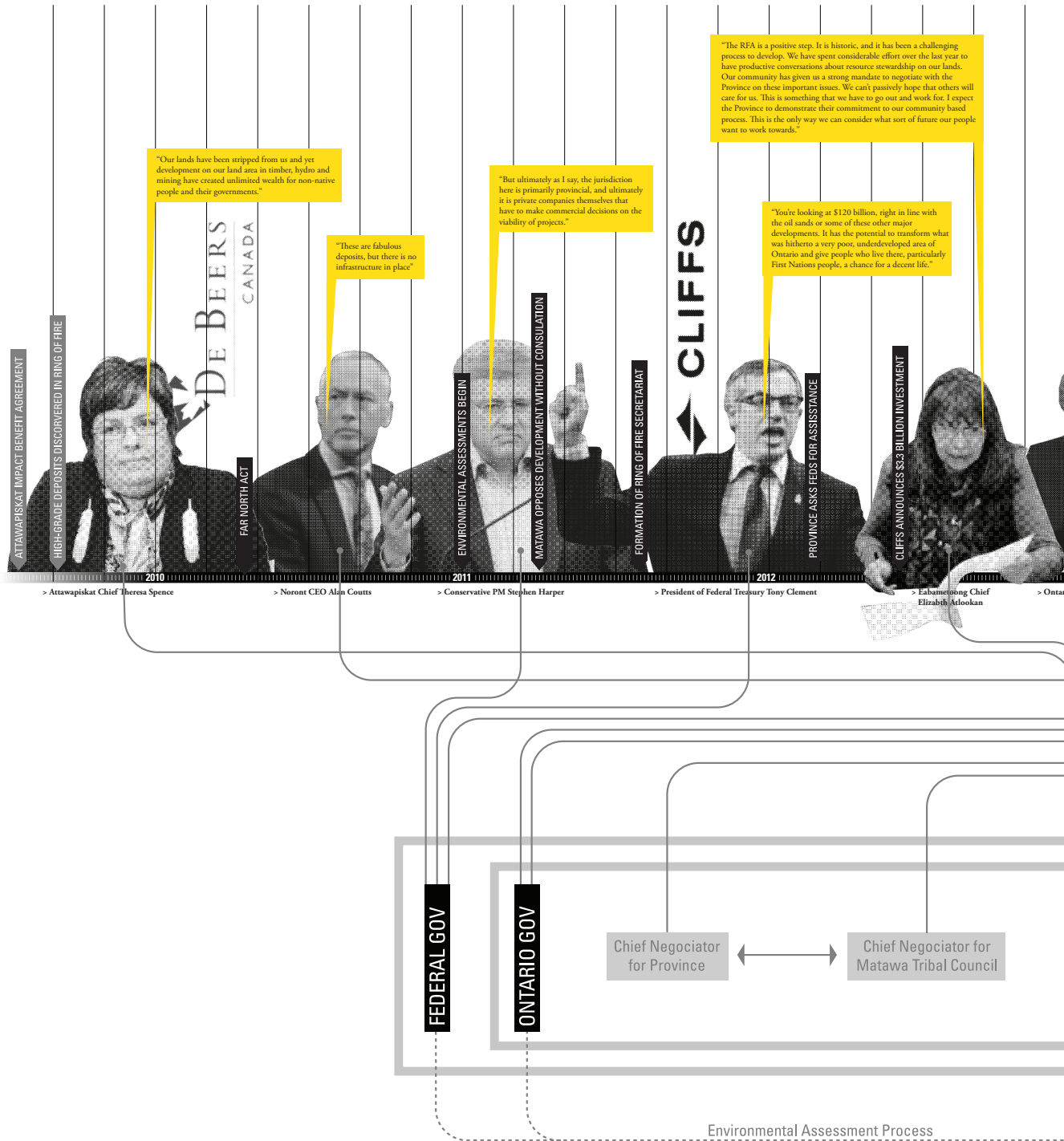
of a contemporary hegemony that is more deeply entrenched in Canadian society and serves to veil the government's unwillingness to meaningfully confront the implications of indigenous sovereignty. David Peerla explains this phenomenon, in a paper on the recent dispute between Kitchenuhmaykoosib Inninuwug (KI) First Nation and junior mining company Platinex Inc., as the struggle for the "right to say no." This confrontation represents a key test of the issue of free, prior and informed consent, "the first connection of a specific local struggle to the global and universalizing claims of the UN Declaration on the Rights of Indigenous Peoples."<sup>29</sup> While it would ultimately result in the modernization of Ontario's archaic Mining Act, what was made crucially evident is that under the current paradigm, the First Nations of northern Ontario are increasingly "turning away from the idea of [...] communities with legal rights, defined under the constitution of a colonial state and in non-aboriginal courts, towards a struggle to bring a different and independent Indigenous world in to existence."<sup>30</sup>



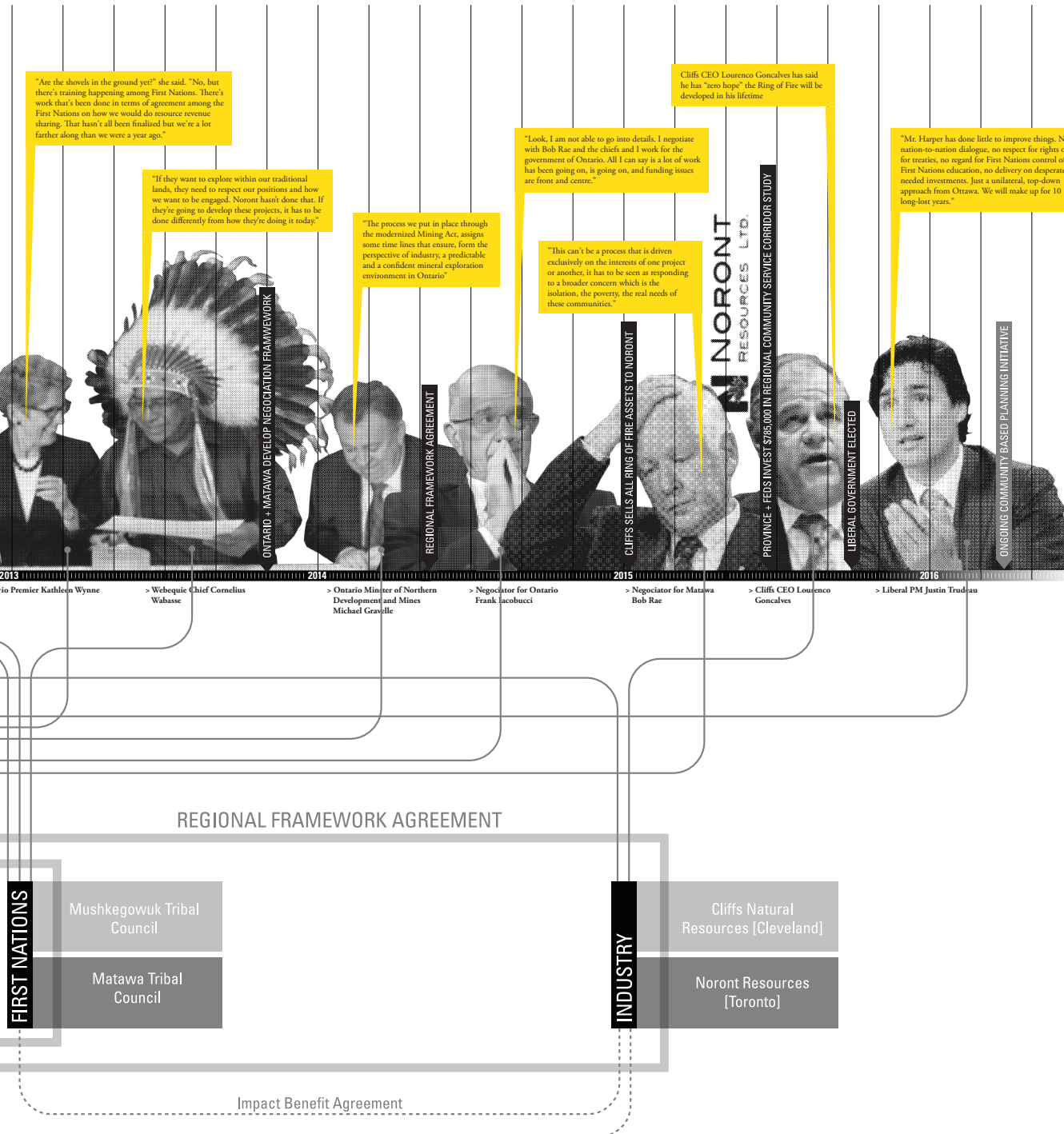
Chiefs Meeting in Eabametoong  
Community Hall (Sept. 2015)

29. Peerla, "No Means No", 5.

30. Ibid., 6.







Charting the stakeholders of the Ring of Fire negotiations (base images sourced from Google Images)

## Chapter 4: Between Map and Territory

### Notes from the Road

*There cannot be a better way to travel this part of the country – why anyone would pay to sleep in a road-side motel is a mystery to me. Its 9PM – I pull into Nagagamasis Provincial Park about 40km south of the Trans-Canada and find a campsite right on the lake. The moon is full and glowing a burnt orange hue, casting warm light across the lake and lighting my campsite such that I put up my tent without my headlamp. I get a fire going, birch bark and cedar crackling as they are coaxed into flame – I take my guitar out for the first time on the trip.*

*The day was full of detours and discoveries. At around noon I pulled into Mattice just before the bridge that crosses over the mighty Missinaibi River. The Missinaibi is one of Canada's great northern rivers and courses through vast terrain from the north shore of Lake Superior out to James Bay. It was a vital waterway for the Cree and Ojibwa of northwestern Ontario and became a major artery of the fur trade. Today the Missinaibi is the only major river in Ontario that remains untouched by hydroelectric development – designated a heritage river with over 500km of its length protected from development. I hope to paddle it one day.*

*On a detour north, I tried to find a road that followed the river in the hopes of seeing the Blackfeather rapids and further north the Thunderhouse falls. Private property – the path has been gated and chained off. On my route back to the Trans-Canada I stumble upon a massive quarry operated by Villeneuve construction. I am drawn to the industrial vitality of northern Ontario. The highway plows its way through vast forests of black spruce connecting gravel pits and larger quarries, huge logging mills and power plants. Where it crosses major rivers or where the logging industry really flourished – in the case of*

*Hearst – small settlements exist, the people a mix of French, English and Oji-Cree.*

*Later that afternoon, somewhere between Heart and Long Lac, I pull off the highway following a sign for Constance Lake First Nation. Here I find the embodiment of the age old story I have read and heard from so many. Adjacent to the highway, only 2km from the reserve, is a large logging operation. The reserve itself reminds me of the lower-ninth ward in New Orleans, which I had experienced walking through the previous summer. I see a few people walking the main road on foot and a couple of trucks go by as I stand there, but it has the feeling of a ghost town. Abandoned houses with plywood boarded windows sit across the street from the public school – at one time perhaps quite a nice building, now tired, battered and graffitied. The asphalt of the adjacent basketball court had cracked and heaved like the fissures in the muck of a dried out river bed.*

*What motivates this backwards relationship? A fear of the other? A fear of empowering First Nation's people to gain self-sufficiency and economic well-being? The desire to keep them entirely dependent on an archaic colonial government?*

*To see the way society can beat the life force out a strong people is shocking. Its physical manifestation brings it all home for me. How could a community look this way, in the midst of some of the most pristine and majestic wilderness this country has to offer and within a stone's throw of a large and profitable logging operation?*

*Further down the road at the Eagle's Nest Pow-wow grounds I see this same struggle in another light. I follow signs towards the pow-wow grounds and discover a large cultural center – an impressive and well-designed building, presumably designed to evoke the form of a turtle's shell, oval in plan with a spine-like skylight down the central axis of*

*the lightly domed roof structure. Beyond the building was the pow-wow arbour, two semi-circular roof structures – like a Canadian version in hewn timbers of Bernini's arm-like porticos that enclose the piazza at San Pietro's Cathedral in Rome.*

*I followed a further path that was marked with an arrow leading to a historical Cree village. Upon breaking through the forested trail and into the clearing, I found another ghostly scene. Informational placards still stood scattered around the large clearing – each one describing a different vernacular structure from tepee to wigwam to sweat lodge. Yet beneath each sign was left only the wreckage of the thing – a pile of birch bark here, a scattering of peeled spruce poles there. Only the tepee still stood, its bark cladding peeling off like the weathered shingling of an abandoned barn – a blue tarp now covering a portion of it.*

*The best of intentions let fall into disrepair – some significant sum of money must have years ago been sunk into making this cultural facility and yet for whatever reasons it did not flourish into a successful destination for tourists looking to learn about first nations culture nor the neighbouring Cree communities to host their pow-wow ceremonies.*

*Just beyond this grave-like site, a beautiful river bubbles and flows over shallow rock, the rapids gurgle and drone out the hum of the tractor-trailers as they cross the bridge just in sight up-stream.*

*Yet another off-road adventure leads me to the crystal clear, turquoise waters of Rabbit Lake. Two loons swim calmly on the glassy surface and call to each other – their beautiful, almost haunting wail echoing across the lake. It's sunset and I can't help but strip down and dive into the crisp water.*

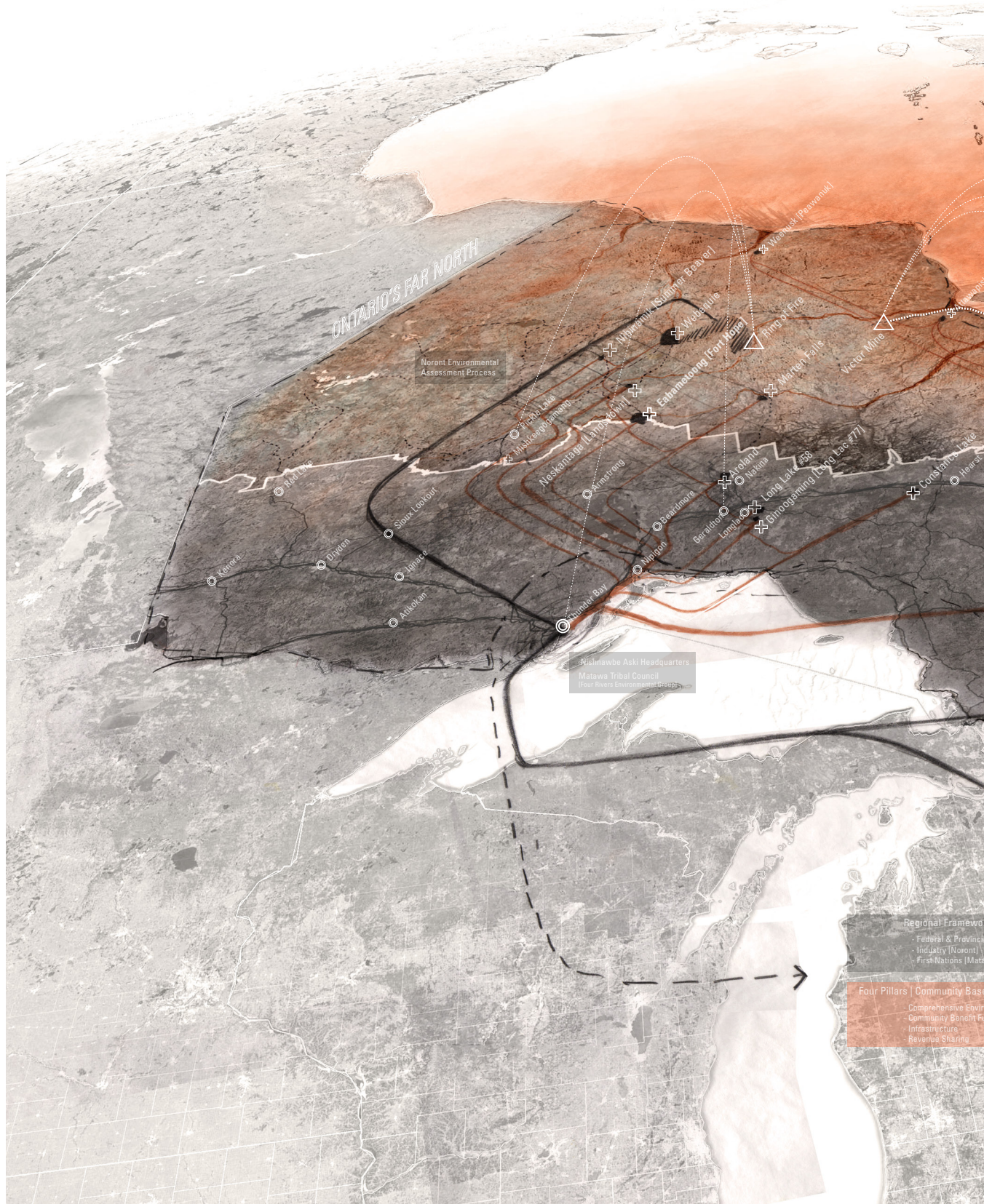


Active gravel pit off of the Trans-Canada highway

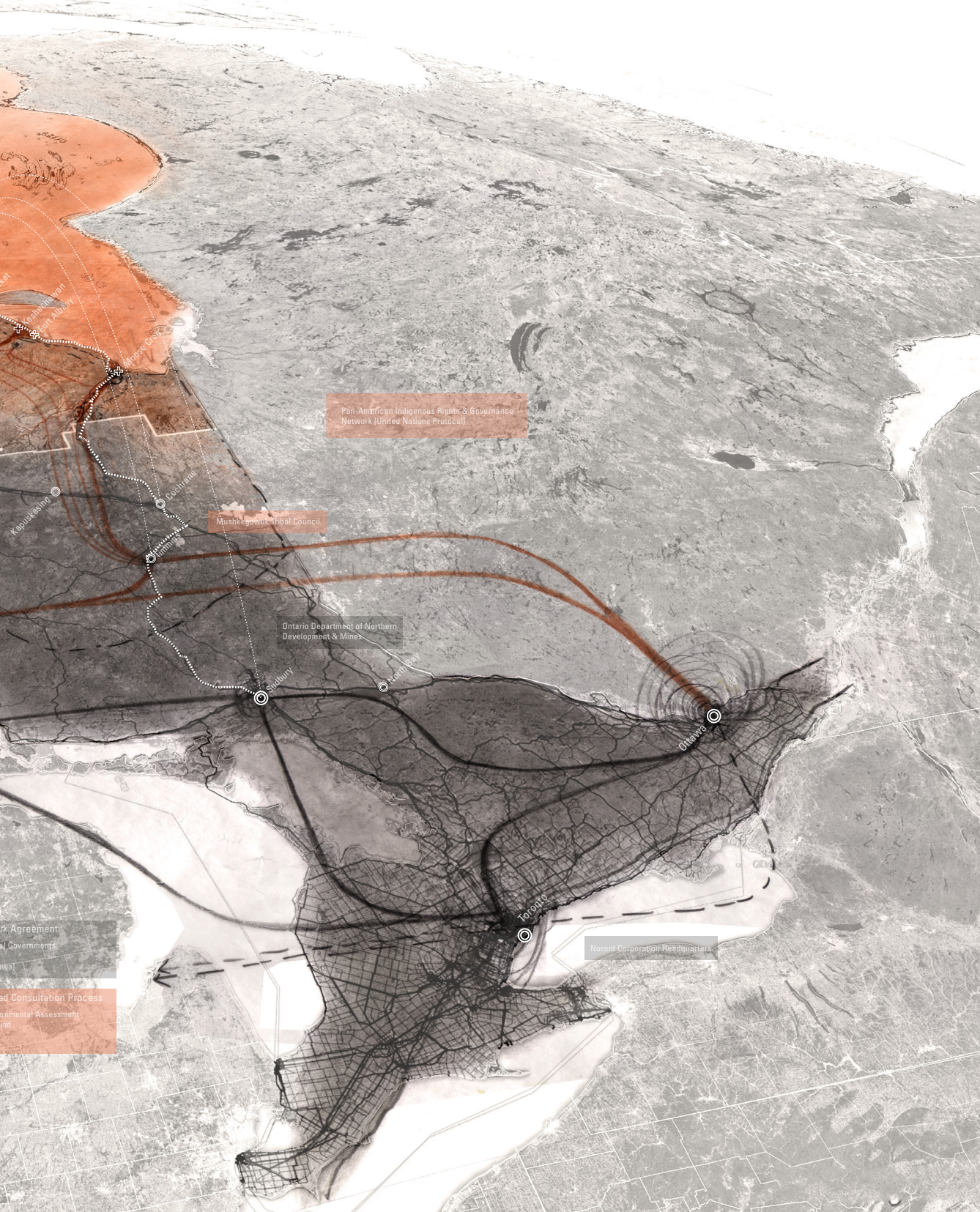


Remnants of the Eagle's Earth historical village









Infrastructural and political boundaries of Ontario's 'Far North' (base map from Google Earth)

## Homelands and Hinterlands

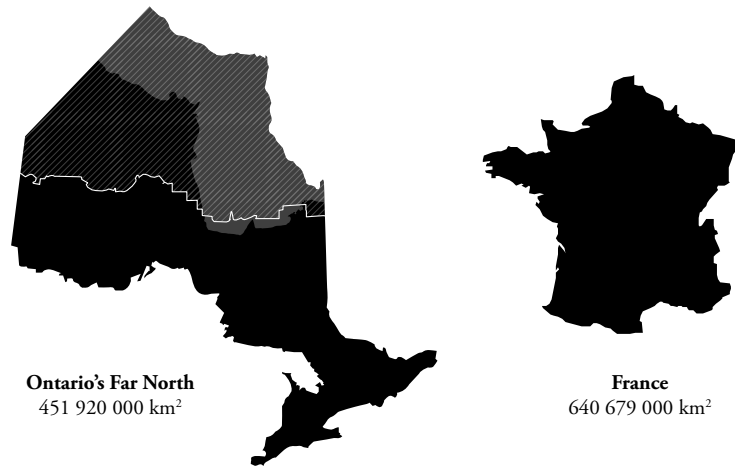


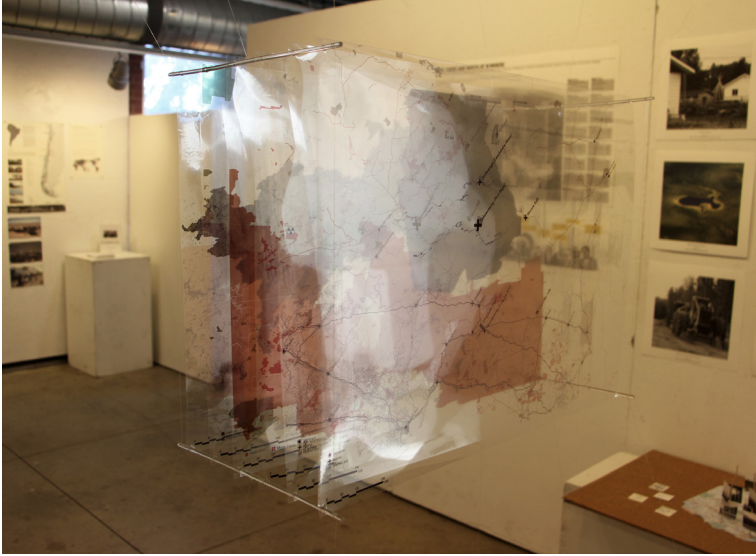
Diagram contextualizing the vast scale of northern Ontario

The mining claims in the James Bay lowlands dubbed the ‘Ring of Fire’ catalyzed a now almost decade long saga pitting industry, desperate to tap profits from extraction of mineral resources in the remote region, two levels of government whose division over the roles and responsibilities concerning the environmental assessment of development and its associated infrastructural networks are at best tenuous and the indigenous communities of the ‘Far North’ struggling to build capacity on the ground to capture revenue and employment opportunities from development on their traditional territory. This already complex understanding of the stakeholders and their associated agendas is still deeply mired by a neo-liberal bias that sees the stagnation of the ‘Ring of Fire’ development as primarily an issue of inadequate consultation on the part of government and industry with the implicated indigenous peoples. What has been made clear however, through years of faltering through augmented consultation strategies and framework agreements is that under the current paradigm the lived counter-hegemony of the remote indigenous communities of far northern Ontario cannot be reconciled with the capitalist development of natural resources in their traditional homelands.<sup>31</sup>

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31. Peerla, “*No Means No*”, 6.

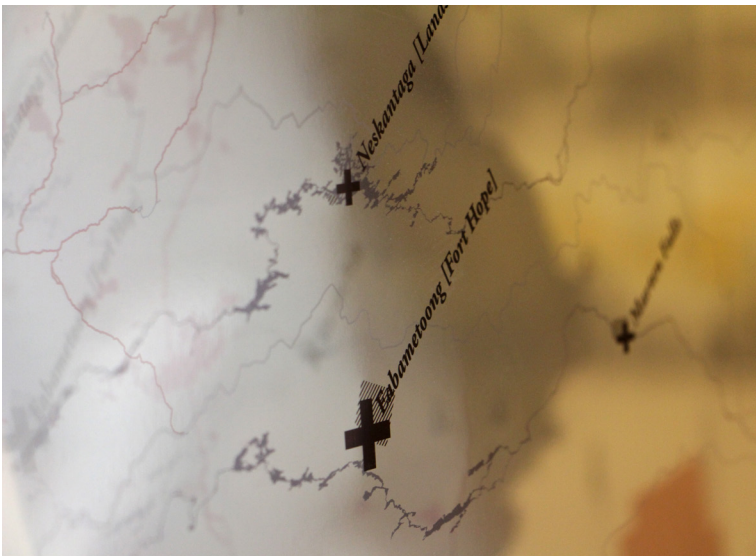




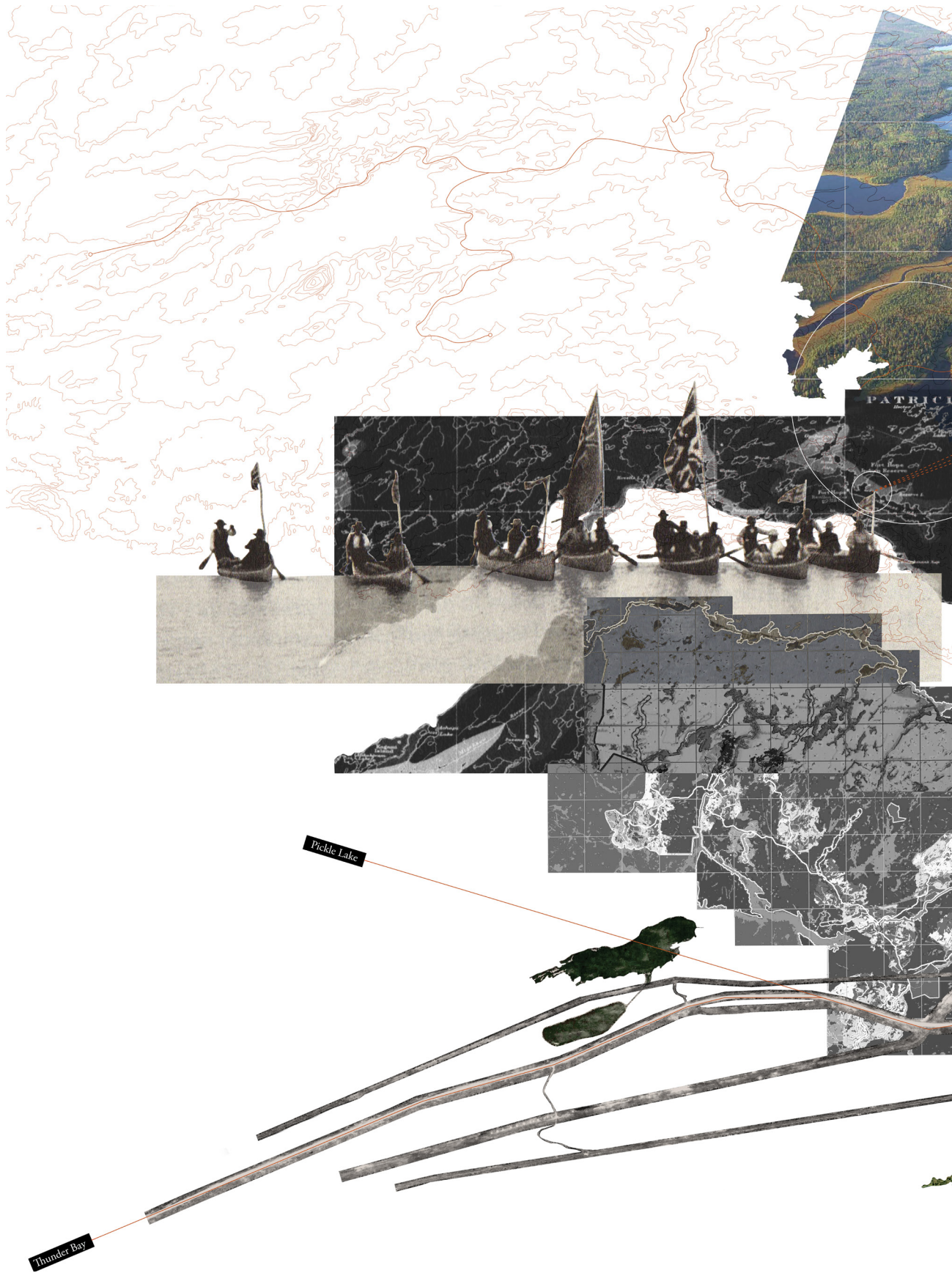
Map of layered transparencies from research trip exhibition.



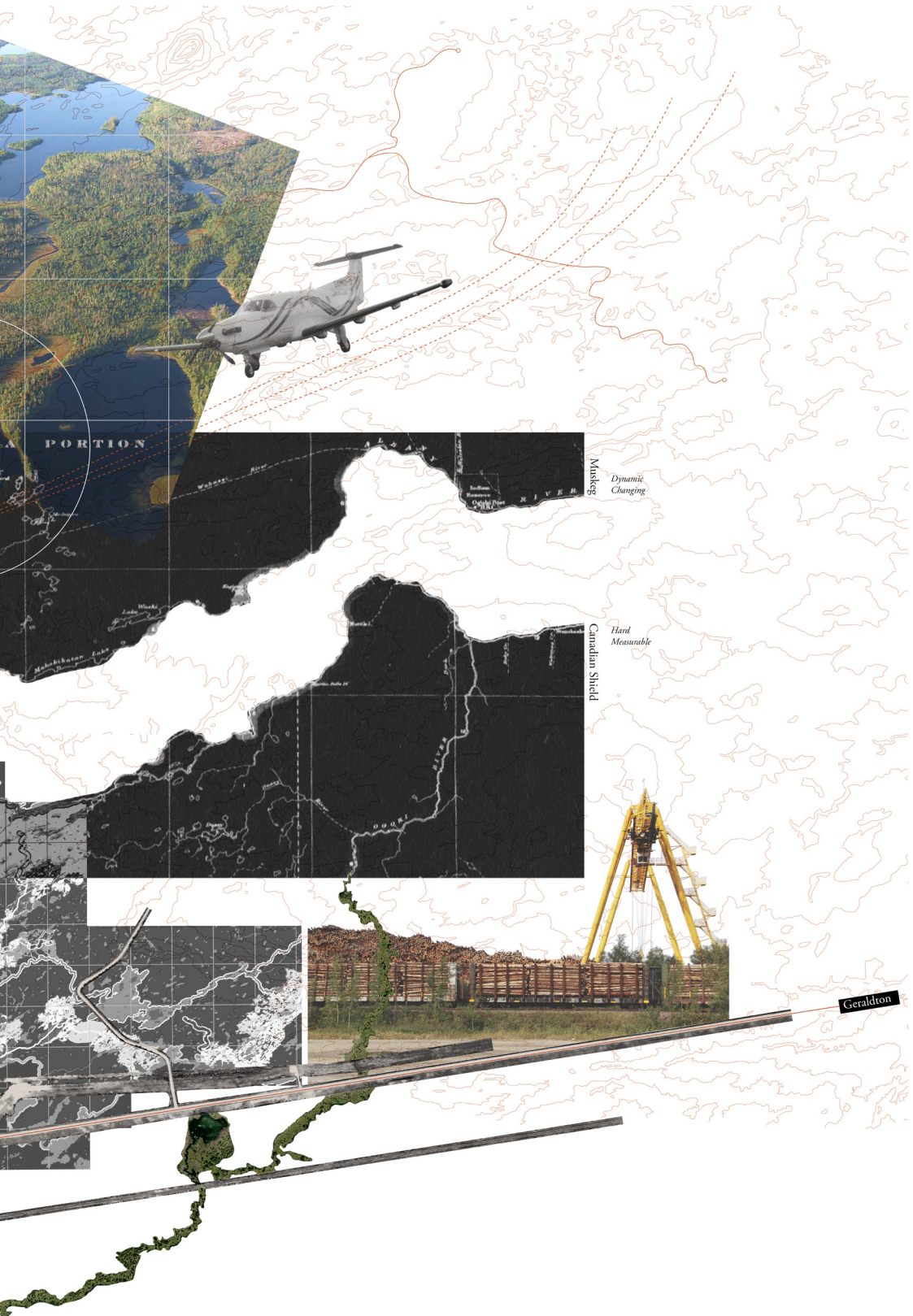
In this way the map becomes three dimensional, allowing the viewer to observe from one side an unobstructed satellite image of far northern Ontario.



From the other side, the satellite image fades into the background as the five other transparencies project layers of mapped information from infrastructure networks to mining claims.









Road construction impacts on the landscape



Road as wall through the muskeg  
(from trip sketchbook)

At 1: 100 000 000, the hinging issue is the infrastructural networks, or more aptly, the lack of such networks, both in the form of roads and power corridors in Ontario's 'Far North'. To the east the DeBeers diamond mine, which began production in 2008, exists as a prime example of the current paradigm of mining and extraction that is at odds with both the natural environment and a people whose historical existence and culture is inextricable based on a respect of nature. This remote mining operation relies on seasonal winter roads which trace the western coast of James Bay from Moosonee to Attawapiskat and then a private extension 90km to the west connecting to the mine site. While the reliance on the winter road to truck in fuel and materials is a logistical feat of substantial proportion, made increasingly more difficult by the impacts of climate change in the region, this operation is only possible due to nature of the resource being extracted.

While in the case of the De Beers Victor Mine, processed diamonds can virtually be brought to market in a knapsack, the chromite and other base metals in question in the 'Ring of Fire' would require a rail corridor or robust all-season road through the muskeg of the James Bay lowlands that would see a tireless, year-round flow of large trucks or railcars transporting ore to processing facilities further South. Three transportation corridors have been proposed since 2012, Toronto junior mining company KWG and Cleveland-based Cliffs Natural Resources both proposing a North-South corridor crossing both the Attawapiskat and Albany rivers, while Toronto based Noront Ltd. proposed an East-West corridor following current winter road routes to the existing all-season highway 599 at Pickle Lake.

The issues revealed through these major transportation corridor proposals as part of the mining companies' mandated environmental assessment reports submitted to the province of



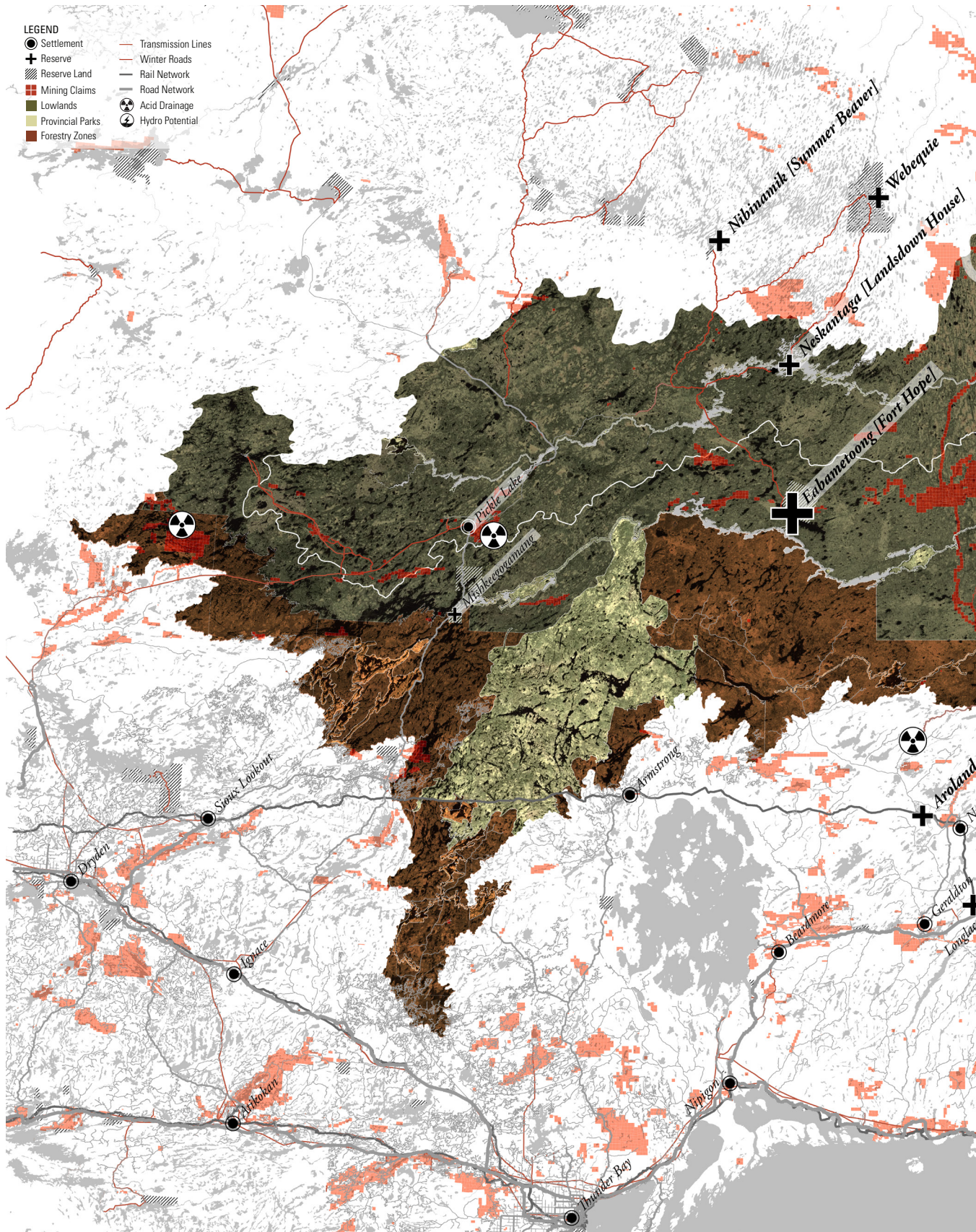
Ontario were twofold: on the one hand it revealed the incapacity of the regulatory process at both the provincial and federal level to assess the cumulative impacts of development and find consensus of the appropriate vehicles to finance such development and, more importantly, it demonstrated the utter disregard of these industry led proposals to address the demands of the implicated indigenous communities, to whom this hinterland is home. Bolstered by a recent history in the Canadian judicial system that has increasingly pressured governments to address the implications of aboriginal and treaty rights in the modern context of resource development, the nine Matawa Ojibwa communities of the region, represented by a common tribal council, asserted their voice in opposition to a perfunctory consultation process that aims to mask the persisting colonial attitude of government and industry as reformed. Amongst demands to be meaningfully involved in all aspects of the



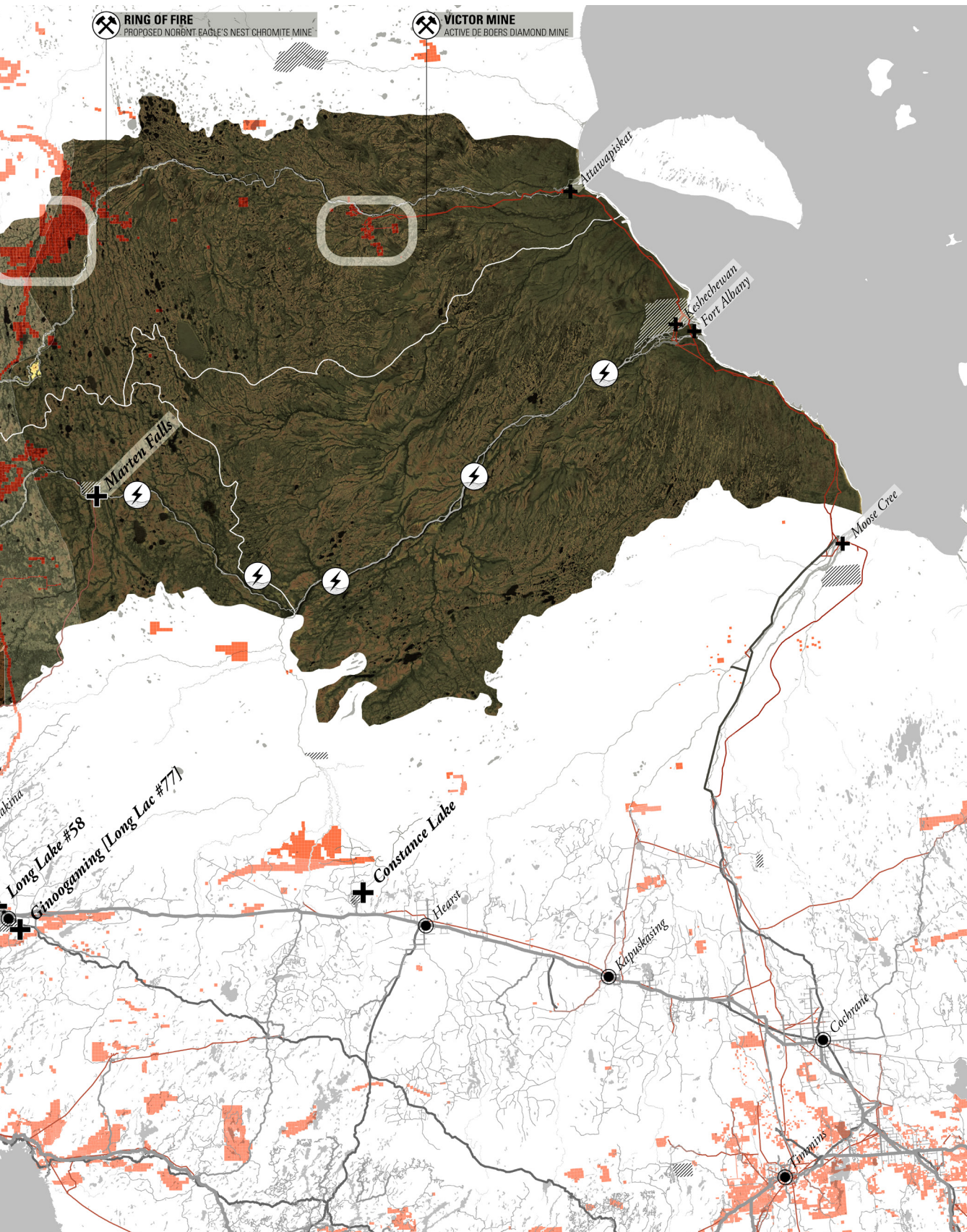
Mid-Canada Corridor:

Map by Chris Brakley based on original design by Pamela Richot/PlanningAlliance



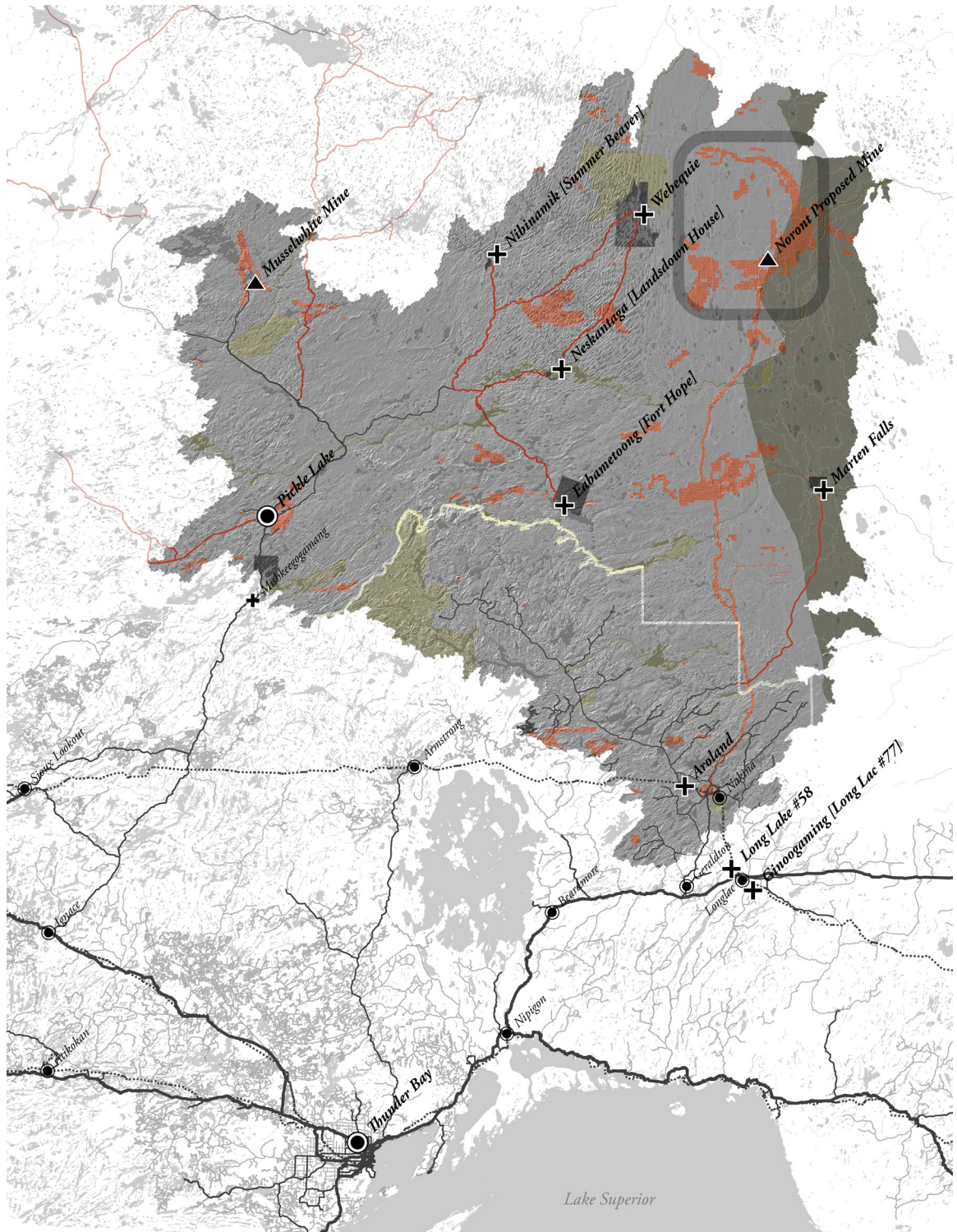






Industrial encroachment on the Albany & Attawapiskat river watersheds (base map from Google Earth)

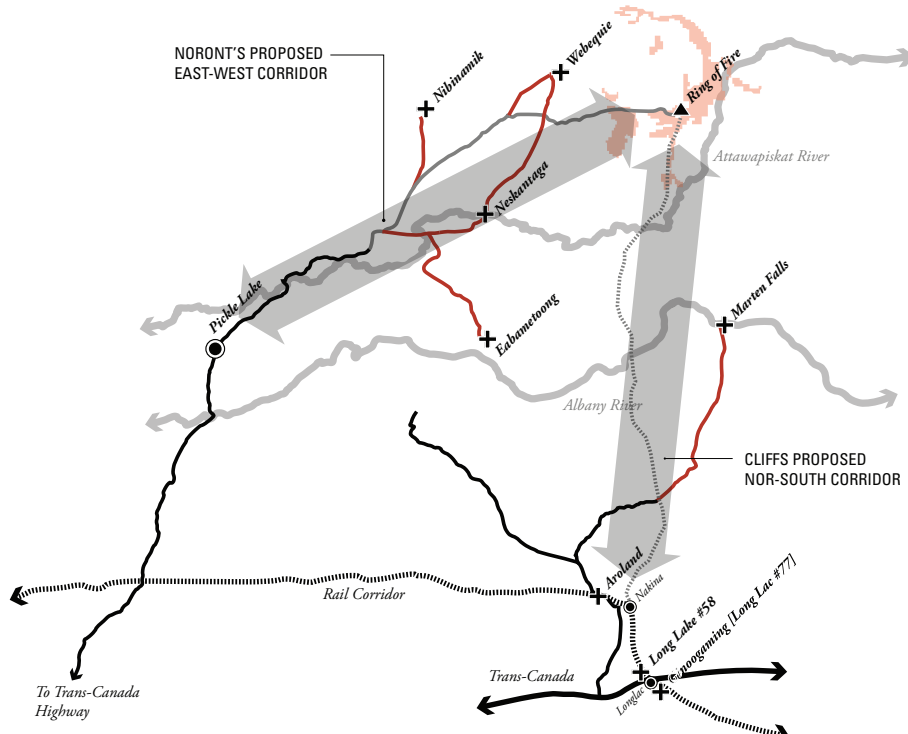




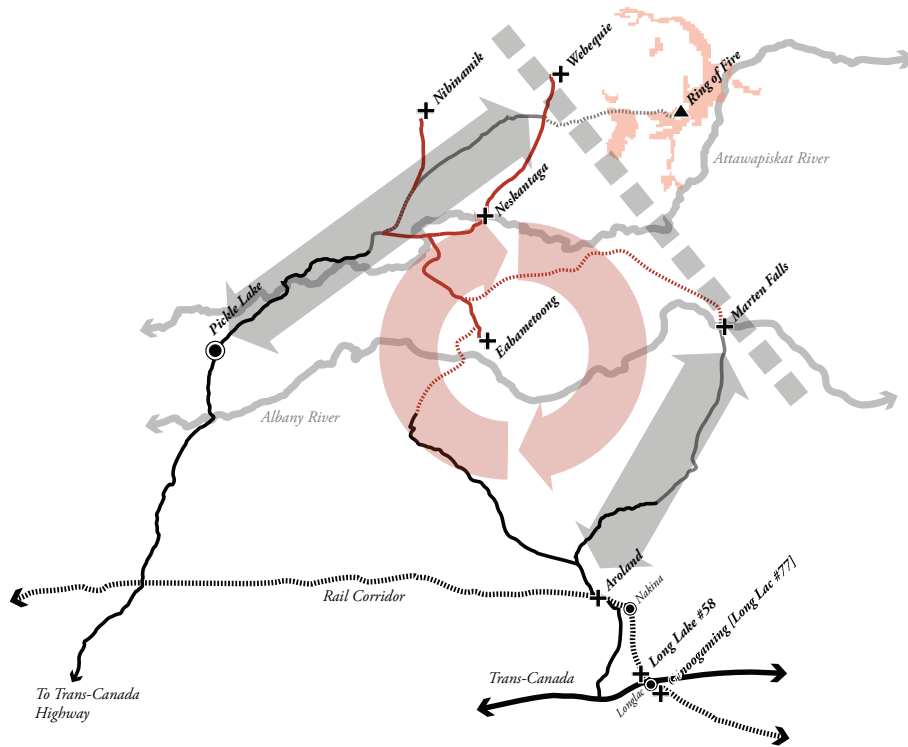
Existing transportation corridors of the Matawa territory (GIS information from Four Rivers, Matawa Environmental Services Group)

**LEGEND**

- EXISTING RESOURCE ROAD
- ROAD BUILT ON EXISTING WINTER ROAD
- ..... INDUSTRY WINTER ROAD
- COMMUNITY ROAD BUILT ON EXISTING WINTER ROAD
- ..... PROPOSED ALL-SEASON COMMUNITY ROAD



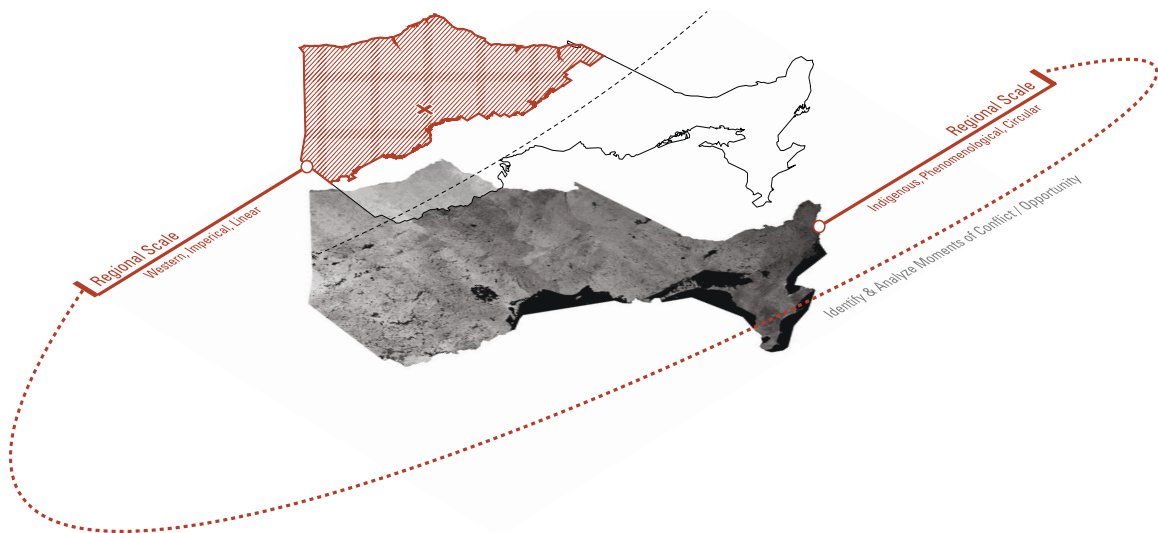
Industry based: East-West & North-South corridors



Community based: Network of exchange and control

development of any industrial project in the region, a bottom-line strategy for a regional all-season road network connecting their five fly-in only reserves to the Trans-Canada highway would have to be established before any development could take place on their traditional territory.

Suspending the narrow-minded approach to infrastructure development that in a broad sense defines the status-quo, in the visionary spirit of Richard Rohmer's proposed 'Mid Canada Development Corridor' of the 1960's, this thesis asks how a network might be developed in the 'Far North' that is driven by the socio-economic needs of the communities that will remain to live the legacy of any industrial development that may take place in the region. More significantly, how might this corridor mediate between the encroaching forces of industry and the as of yet isolated 'free space' of the indigenous communities of the region?



Dialogue between map & territory



## Chapter 5: Between Grid and Land

### Notes from the Air

*I board the small Nakina Air prop plane to Fort Hope with not a clue what to expect and better yet where I will stay.*

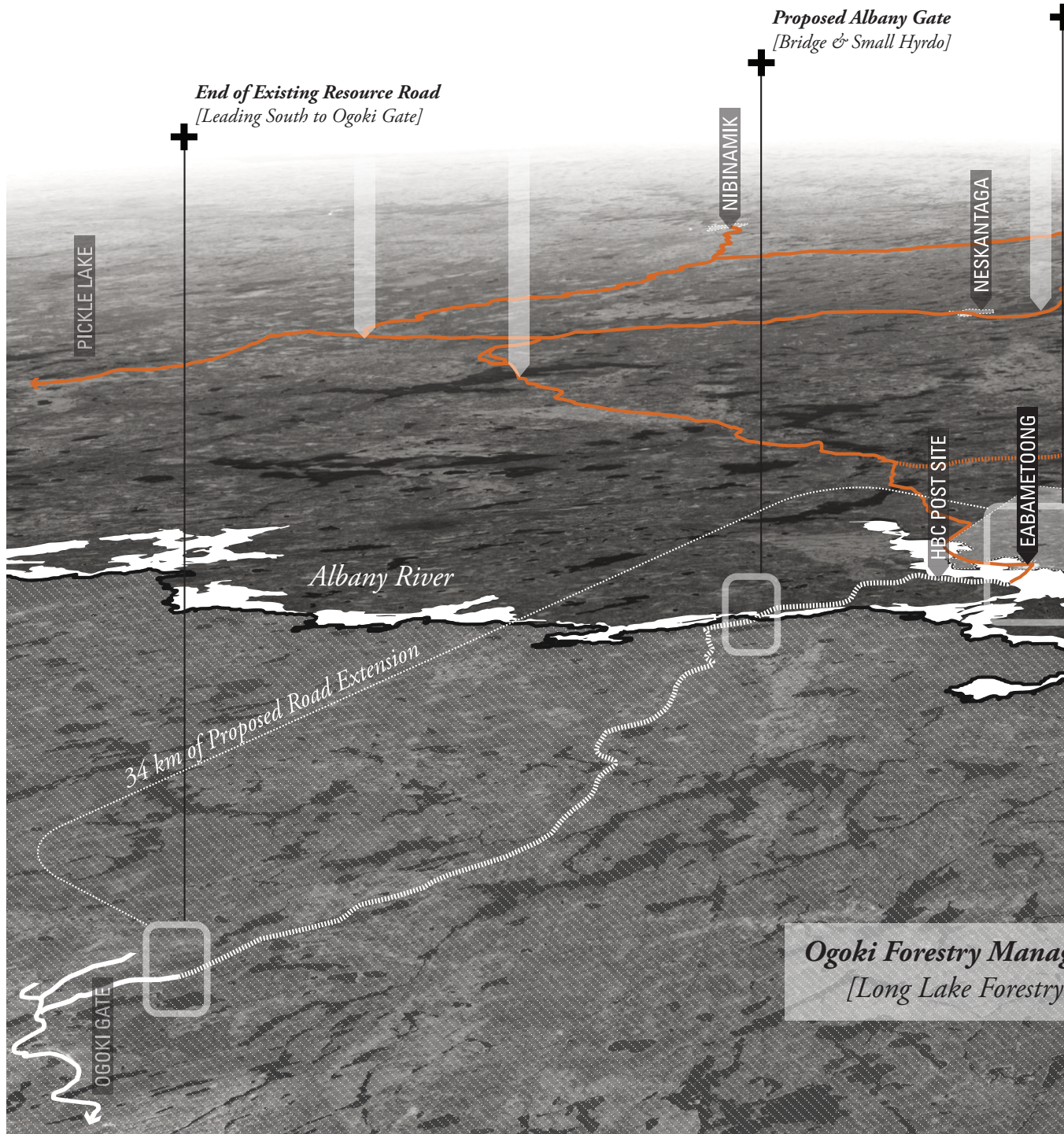
*This is easily forgotten, at least temporarily, as we head north – flying low over the endless expanse of blue-gray and green, the sun light dancing on the water as it pierces through the overcast sky. One can make out shapes and familiar forms in the amorphous curves of islands and sinewy rivers that snake through them towards open water.*

*The challenge and frankly sheer absurdity of building an industrial road through this place is all the more real as I take in the bird's eye view.*

*Day 17*

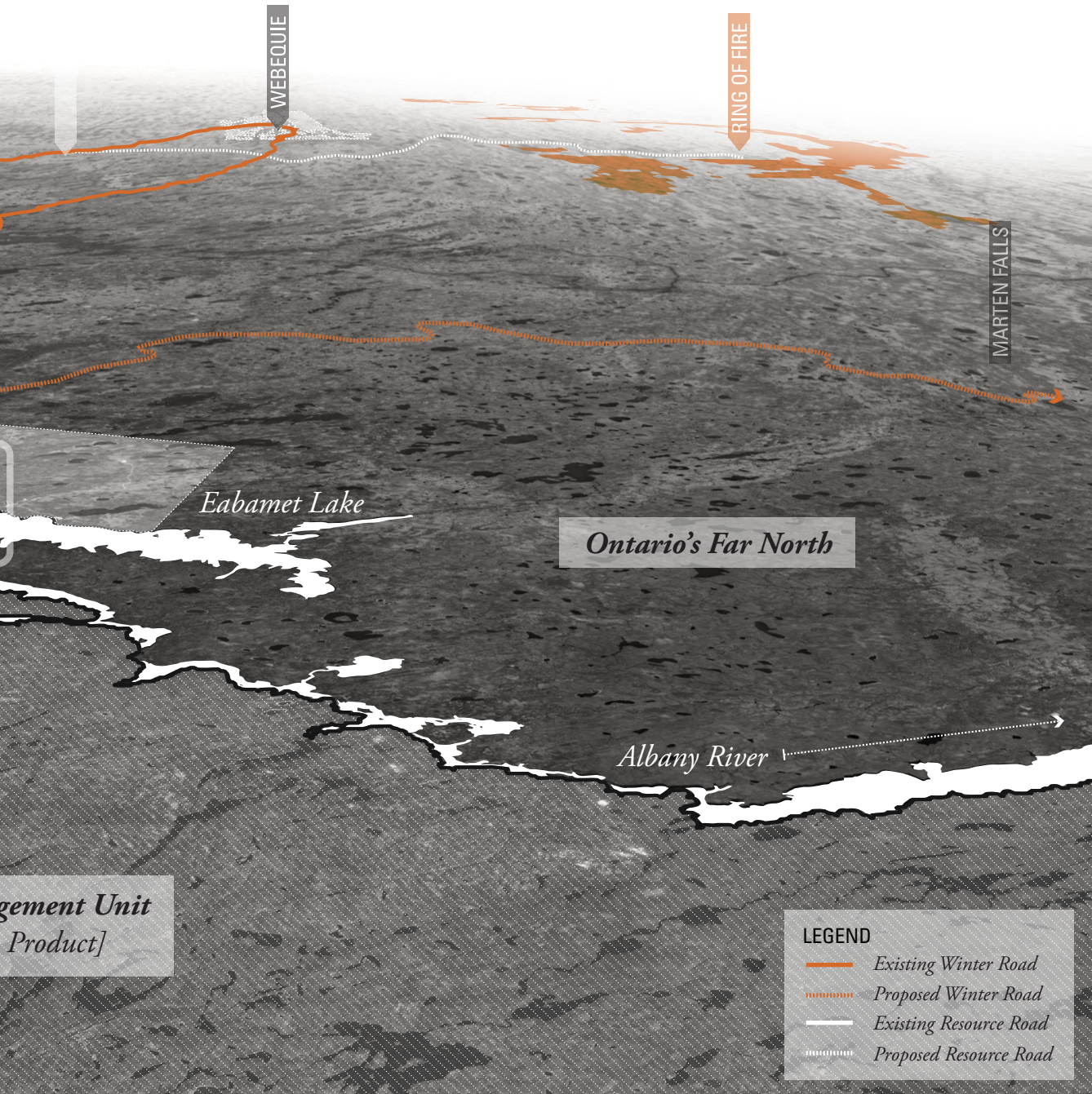


Flying north from Thunder Bay to Eabametoong (September 2015)





**Proposed Barge / Ice Road Crossing**  
*[Gateway to the 'Far North']*



Proposed road network illustrating potential nodes of exchange & control (base map from Google Earth)

## The Ephemeral Infrastructure

At 1: 10 000 the specific site of one community serves as microcosm for the issues of the regional scale – a locality within the larger network – at once defined by its site specificity while inextricably linked to broader social, political and physical registers.<sup>32</sup> The community of Fort Hope lies on the northern shore of Eabamet Lake whose waterbody is connected by a narrow rapids to the Albany River which flows from its headwaters to the West into the James Bay. For the remainder of the thesis I will refer to Fort Hope, the historic name of the Hudson’s Bay trading post that was established on Eabamet Lake near the turn of the 19<sup>th</sup>C, by its Ojibwa name, Eabametoong, which translates loosely to *place of the reversing water*.



The Albany River as it flows into Eabamet Lake

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32. Jeremy Till, “Here, There and North of Nowhere”, 19.

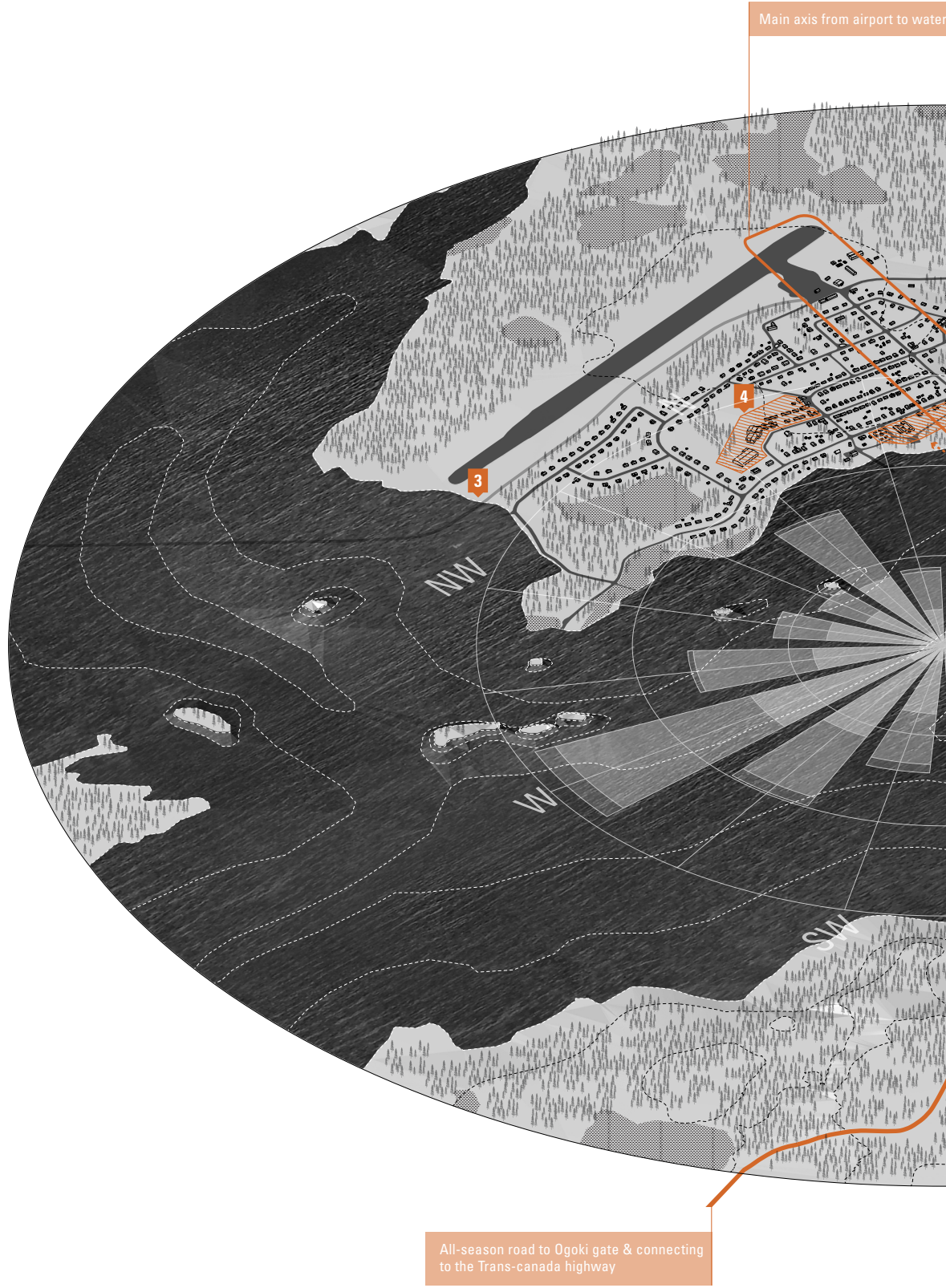


It is grounded in this reality that this thesis speculates on the future of the as of yet isolated reserves of far northern Ontario. It adopts the current stance of the Matawa First Nations in their demands for a community-based road network before any larger infrastructural projects granting access to mining the 'Ring of Fire' region might be established - if ever - and proposes a form that this network might take. Here, I return to the poignant image of the treaty commissioners – eight canoes abreast, with Union Jacks staked high behind their vessels as they cross the waters of Eabamet Lake on their arrival in Eabametoong. While we have now explored the full impact of the Treaty that would be signed on that day in the summer of 1905, what is perhaps most notable about the image is the ceremonial nature of their arrival into the community. The

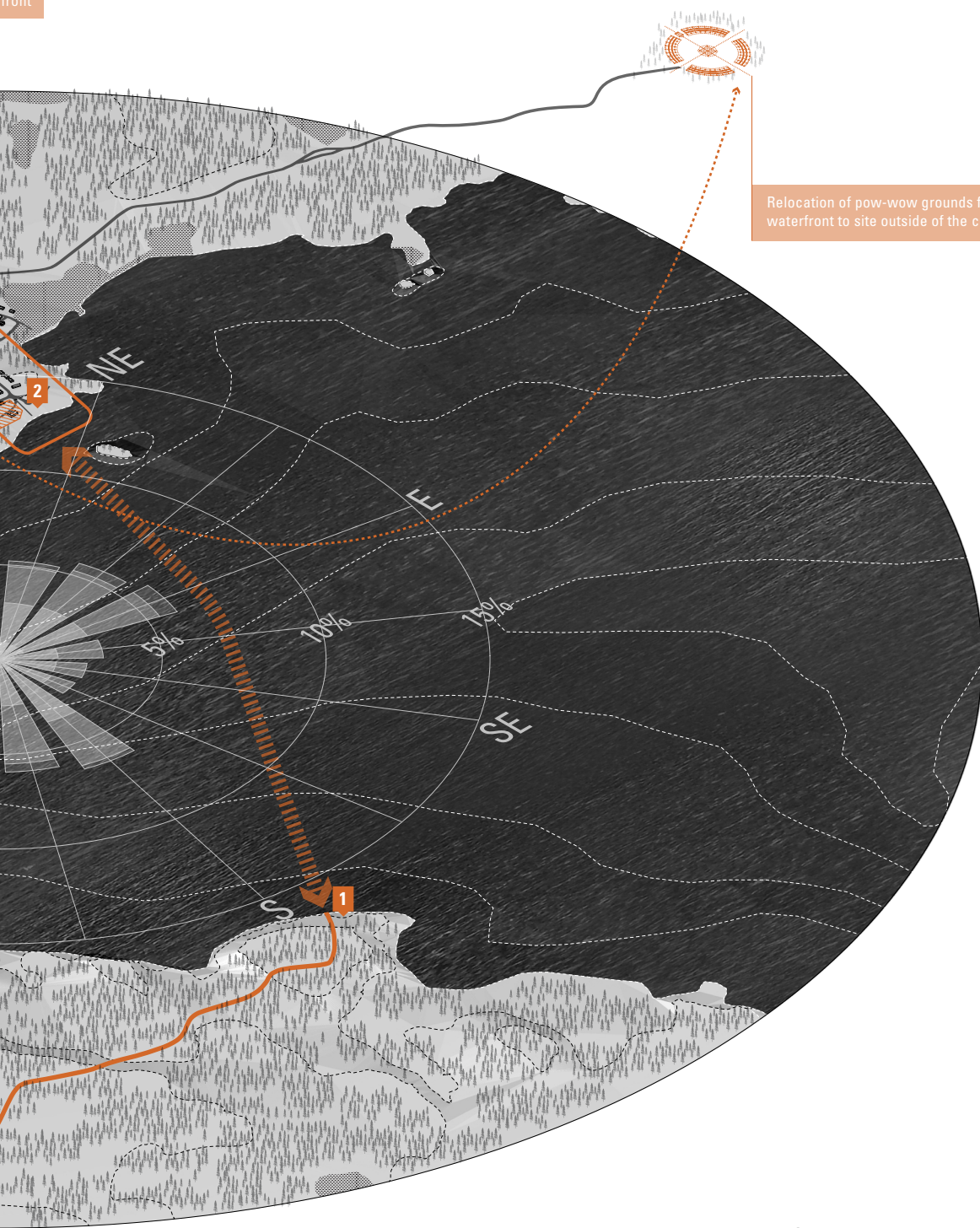


Frozen boat launch on the shores of Eabamet Lake.





front



Relocation of pow-wow grounds from waterfront to site outside of the community

**LEGEND**

- 1 *Outpost*
- 2 *Existing Community Buildings*
- 3 *Existing Winter Road*
- 4 *School & Arena Buildings*



mode of transport binding together two disparate cultures through the physical reality of the long and gruelling journey by canoe - the raised flags symbolic of a relationship between two sovereign governments, the remaining vestiges of the “middle ground” relationship of the fur-trade era. In this spirit, the thesis explores the potential of a road extending northwards to Eabametoong from the existing logging roads south of the Albany River. However, breaking from the industry-based road proposals, the road here crosses rather than circumvents the waterbody of Eabamet Lake, by barge or by ice road in the frozen winter months. In this way it serves to establish the community as a gateway, at once a place of exchange and control. Reciprocally, unlike the airplane which vastly abstracts the spatial and symbolic movement between North and South, this network remains tethered to cycles of seasonal change. Thus an argument is made for the importance of spatial realities grounded in the natural environment and not simply abstract changes in policy in the search of a new *middle ground* in northern Ontario.



Unloading cargo plane on the airstrip at Eabametoong First Nation.

## Erroding the Cartesian Grid

If only we could have made government people listen. We tried to tell them why space was important to us.

The most important thing is that it's from the culture – that's the way our people have always lived. We don't live like the white man, that's not our way. The white man lives close together, but we don't. We like to live far apart, in families. On the old reserve, you knew your place. Everybody respected your place. Nobody didn't build right next to your place....It wasn't private property, but it was a sense of place, your place, your force around you.

And another thing. When you have the space, you have a better chance to look after yourself, to be independent.

As soon as they started to bunch us up, the problems started, the drinking, the violence. This has a lot to do with being all bunched up.<sup>33</sup>

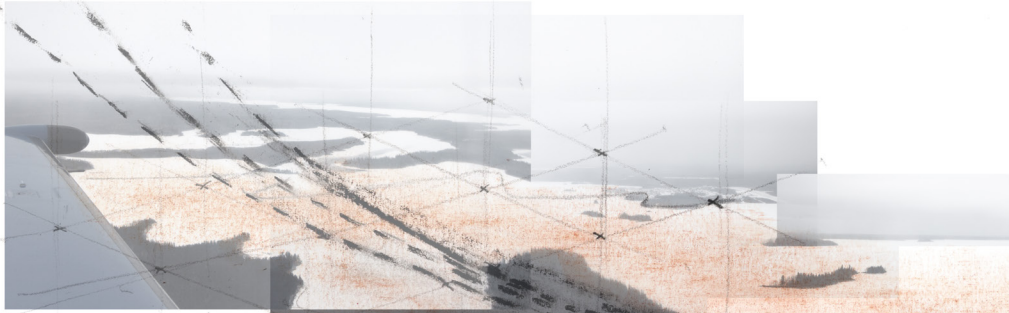
[Elder and former chief of Grassy Narrows First Nations  
in the 1970s]



Eabametoong from the air: settlement in the remote landscape

33. Shkilnyk, *A Poison Stronger than Love*, 173.





INDIGENOUS COMMUNITIES  
AT TRAVERSING THESE  
NAVIGATING AS THEY  
TWIN ORBITS OF COL

CENTER  
MARGIN

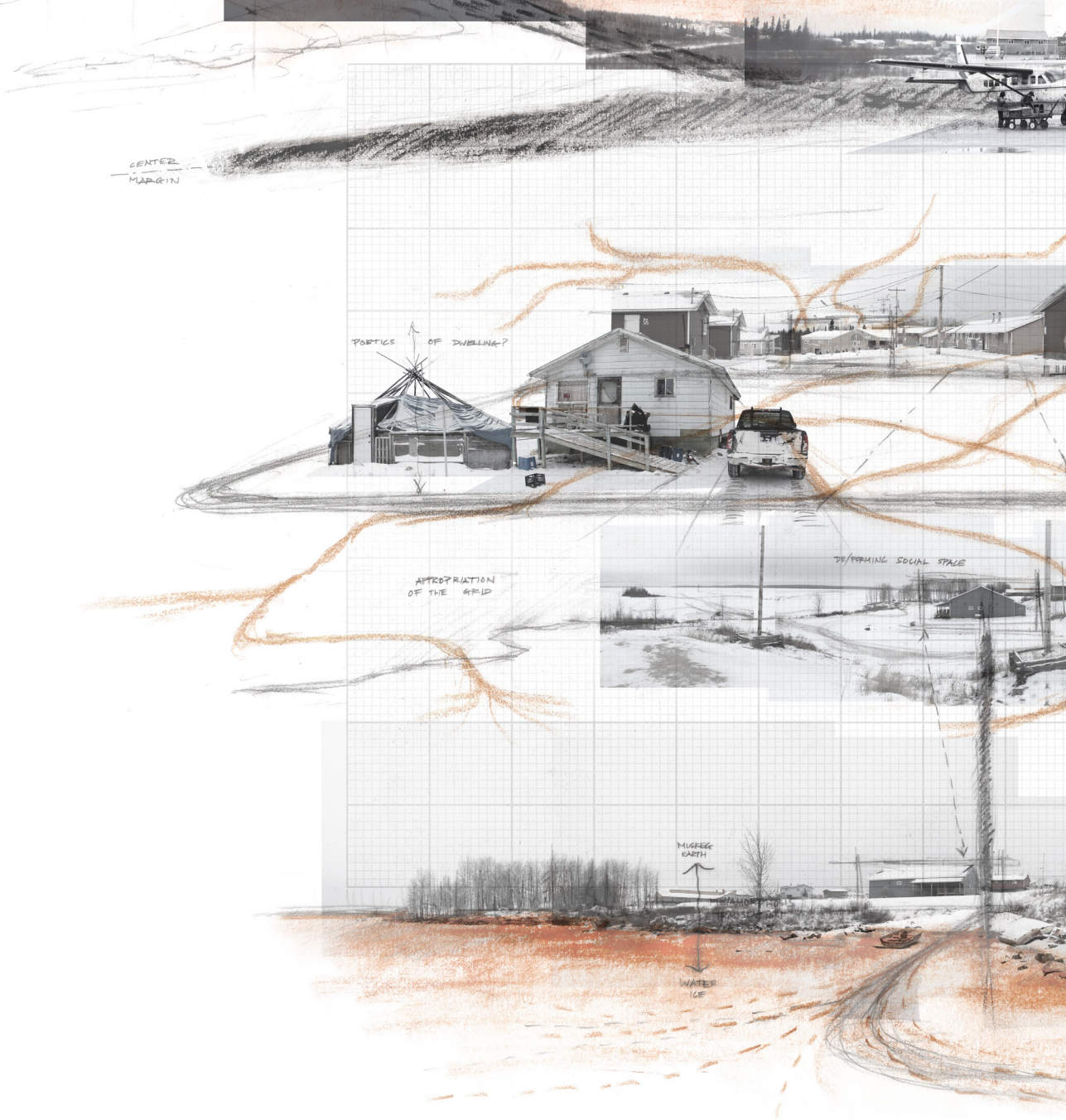
POETICS  
OF DWELLING?

APPROPRIATION  
OF THE GRID

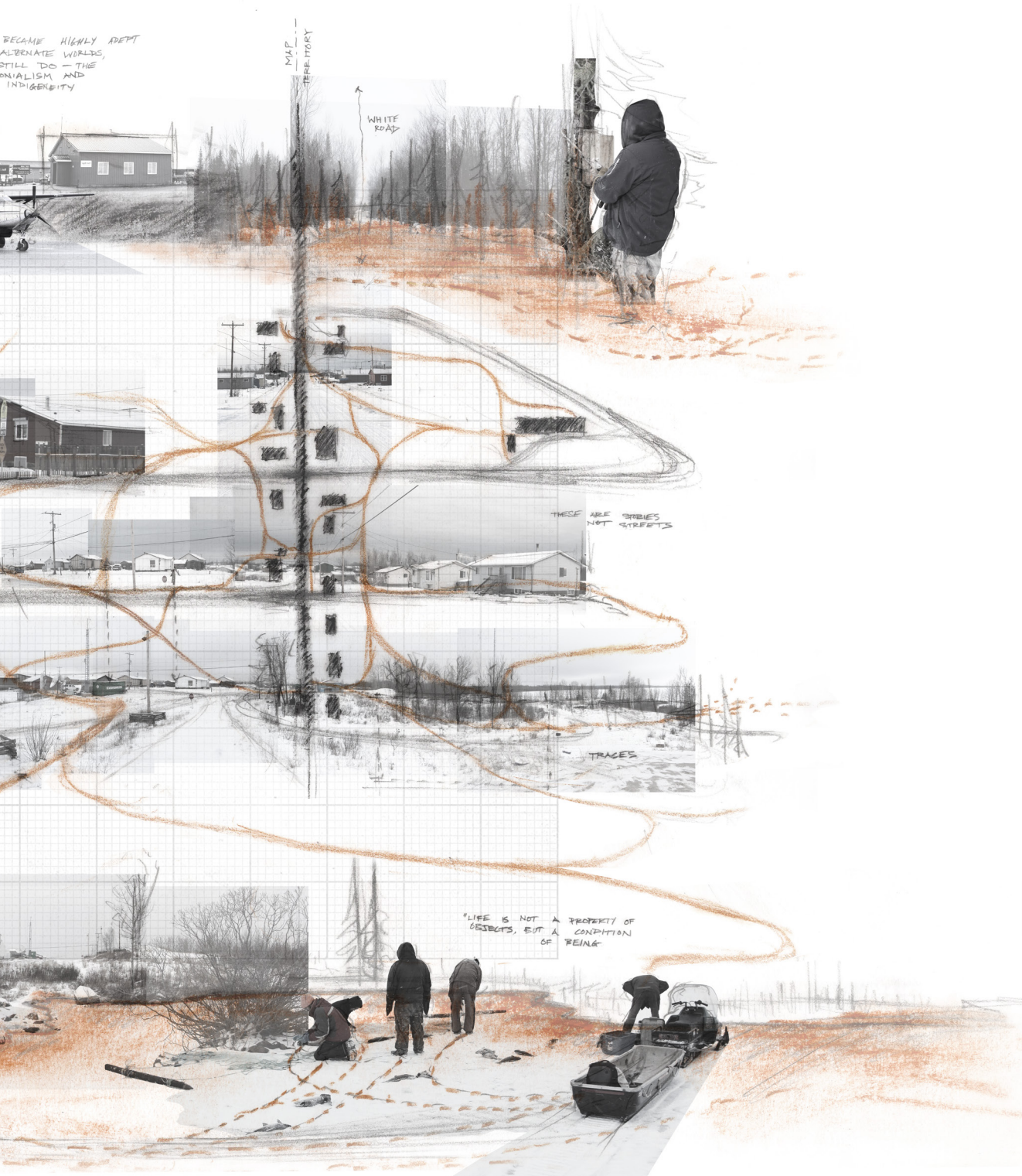
DEFORMING SOCIAL SPACE

MURKIN  
EARTH

WATER  
ICE







Between Grid & Land | Dialectic 1: 10 000



House in Eabametoong  
(September 2015)

The collage that opens this section of the thesis illustrates the dislocating spatial implications of this imported suburban settlement model which remains entirely at odds with traditional indigenous occupation of the land. This is what is meant by the dialectic of the *grid* and the *land*. The grid is representative of the entrenched western model of human occupation. Like the vast majority of reserve settlements in far northern Ontario established by the Department of Indian Affairs, the layout of the community was based on the pragmatic arrangement of “modern” infrastructural systems. In the case of Eabametoong, it was the high outcropping of stable and relatively flat ground – ideal for the placement of the airstrip – that decided the location of the settlement. But for a zone of trees and green space surrounding the site of the school, houses were laid in uniform rows stepping back from the water such that sewage and water mains could be easily connected to the new homes. In reality, this process of misguided “modernization” would result in major health problems due to the failures of poorly planned or non-existent water treatment systems and a housing crisis due to the unreliable provisioning of funding and materials for new homes.

The most dislocating condition of the new community was, and remains today, the reordering of the relationship to the water. Shkilnyk explains that previous to relocation, “the customary law of equality of access to life-supporting resources was reflected in the spatial arrangement of houses along the shoreline.”<sup>34</sup> Where previously houses were spaced out generously, each with direct access to water, now this access, both technically and spiritually, was buried beneath the soil in a faltering and unequal network of pipes that suffer in perpetuity from the seasonal heaving of the earth as a result of natural freeze-thaw cycles. Reciprocally, the stick-frame government housing that replaced more traditional log homes is characterized by poor insulation and sheathing materials,

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34. Ibid., 173.





Typical R2000 on-reserve dwelling



Traditional tepee dwelling



crawlspaces inevitably prone to the development of mold and are heated by wood-stove which commonly results in outbreaks of fire. Today, reserve homes are all mandated to conform to the national R2000 Housing Standard which, while in some ways is an improvement on older typologies, has resulted in prohibitively high construction costs due to the use of concrete and rebar for foundations and the use of imported materials that, in failure, leave the community unequipped to engage in maintenance or repair.

What this thesis tries to reveal however, amidst this critique of the current condition, are the moments and traces that mark the reassertion of the indigenous conception of space upon this imposed model. The plan study of the community illustrates this dialectic most clearly through the superimposition of the official zoning plan of Eabametoong with a hand-drawn map of informal footpaths and boat launches that can be read from aerial satellite images. This alternate network of movement belies the notion of property lines. Where in the South these inscribed boundaries would typically be manifested by physical borders in the form of privacy fences or even planted tree lines, on the reserve, “back yard” spaces become



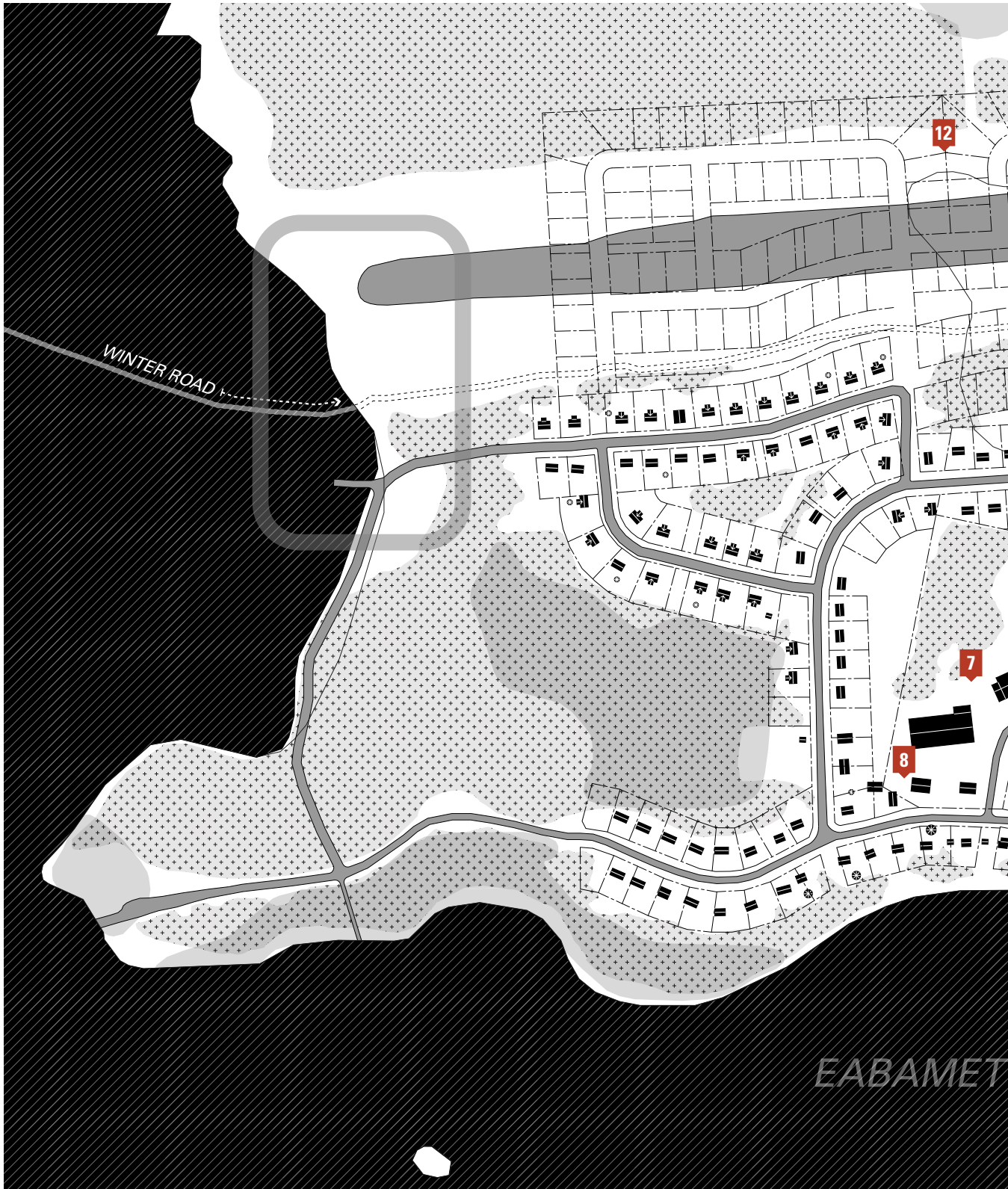
Wood storage sheds and traditional smoke hut built between government housing.

agglomerated into larger areas occupied in a more ad-hoc way by wood-storage sheds or more traditional tepee-like smoking huts. Furthermore, people move more fluidly according to changes in topography or more direct paths between community buildings (store, school, church, community hall, arena).

The site within the community that the thesis explores in more detail again serves as a microcosm of these larger issues. The plan of Eabametoong reveals one north-south road which reads like a spine linking the airport to the water where the band office, nursing station and community hall are all located. The proposed road network, which would connect to the logging roads south of the Albany River, becomes an extension of this spine across Eabamet Lake and reorients the community towards the waterfront. The underlying aim is that this reorientation goes beyond its pragmatic implications and serves to communicate, both to outsiders and within the context of the everyday life on reserve, the significance of the water as the cultural lifeblood of Eabametoong.



Arrival into Moose Factory reserve  
via freighter canoe.







Eabametoong community plan & key buildings









Juxtaposing zoning boundaries & informal footpaths in Eabametoong



## Chapter 6: Between Space and Time

### Notes from the Land

*I don't get a chance to write this until sitting down for lunch and a break from the road just south of Sudbury.*

*It is hard to put into words my experience in Eabametoong this past week. I arrived, an outsider with only loose connections and nowhere to stay, and was welcomed undeservingly by the community – lifted by the many passionate conversations, jokes made at my expense and the generous meals that were shared with me.*

*Nowhere else could I have shown up in this impromptu was only to find myself in the same room as all of the Matawa Chiefs privy to their meetings and presentations. It was very influential for me to be able to observe this political process – the struggle between traditional community consensus decision making and an imposed Western system of elected chiefs on two year terms. The Chiefs continually stressed their reluctance to act unilaterally on behalf of their members, reasserting the fundamental imperative to bring the issues and resolutions back to the community to educate and negotiate the myriad opinions, suggestions, concerns of youth and elders alike.*

*And yet here we are, in a bind with industry and government that will require rapid mobilization of communities to educate, train and build the political and social infrastructure around them to be poised and ready to sit at the table and negotiate in a firm and purposeful way.*

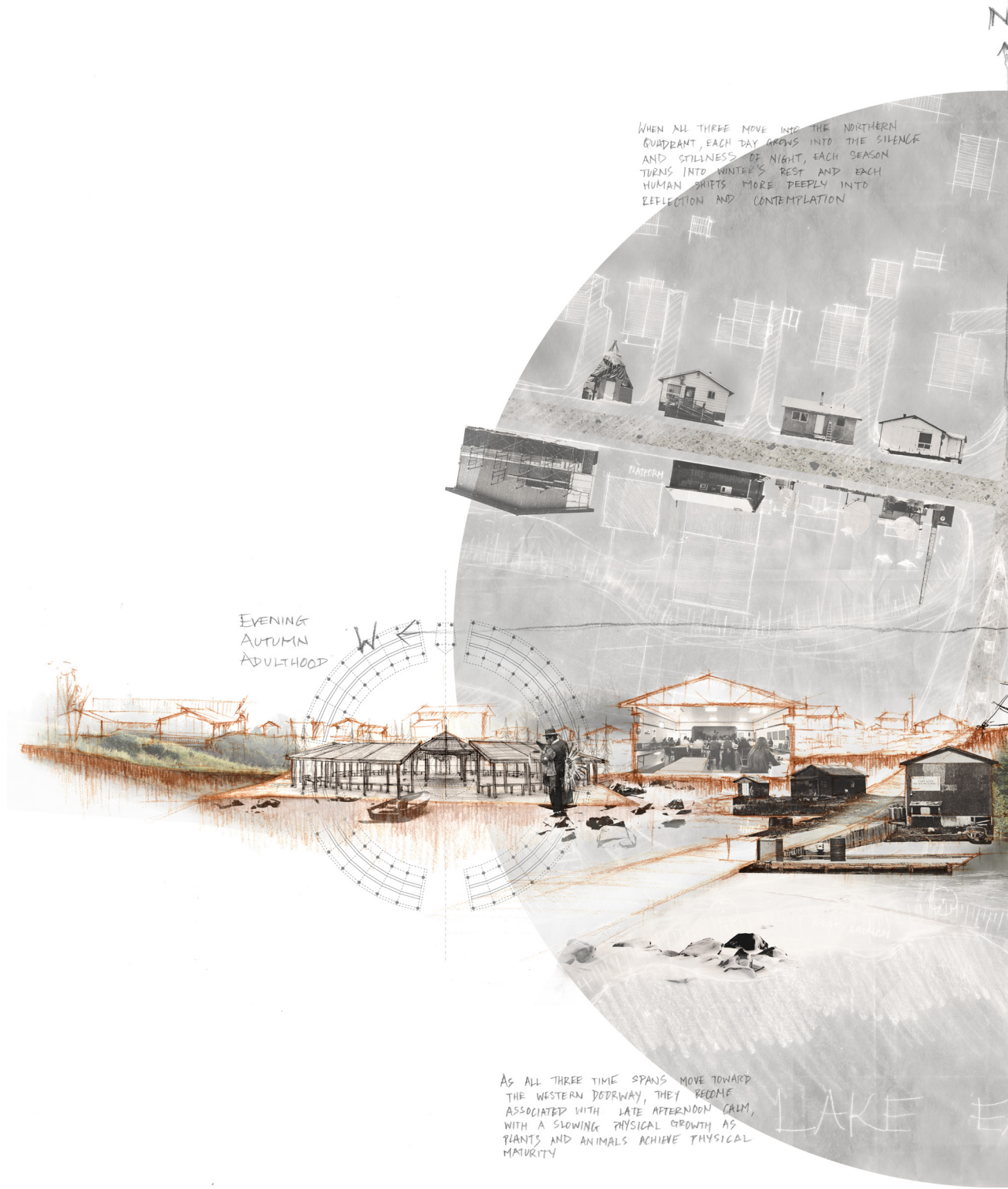
*What struck me the most was the vitality of the people and of the community. Life here is hard and very real – relations, weather, sustenance, financial well-being are all an everyday struggle. There is no room for passivity – no room to take this life for granted. You can feel this spirit, this life-blood in the genuine smiles of people, in the*

*calm and thoughtful poise with which people speak, with the care that is taken to thank other chiefs and delegates for their presence and words before speaking oneself.*

*Perhaps the most powerful moment was when an Eabametoong elder and former chief spoke mid-morning on Thursday – the second day of the meetings. This man had helped find me a place to stay with his son while I was visiting – was a quiet, soft spoken man with a kind face and a knack for making off-the-cuff jokes now and then to lighten the mood. He had been sitting to the side and not at the central round of tables and microphones in the middle of the hall where the Chiefs and their advisors sat.*

*Following a presentation by Matawa's Four Rivers Department – their environmental and mapping branch who are focused on trying to tackle the environmental assessment process at a regional scale – he calmly took a seat beside Eabametoong Chief Elizabeth Aitlookan. Speaking partly in English and partly in Ojibwa, he reminded everyone of the recent loss of a young man in the community – he reminded everyone of the debilitating cost of a carton of milk and fresh produce at the local store and the imperative to act now as a collective for the sake of the community above all else. He stressed that with all the talk of regional plans and billion dollar road networks – if it is to mean anything it must be in support of the people. He spoke passionately about plans in Eabametoong to build a community greenhouse so that they might be able to grow their own herbs and vegetables once again.*

*This simple and powerful thought really concretized the reality of this Ring of Fire debate. It is not time for empathy but for action, and if my thesis can in any way assist these communities in moving forward to assert their inherent rights and craft a new path towards mutual benefit rather than glad-handing and conflict then it will all be worth it.*



WHEN ALL THREE MOVE INTO THE NORTHERN QUADRANT, EACH DAY BECOMES INTO THE SILENCE AND STILLNESS OF NIGHT, EACH SEASON TURNS INTO WINTER'S REST AND EACH HUMAN DIPS MORE DEEPLY INTO REFLECTION AND CONTEMPLATION

EVENING  
AUTUMN  
ADULTHOOD

AS ALL THREE TIME SPANS MOVE TOWARD THE WESTERN DORWAY, THEY BECOME ASSOCIATED WITH LATE AFTERNOON CALM, WITH A SLOWING PHYSICAL GROWTH AS PLANTS AND ANIMALS ACHIEVE PHYSICAL MATURITY

LAKE E



NIGHT  
WINTER  
ELDER

THE START OF A NEW LIFE IS  
EQUATED WITH THE START OF  
A NEW DAY AND START OF A  
NEW YEAR

FORMER ANGLICAN  
CHURCH SITE

SITE OF OLD  
SAWMILL

MORNING  
SPRING  
BIRTH

AS EACH DAY, YEAR AND LIFE MOVE INTO  
THE SOUTHERN QUADRANT, THEY DEVELOP  
SIMILARLY: THE SOUTH, FOR INSTANCE,  
IS THE TIME OF FULL LIGHT FROM  
THE SUN OF EACH DAY, FULL SEASONAL  
FLOWERING IN THE NATURAL REALM AND  
THE FULL ENERGY THAT COMES WITH YOUTH

ABAMET

NOON  
SUMMER  
ADOLESCENCE



## Rounding a Linear Relationship

I enjoy admiring the ‘good’ detail as much as the next architect, which is probably excessively more than the average punter for whom the shadow gap is somewhere dirt collects rather than a place of near spiritual necessity. But it is to argue that our aesthetic and technical twiddlings - whilst the world burns - are accorded a reverence, and association with resistance, that they simply do not deserve. Holding to the hope of redemption through tectonics is only tenable under a belief system that posits the “autonomy of architecture”. As soon as one situates, as one must, architecture - as both practice and product - within the social lifeworld, then that hope crumbles in the face of dirty reality.<sup>35</sup>

In the preceding chapter, the far-reaching implications of a community shaped by the friction between two competing philosophies on human inhabitation of the land were explored. As the project moves into the 1:100 scale, the design project is guided by this underlying ambition to reassert a more tangible and productive dialogue between the waterfront and the everyday life of the community. The architectural strategies that address notions of climate, topography, materials and program will be explored in the following section.

The collage entitled *Between Space and Time* begins to illustrate how an architectural intervention along the waterfront of Eabametoong might address the more dynamic aspects of spatial ordering inherent in indigenous culture. As one thematic layer, the drawing blends together imagery of the site in its many seasonal phases, merging the soft muskeg of early spring into the full greenery of summer and ultimately into the white, frozen months of winter. In this way it serves as a reminder of the ever-emergent nature of the site and challenges the design strategy to resist the reading of the land as stagnant, as is all too often the default method of site analysis. Overlaid on this notion of seasonal cycles are the interconnected cycles of communal memory, understood spatially through the many structures and

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35. Till, “Here, There and North of Nowhere”, 17.

events that have historically occupied the site. Two of these historical moments, still read in the traces of foundations and the levelling of the earth, are particularly relevant to the thesis. Immediately east of the north-south axis, linking the airstrip to the lake, is the site of the former sawmill that was operational in Eabametoong until the late 1970s when government regulation of lumber rendered the mill obsolete (this will be discussed in more detail in *Constructing Local Economy*). The sawmill was located along a small cove, just below a dip in the landscape that both sheltered it from prevailing western winds and provided an efficient leeward location for logs harvested farther north to be floated into the site. In this way, the foundations of the old sawmill provide clues in how to thoughtfully negotiate local climate and, perhaps more importantly, remains as the physical trace of an era when the waterfront was used more actively as a site of industry and everyday inhabitation. To the west, directly in front of the current community hall, is a level area adjacent to the water's edge that was formerly used as the community pow-wow grounds. Today, the pow-wow grounds are located outside of the community, a short drive west from the "town-site" of Eabametoong. The



Image of the waterfront in Fort Hope in the 1970s from *When Freedom is Lost*.



Eagle's Earth pow-wow arbour  
at Constance Lake First Nation  
(August 2015).



reasons for its relocation are largely uncertain but it is likely that issues of sustained social unrest within the confines of the planned settlement and the strong influence of the Christian churches, which historically had denounced the practice of such traditional ceremonies, played a considerable role in this dislocating practice.

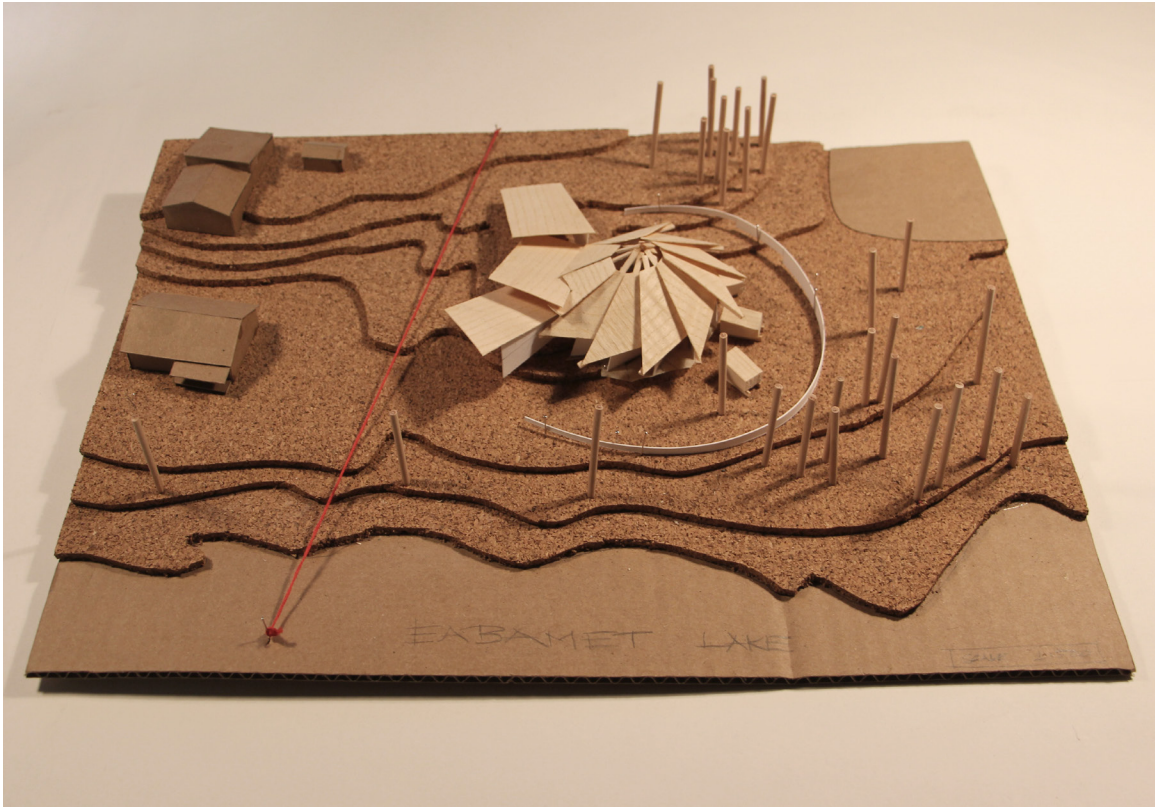
The pow-wow is an annual ceremony hosted in summer that gained resurgence in the latter half of the 20<sup>th</sup>C across Canada as an important forum for indigenous communities to visit relations and celebrate cultural heritage while also serving as a site for cross-cultural sharing with non-indigenous attendees and participants. Spatially, the pow-wow is organized in concentric circles oriented to the cardinal axes with the drums and musicians in the center and dancers, audiences and vendors emanating outwards. This ordering, which is the physical embodiment of the indigenous medicine wheel, both broadly communicates the philosophy of the circle as an inclusive and non-deterministic form as well as the significance of the central drum which grounds the circle and is symbolic of the heartbeat of Mother Earth.

It is this reading of the pow-wow as an architectural form that both communicates the indigenous concept of spatial ordering while providing a space for cross-cultural sharing that this thesis takes

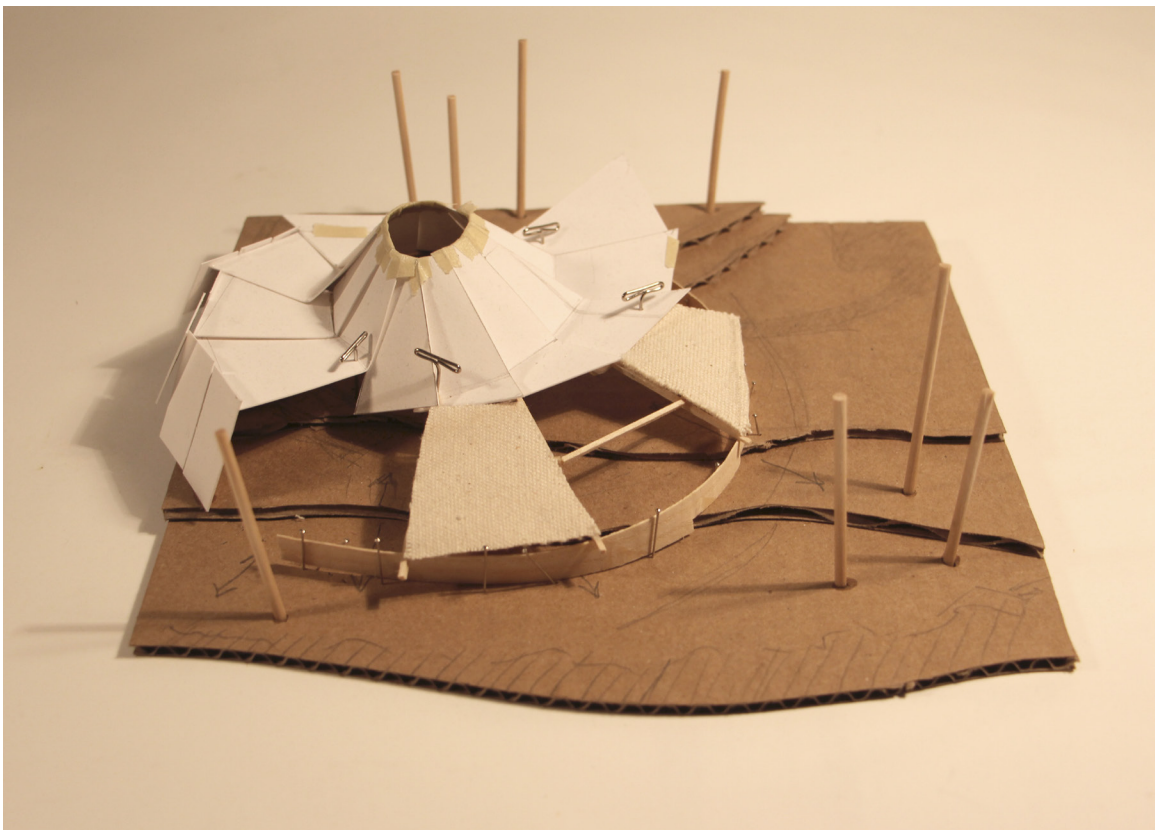


Pow-wow drum circle at Wabigoon Lake First Nation (August 2015).

inspiration from. Merging the critique of the current paradigm of “consultation” from Chapter 2 with the argument made here for the revival of the community’s deep connection to the waterfront, the thesis proposes the establishment of a new place of exchange sited on the threshold between the everyday reality of the reserve and broader networks of southern reaching roads and flows of information. Framed through the architectural lense, the project confronts the current condition in two important capacities. First, it contends that if we are to transcend the persisting hegemony of current “consultation” practices, this must necessarily take place on reserve, firmly grounded on the land in question, and not in the rented hotel convention rooms of Thunder Bay or any other southern center of power. Secondly, the argument is made that architecture and thus the ordering of physical space must play a vital role in bridging these seemingly disparate worldviews. In other words, so long as the community hall in Eabametoong where on-reserve consultation currently takes place remains a metal shed-like building, rectangular in plan and built entirely by outside contractors and labourers hired through government, a shift towards a new model of cultural exchange while remain thwarted. This is what is meant by the need to round a linear relationship.

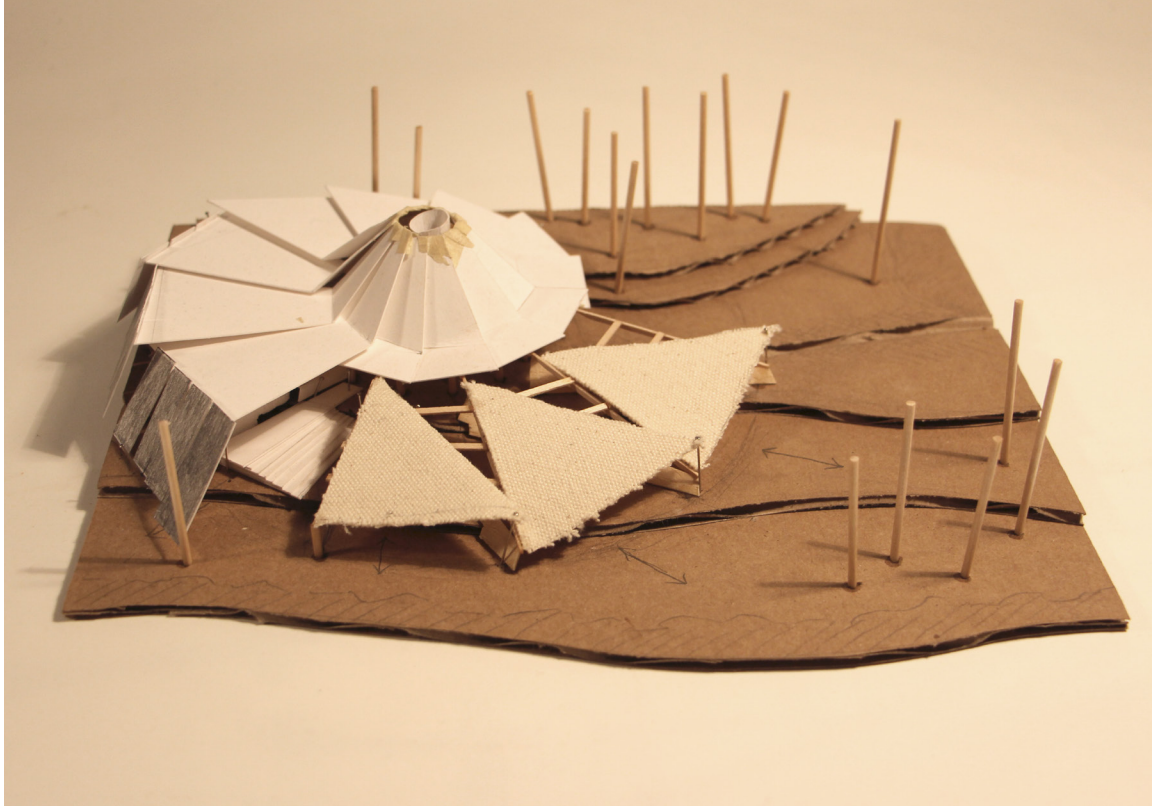


1:500 Sketch Model (with larger context)

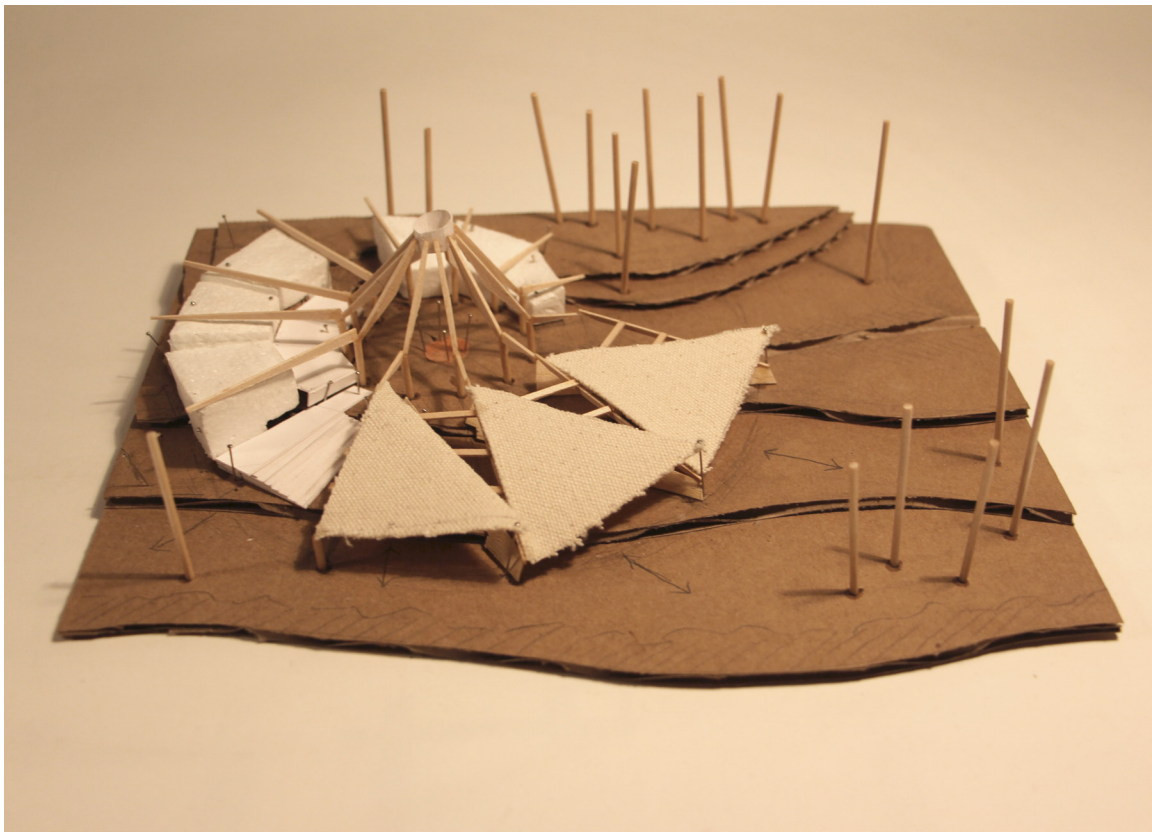


1:500 Sketch Model (experimenting with spiralling roof forms)



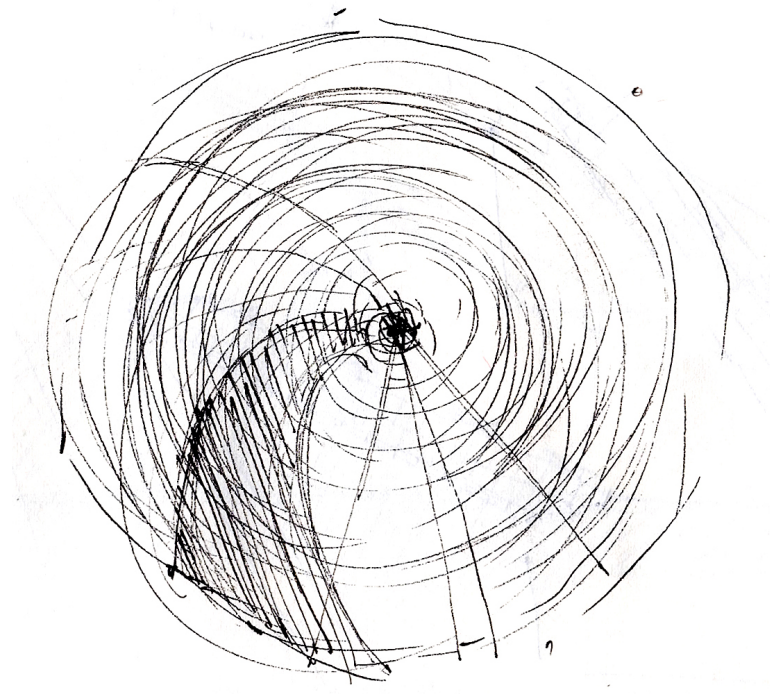


1:500 Sketch Model (continuous spiral iteration)



1:500 Sketch Model (with the roof removed)

In this spirit, the pursuant site plan speculates on a possible future condition of the Eabametoong waterfront. A circular meeting place is the focal point of the site, while secondary spaces and structures spiral off of it, implying an open-ended approach to building that resists the existing typology of box-like “object” buildings that are entirely divorced from this more careful reading of site, understood through climate, topography and existing paths of movement. A large snow-fence structure mediates between the road and the nestled stretch of land to the east, calibrating drifting snow in the winter months to form a large protective berm around the central structure. An existing footpath from the end of the formal road network of the community down to the water informs the main entry to the spiralling space and continues eastward to Lake Eabamet passing through the proposed structure of the reconstructed sawmill.



Spiralling (from trip sketchbook)

## Recovering Instrumentality

### Constructing Local Economy

All I ever wanted for myself and my family was a small tourist camp that I could make a living out of. That's all I wanted. And I know that's all everybody around this room wanted.

And I suppose, too, that's all a lot of Indian people ever want – a chance to make something for themselves without always having to go to the government for help. But our dreams are always just dreams because of the government, and I think they always will be just dreams.

We ask them for help and they always say: 'Yes, we'll help you,' but they never tell you about all the strings attached. You can have money for your business but don't try too much to compete because we won't let you. You can have money for your business but make sure you run a job-creation program at the same time.

And then they ask: 'Why doesn't your business run on its own? Why do you always need government money?' And they ask you this without knowing they are the ones who are responsible. They just seem to forget.

Maybe someday things will change. I hope so, because if they don't, my sons and your sons will go from here, and you and I will want them to.<sup>36</sup>

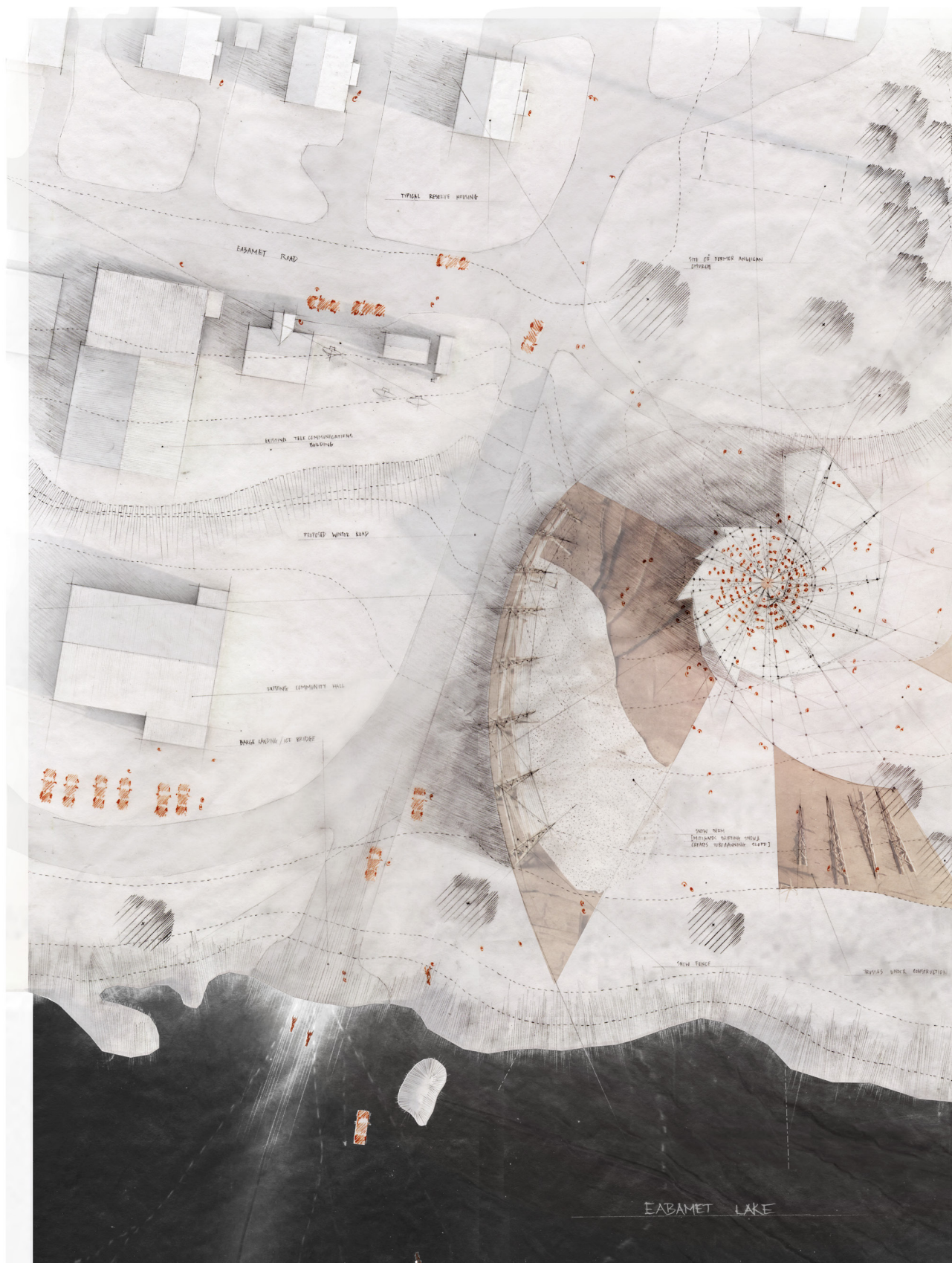
[President Fort Hope Development Corporation, 1979]



Image of workers at the sawmill in Fort Hope in the 1970s from *When Freedom is Lost*.

36. Driben, *When Freedom is Lost*, 86.



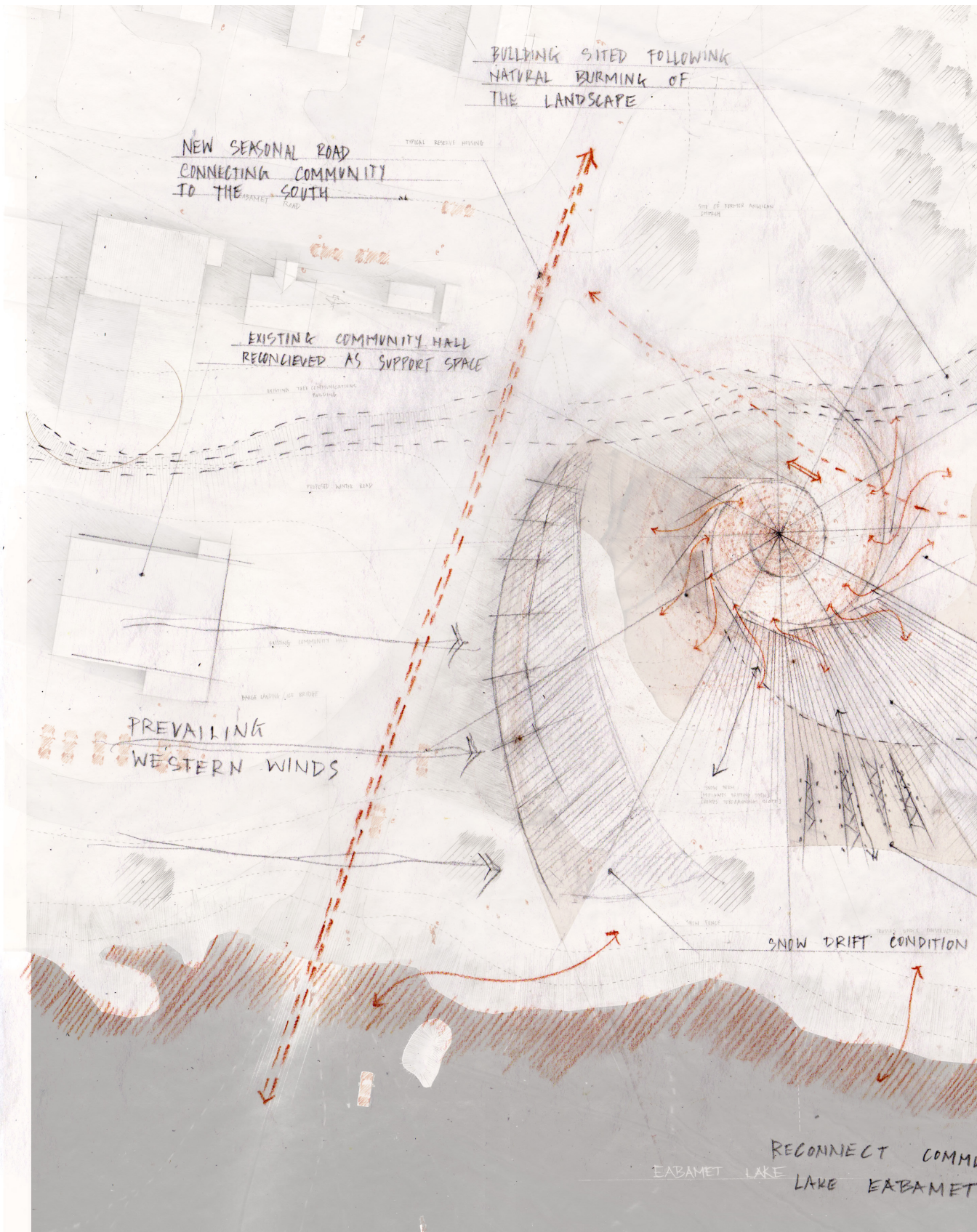




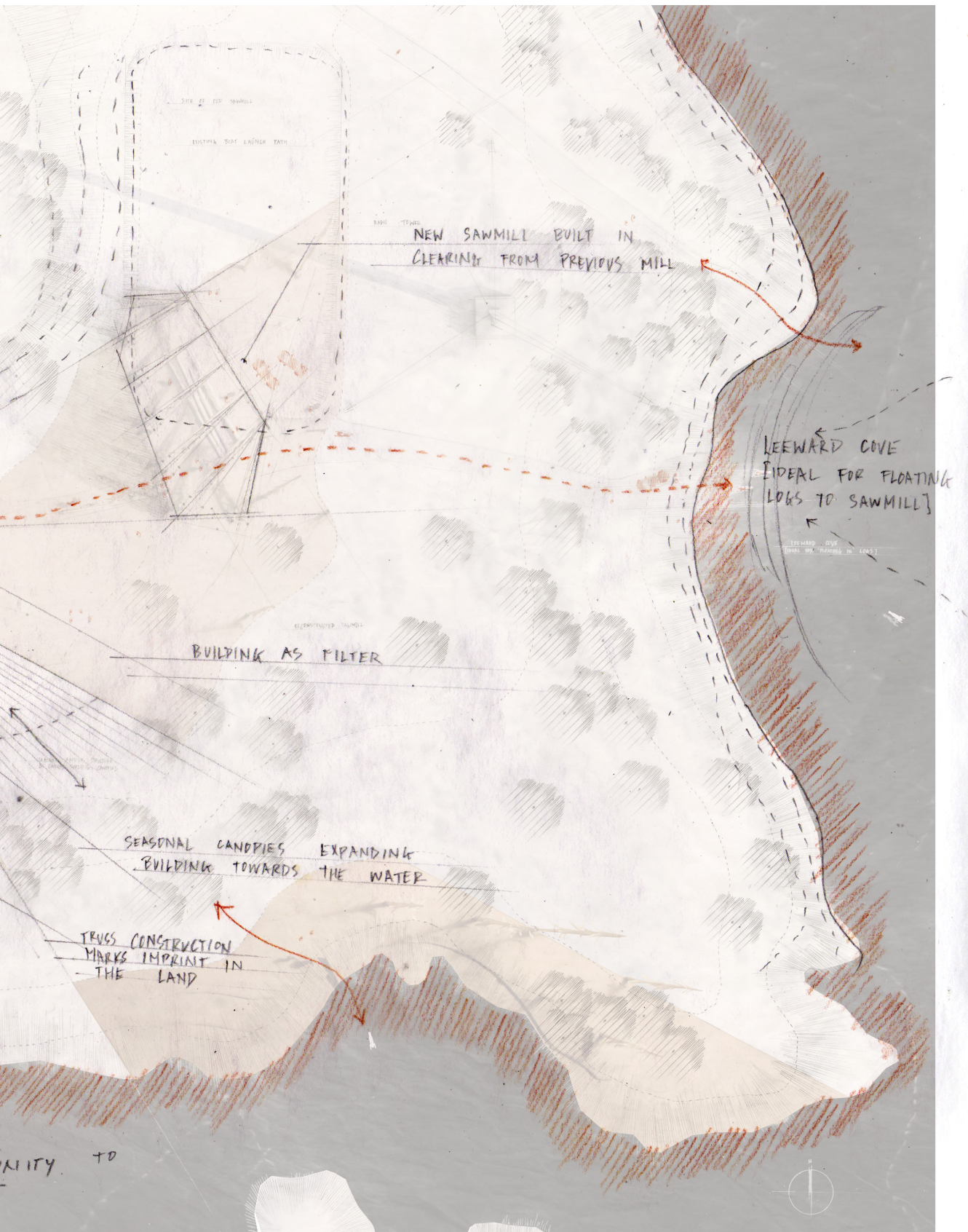


Rendered Site Plan



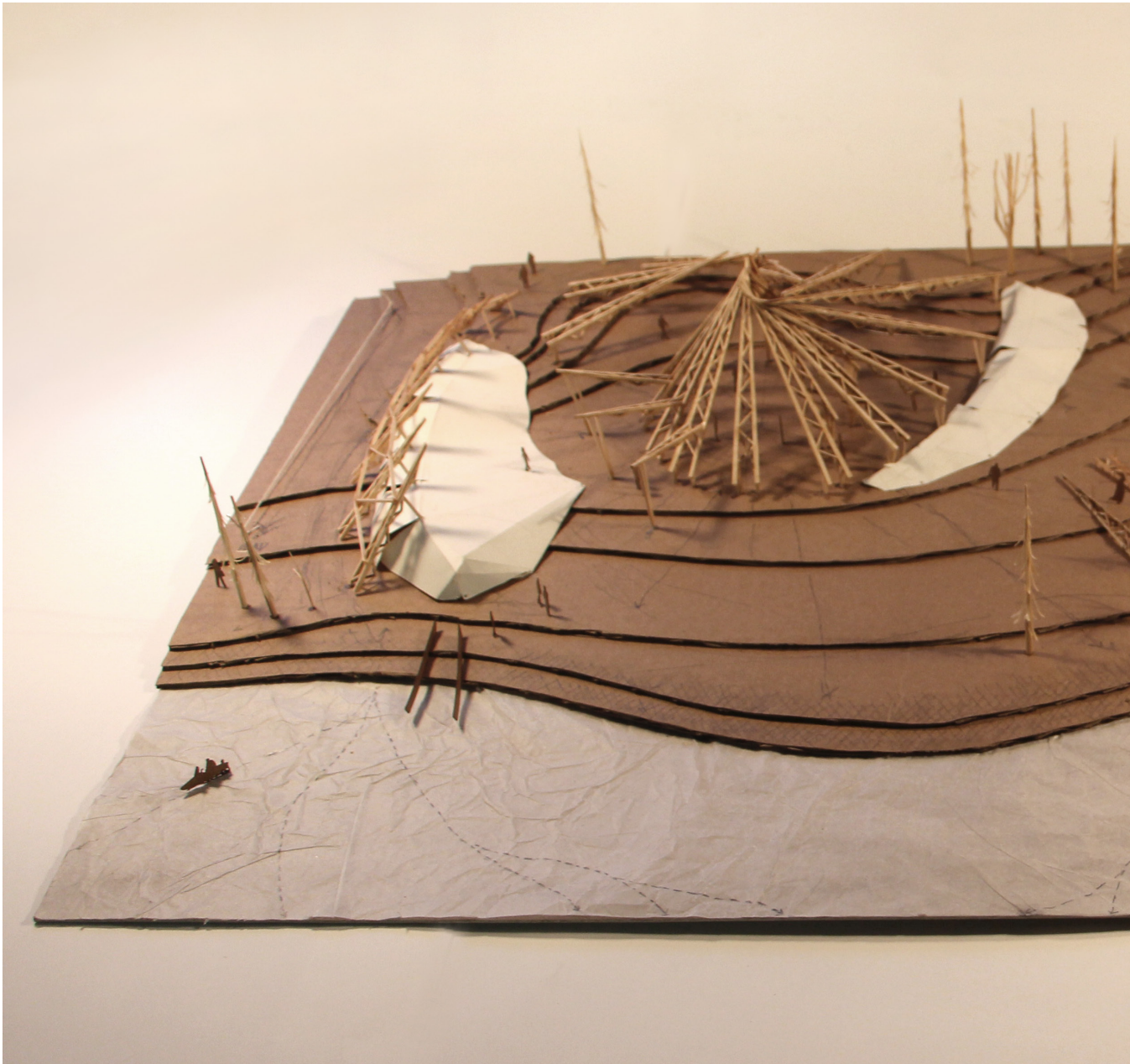


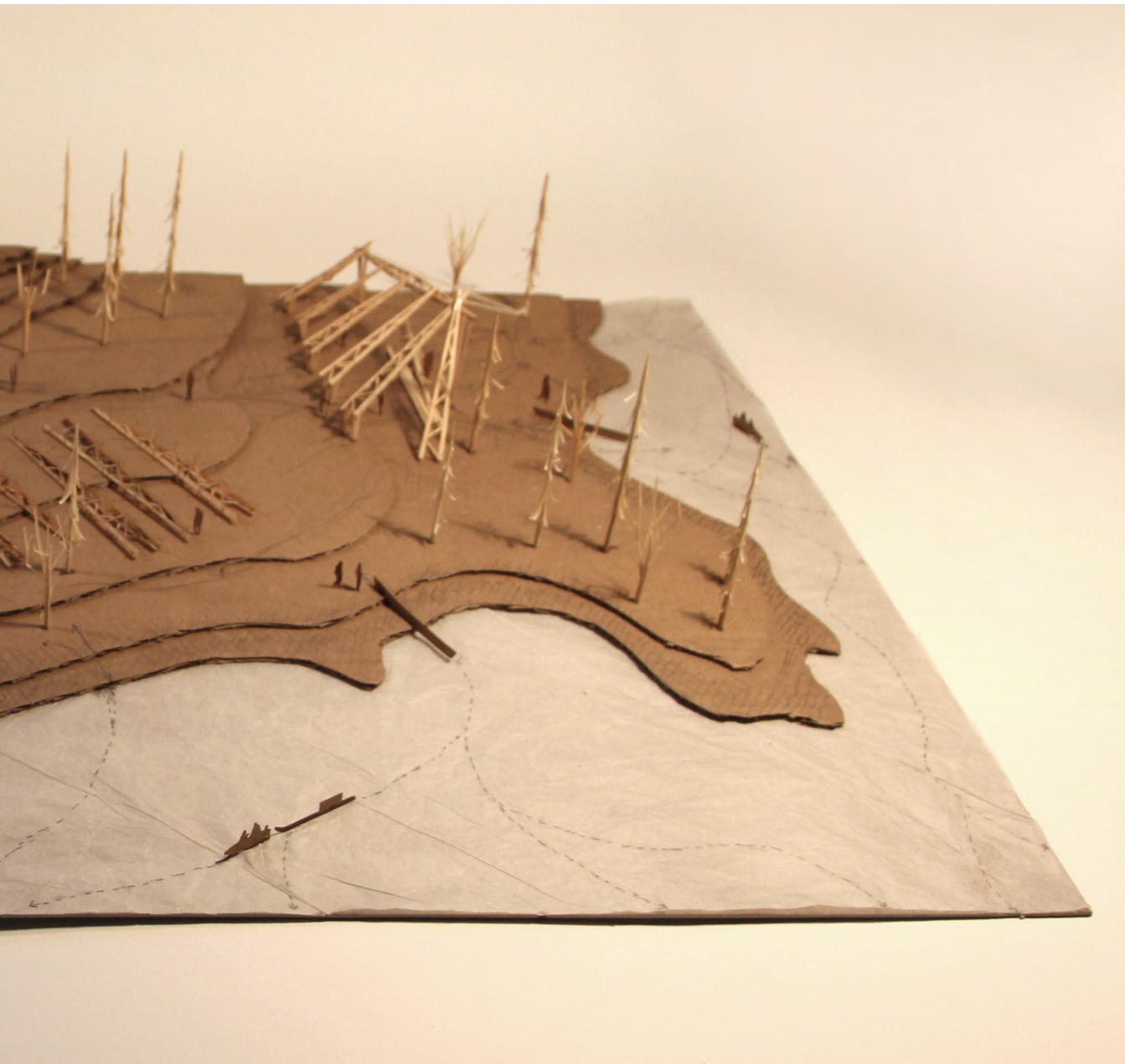




Site Plan Diagram - illustrating site circulation strategies and seasonal adaptability







1:100 Sletch Model of Site Strategy



While the programmatic argument of the thesis is a critique of the persisting hegemonic practices of consultation, the architectural design is grounded in an ambition to recover the material culture of the far northern Ontario Ojibwa within the context of modern building codes and government regulation. The fundamental point of this final section is that through the enforcement of stamped lumber in building construction on reserve the forest was rendered all but useless to the indigenous communities that inhabit it. Like the dislocating effects of the imposed Cartesian grid at the scale of the planned settlements, the imposition of stamped lumber catalyzed the shift towards the importation of all construction materials and effectively removed the community's ability to participate in the building of their own environment.

In resistance to this, the built work of my thesis advisor Richard Kroeker, most notably the Pictou Landing Health Center in Nova Scotia, is exemplary of a different approach to building. This project has demonstrated the potential to circumvent the need to conform



Pictou Landing Health Center under construction, image courtesy of Brian Lilley.

to industry regulation through the design of alternate structural systems, tested and approved by an engineer. This approach allowed the Pictou Landing First Nation to construct a building that met and surpassed national building code standards using local labour and local material. The round wood structural system re-established the community's ability to use small diameter saplings native to the region as the building's primary structure – trees that are otherwise deemed useless to larger kiln-dried lumber operations.

This thesis cannot be fully demonstrative of a participatory process, as the majority of the design work necessarily took place away from the community within the confines of architecture school. However, the ambition here is that through the design of an alternate structural system using the inherent material of the local forest, the community might be empowered to assert a contemporary indigenous material culture, allowing them to regain control of the physical space of the reserve and provide the beginnings of a viable local economy and the potential for self-determination.



Bartel Bridge: Richard Kroeker & Alvin Bartell, part of thesis project at the TUNS.



From this perspective of local economy, there exists a legitimate potential for the reserves of far northern Ontario to act once again as meaningful stewards of the land through the practice of sustainable forestry. By in large, the harvesting of trees for small scale structures as well as for fire wood is already done in this way based on traditional knowledge of how to selectively fell trees in order to maintain and even contribute to the health of the forest. However, the ability to apply for FSC certification (Forestry Stewardship Council) provides the potential for the cultural practice of sustainable forestry to produce a value-added product that can be marketed within the broader provincial and even national economic system.



Bentwood truss in assembly using jig blocking system.  
Image from [www.richardkroekerdesign.com](http://www.richardkroekerdesign.com)



## Tools over Objects

Our culture has tended to create a separation between what we understand as the milieu of nature and the milieu of technology or artifice. [...] Architecture is the most primitive of the arts: primitive in the best sense. It is a response to the most primal of urges and therefore a useful vehicle for exploring these artificial groupings. Architecture can be understood as a material record of human technological achievement. In a context dedicated to the notion of progress, as measured by the distance covered from the point of origin, we risk losing contact with origins.

The [...] project is one in a series of projects [...] which explore the notion that artifice might be ultimately understood as a manifestation of nature. Taken together, they all explore the potential for the literal identity of site and built form. Human agency is an aspect of nature which ultimately cannot transcend it. We perceive in nature those orders which suit our desired, temporary ends. [...]

The role of designer was as the active agent, following instructions inherent in material, site and use. Our readings of these were helped by centuries of tradition and evolution.<sup>37</sup>



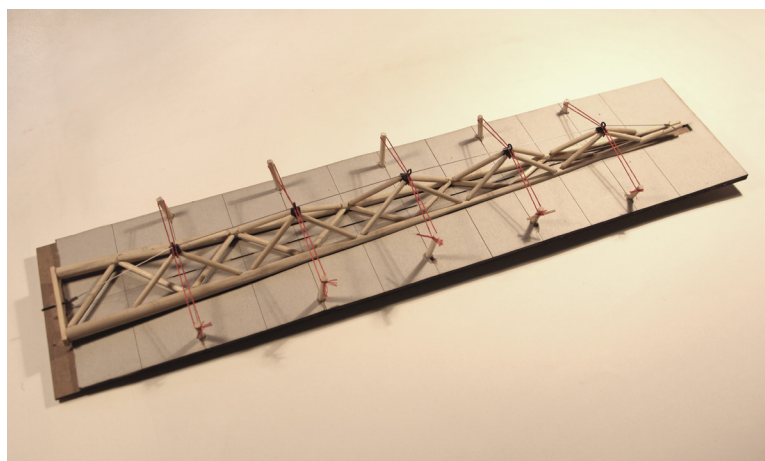
Smoking Hut in Eabametoong: juxtaposition of modern materials & traditional structure, form.

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37. Richard Kroeker, foreword to *Beaverbank: Between Material and Process*, by Frank Chiu (Halifax, N.S.: TUNS Press, 1995), 5.

In pursuit of such a building culture, the design project is treated as the development of tools rather than of objects, understood here as singular buildings. Building off of the bentwood truss system previously discussed, the proposed design is evolved not as a one-off scheme but rather as a demonstration of the potential of a new structural system. Whereas the bentwood truss made use of bolted connections at its ends and band-it strap connections slotted between the chord and web members, new advancements in high-tensile steel screws effectively allows small diameter saplings to be configured into the entire vocabulary of steel trusses in an low-tech and economical way.

The inverted bowstring truss that forms the primary structural element of this project takes inspiration from the historical construction of Ojibwa birch-bark canoes, documented in rigorous detail by Edwin Tappan Adney in a book called *The Bark Canoes and Skin Boats of North America*. Specifically, the construction of canoe building beds – a subtle depression in the land allowing the bark to be moulded in the desired form – as well as the staking system traditionally used to bend the gunwales into place, inform possible techniques for the contemporary construction of the truss. Its basic configuration consists of two chord members that form an elongated triangle in plan and are braced by diagonal web members in the same plane. The depth of the truss is then made up of webbing



Bowstring Truss Structural Model  
1:20 (showing staking system)





1



4



2



5



3

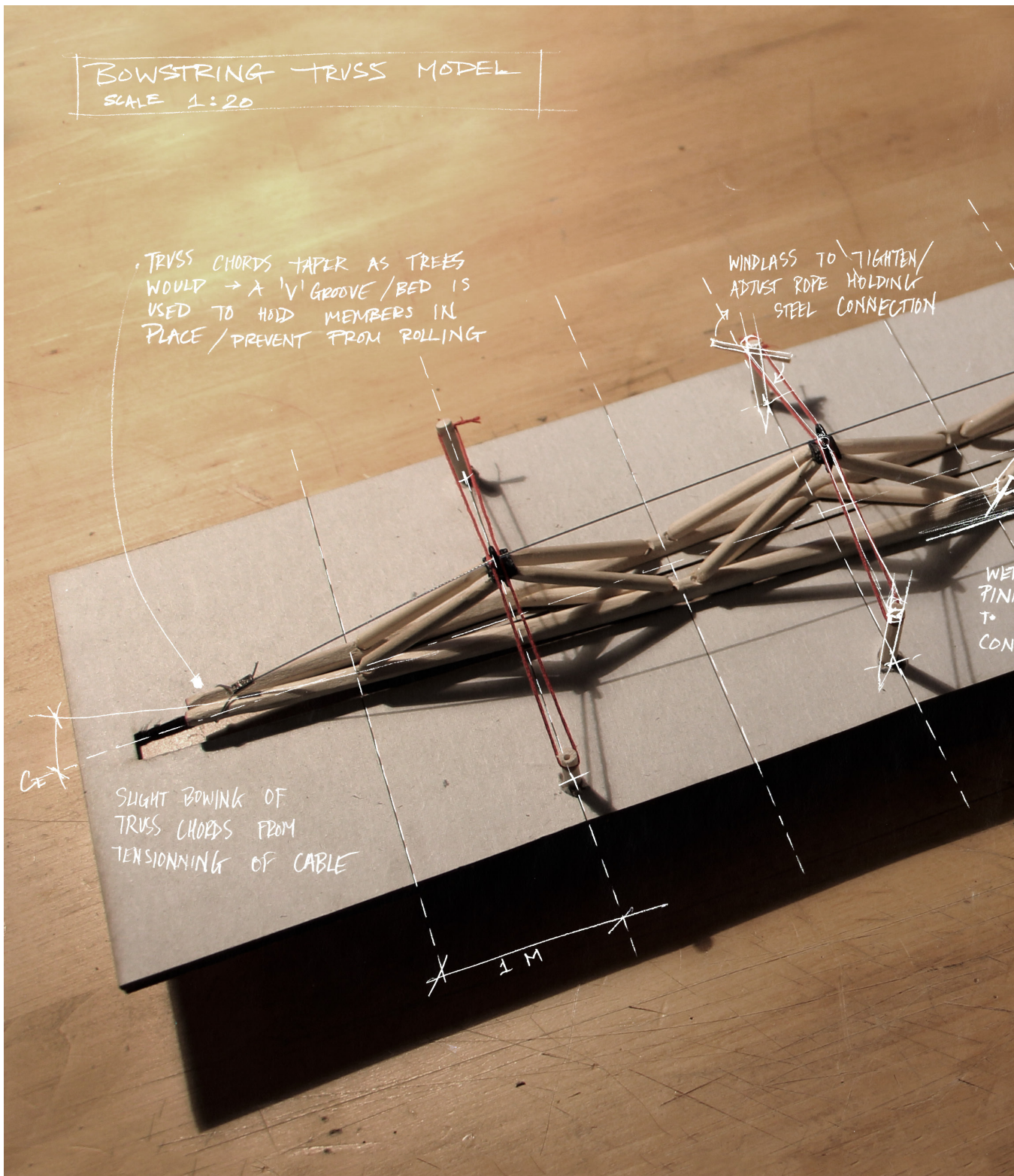


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Ojibway Canoe Building Process, Lac Seul, 1918  
 (from *The Bark and Skin Boats of North America* by Edwin Tappan Adney and Howard Chappelle)

1. Preparing a building site or bed; building frame in place
2. Bark set up; bark staked out on building bed
3. Bark cover being set on building bed
4. Gunwales being lashed
5. Securing gunwales
6. Pitch being applied to seams





BOWSTRING TRUSS MODEL  
SCALE 1:20

TRUSS CHORDS TAPER AS TREES WOULD -> A 'V' GROOVE / BED IS USED TO HOLD MEMBERS IN PLACE / PREVENT FROM ROLLING

WINDLASS TO TIGHTEN / ADJUST ROPE HOLDING STEEL CONNECTION

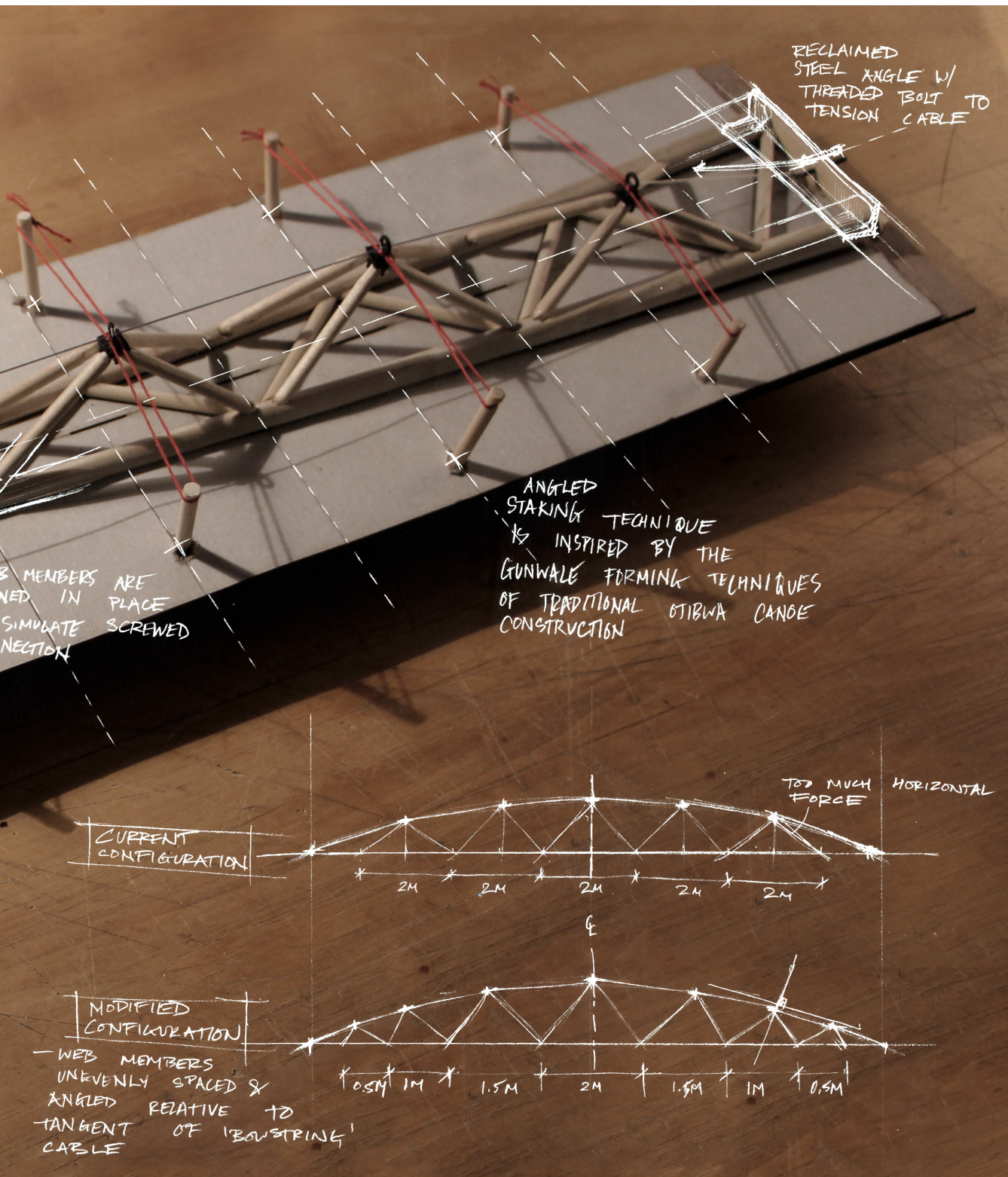
C/E

SLIGHT BOWING OF TRUSS CHORDS FROM TENSIONING OF CABLE

1 M

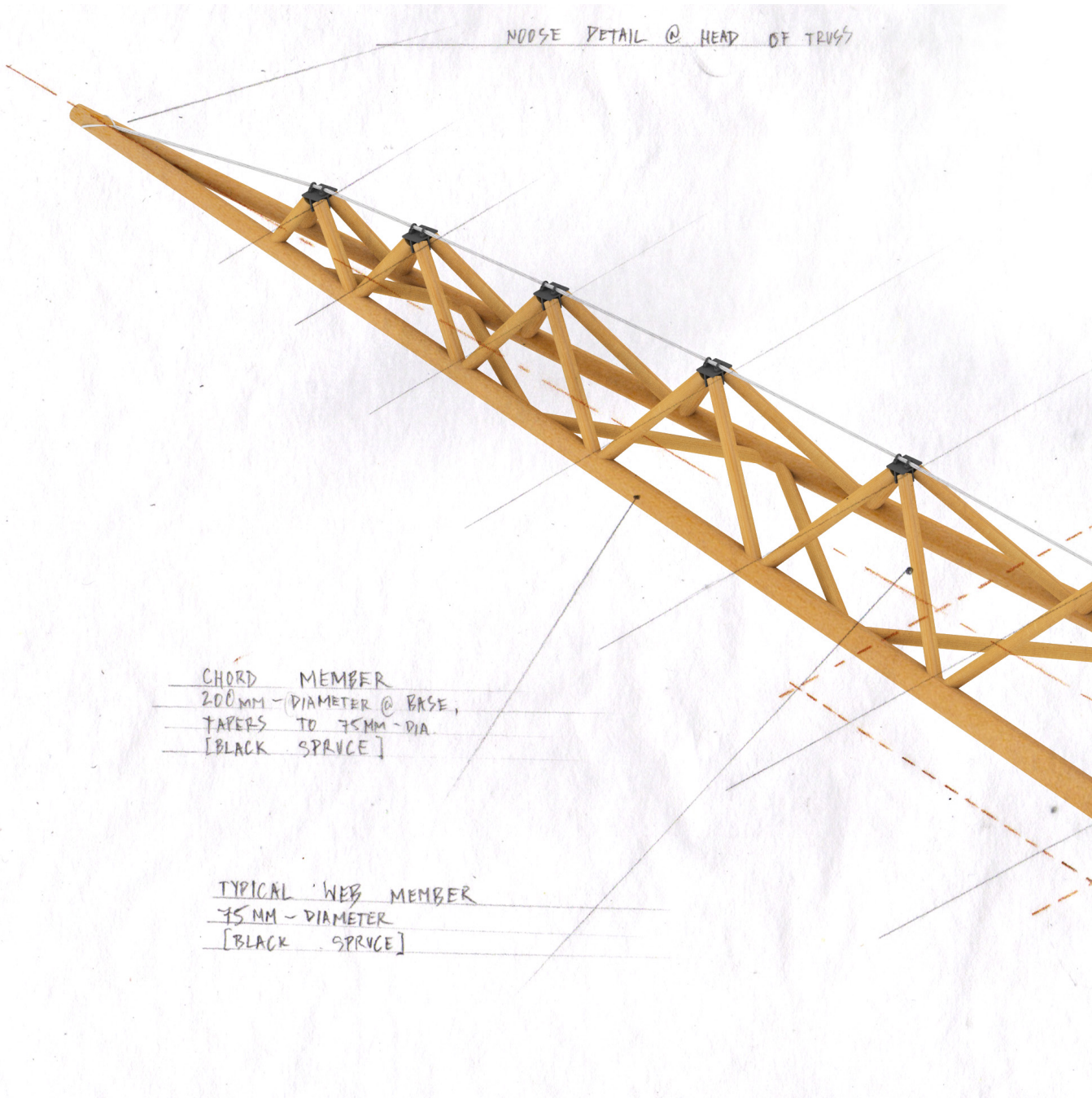
WE FINISH TO CON





Bowstring Truss Structural Model 1:20 - Annotated to show necessary modifications learned through model

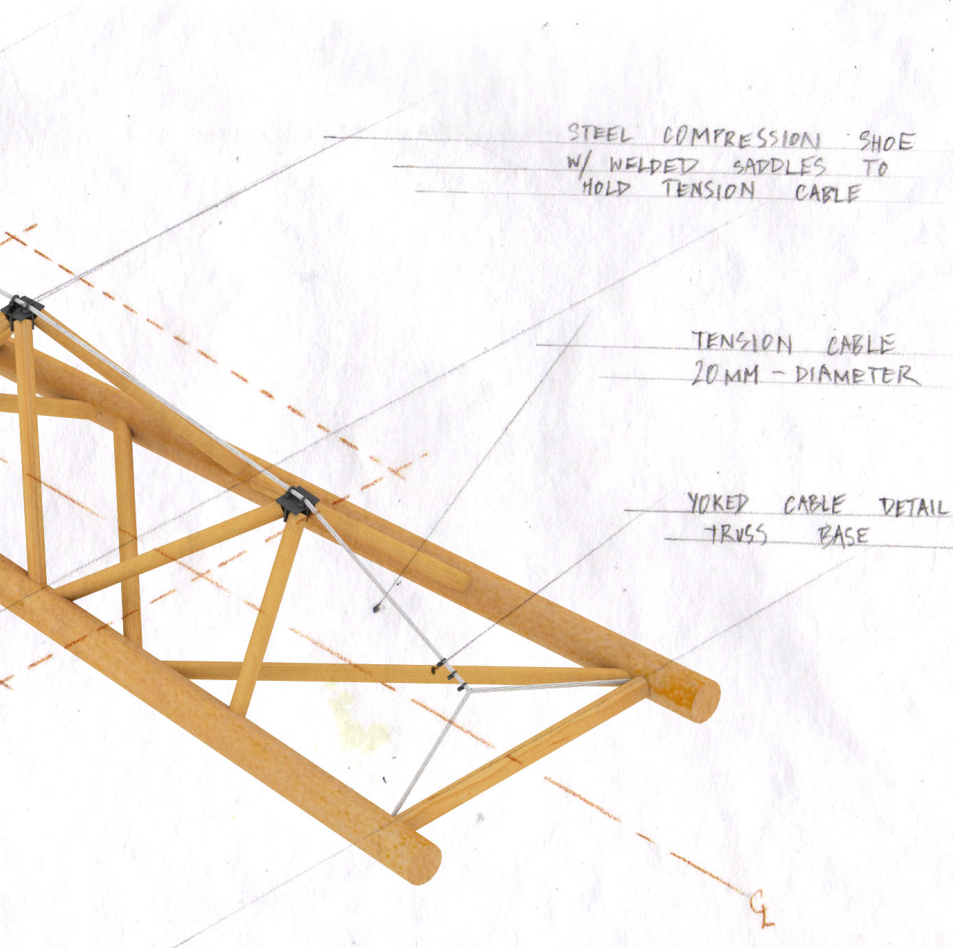








HIGH STRENGTH ROUND WOOD  
SCREWS @ ALL TYPICAL  
CHORD / WEB CONNECTIONS

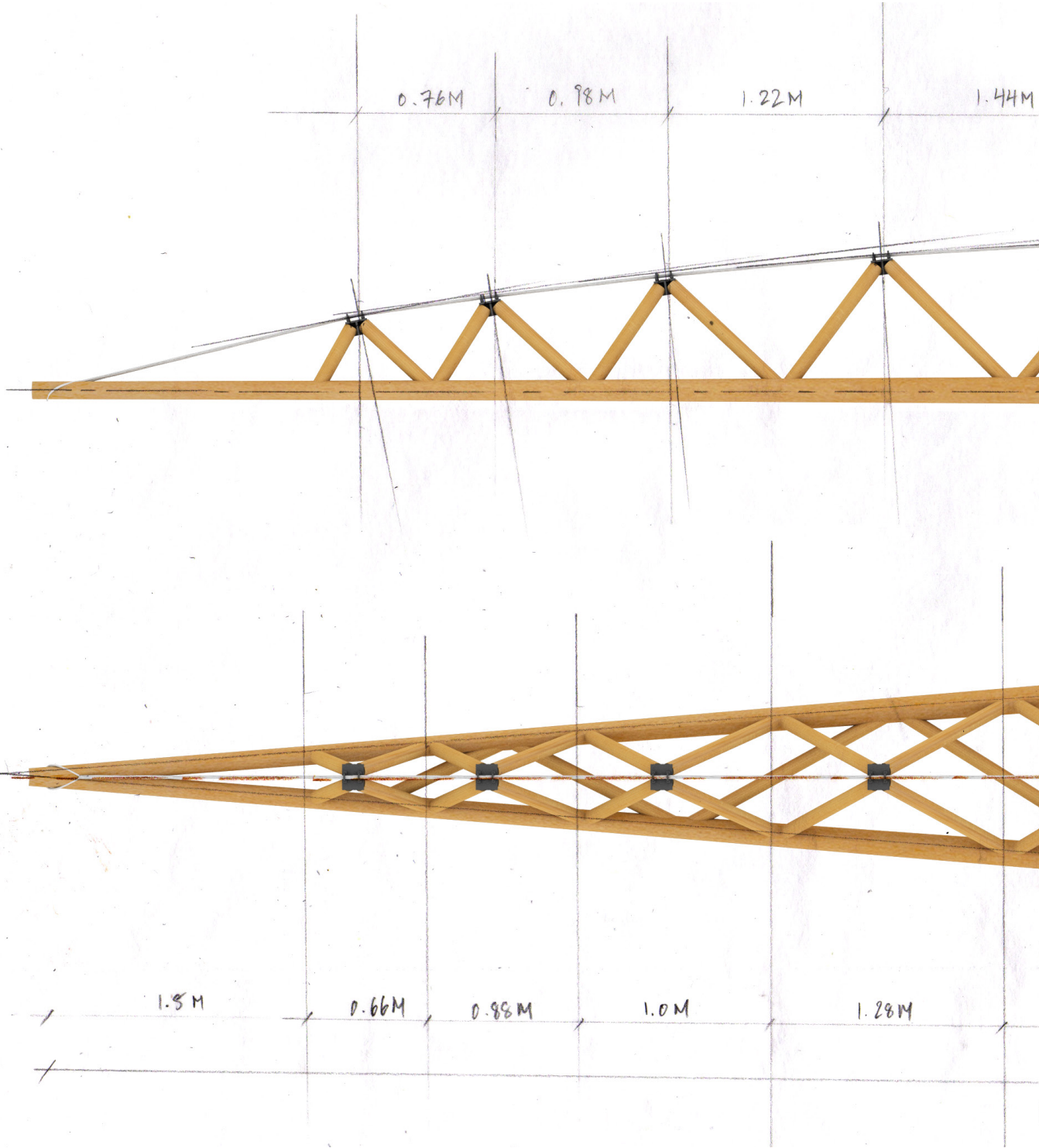


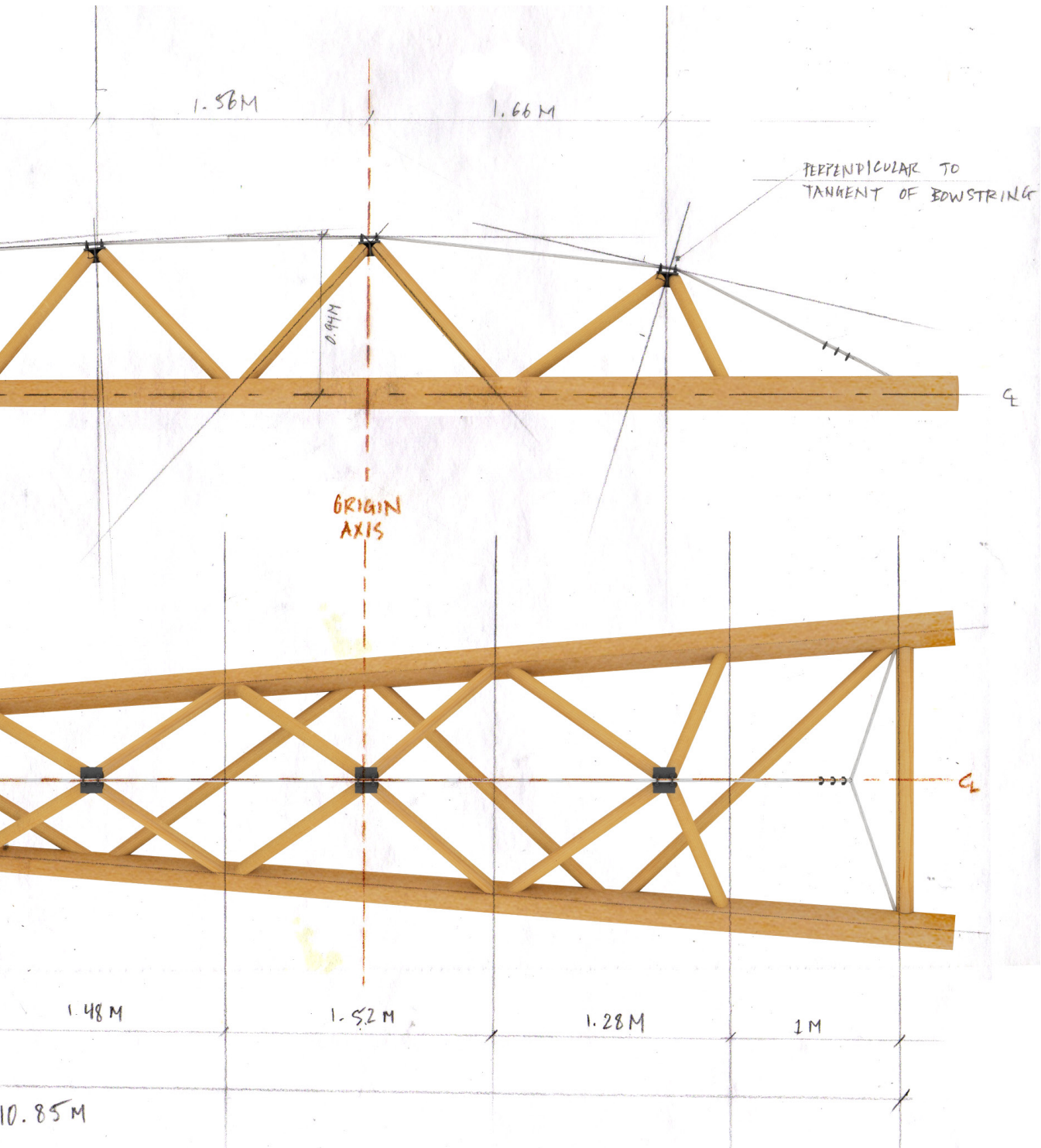
STEEL COMPRESSION SHOE  
W/ WELDED SADDLES TO  
HOLD TENSION CABLE

TENSION CABLE  
20MM - DIAMETER

YOKED CABLE DETAIL  
TRUSS BASE

Typical Bowstring Truss Axonometric - Annotated with dimensions and construction details





Typical Bowstring Truss Plan and Elevation - Annotated with dimensions



“pyramids” similar to a steel radial truss. These web members vary in length and angle to form an asymmetrical “bowing” shape in elevation. These pyramids are connected at their base using screwed connections while at the top, the intersection of the groupings of four web members are resolved through a simple steel plate detail. This steel connection has saddles welded to the top plate that receive a braided steel tension cable that serves to pre-stress the truss, binding the screwed connections in compression. This plate detail is shown in the construction drawings above though an alternate, more economical technique was used in the 1:1 mock-up that simply connects the two triangles of each pyramid with screws, using a one inch section of steel pipe as a spacer to provide a surface for the cable to rest on. A guiding principle throughout was the ambition to minimize the use of costly or high-tech details



Felling white spruce sapling with Richard Kroeker.

that might hinder the ability for the structure to be built on reserve, using available local material and labour.

The 1:1 mock-up of the truss was a vital step in moving the project outside of the purely speculative realm of academia, giving me the opportunity to learn about the material properties of spruce saplings from the initial selection and felling of the tree, through the bark peeling process and ultimately the assembly of connections and tension cable. It is primarily through the knowledge gain in this process that the thesis strives to provide a tool that might be appropriated by the indigenous communities of far northern Ontario in order to undermine the current mechanisms of building construction on-reserve which dislocate the local population from being an active agent in the shaping of their own physical space.



Using draw knife to peel bark and remove knots from the green poles.



Hand callused and covered in sap having finished peeling the poles.





1



2



3



4



5

1. Cutting taper of chord members and attaching cable noose detail
2. Pre-drilling & screwing diagonal bracing
3. Laying out truss 'pyramids' based on construction drawings
4. Roughly measuring web members
5. Using ad-hoc jig to scribe angled cuts of web members





6



7



8



9



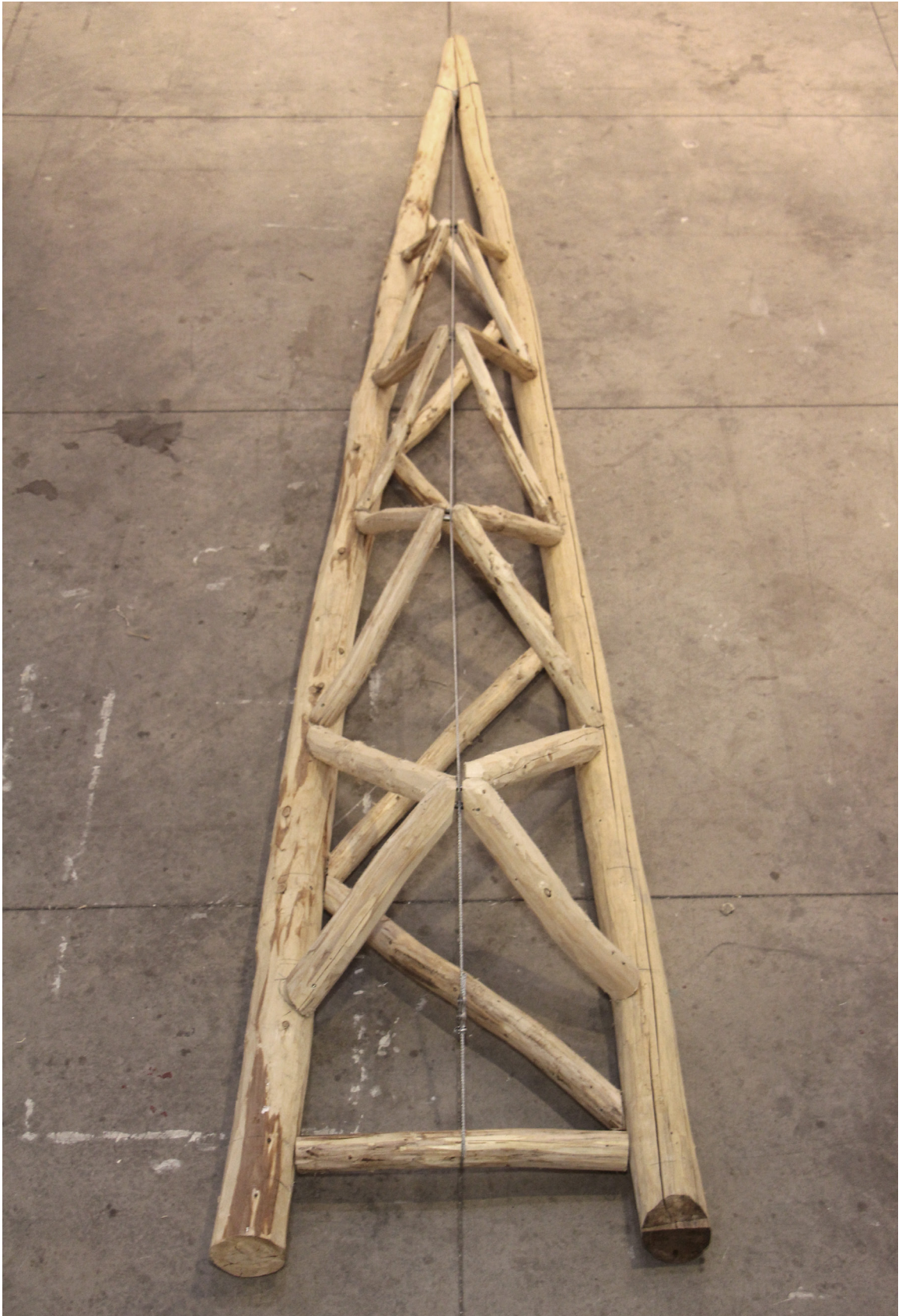
10



11

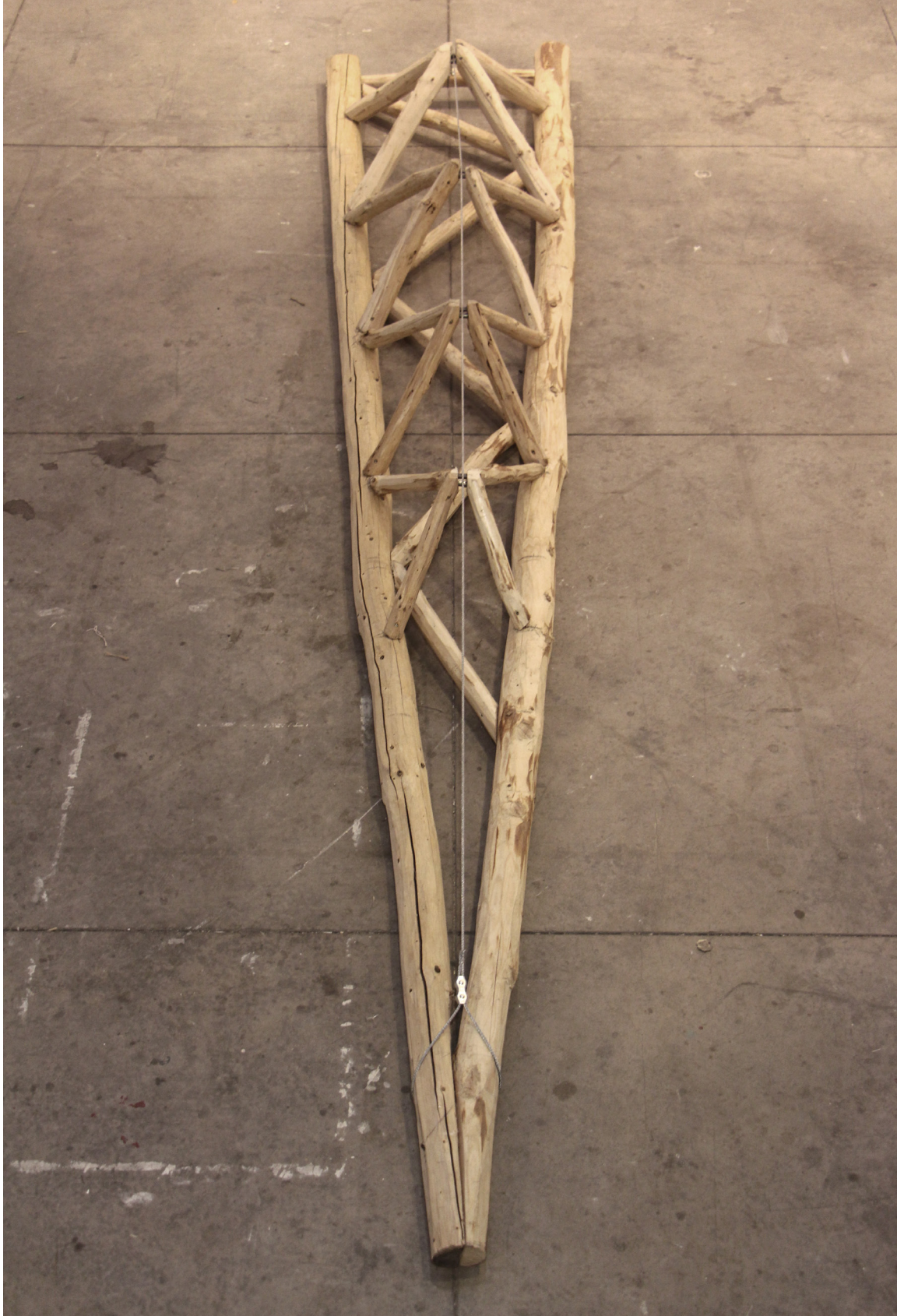
6. Making angled cuts of web members
7. Screwing 'triangles' together using a section of metal pipe as a spacer for cable to rest on
8. Trimming web members once screwed together
9. Using notched stake to tension cable to the desired height, acting as a temporary guide
10. Attaching cable at bottom of truss once all pyramids are complete
11. Using concrete ramp as ballast to tension cable using a come-along system





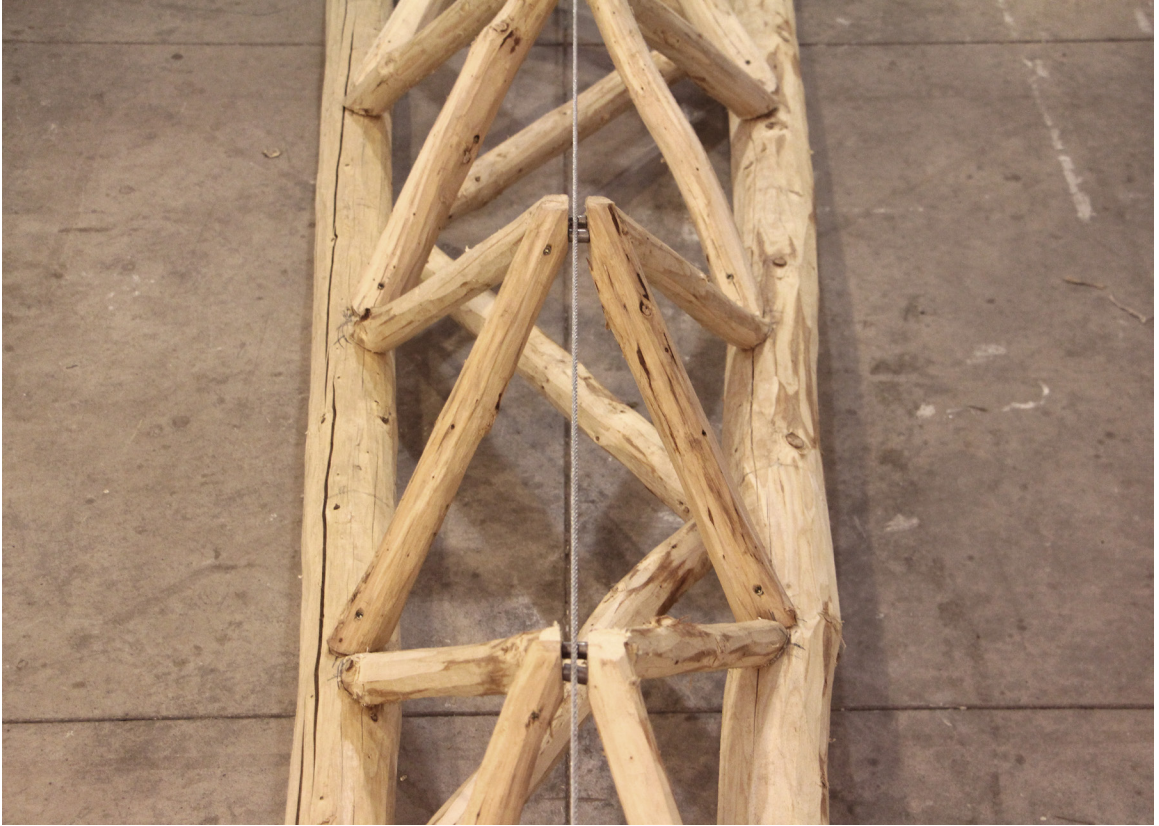
1:1 Truss Mock-Up





1:1 Truss Mock-Up









1:1 Truss Mock-Up Details

## Technic over Symbolic

The threshold between indoors and out is gentle. The thin boundaries of the tent are simultaneously protective and connective. On the one hand, one is sheltered from the bush — however the bush is also present, and even concentrated in the tent in the smell of cedar or spruce boughs on the floor. One is protected from the wind, but aware of its pressures on the folds of the tent. One walks on the surface of the earth, although it is cushioned by boughs underfoot. A trace of snow and rain may enter the building through the same opening that lets the smoke out.<sup>38</sup>

The final section of the thesis focuses on the reinterpretation of traditional forms, studied from the viewpoint of material and instrumental efficiency rather than for their symbolic associations. The design of this spiralling building, conceived broadly as a flexible political and ceremonial meeting place, takes its cues from the tepee dwellings of the northern Ojibwa.

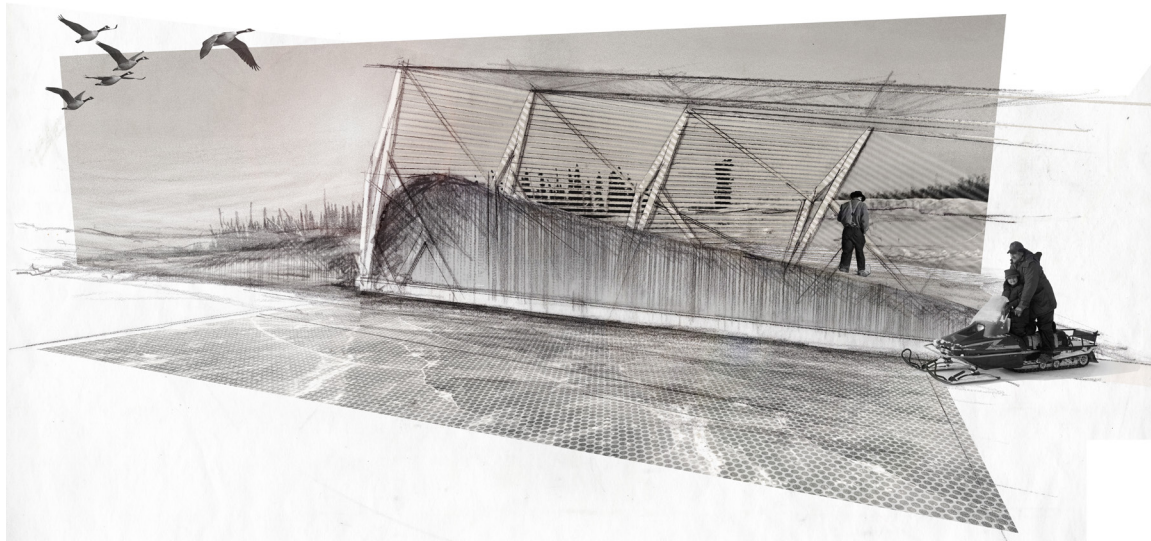


Goose smoking in traditional tepee structure (courtesy of Justin Breg).

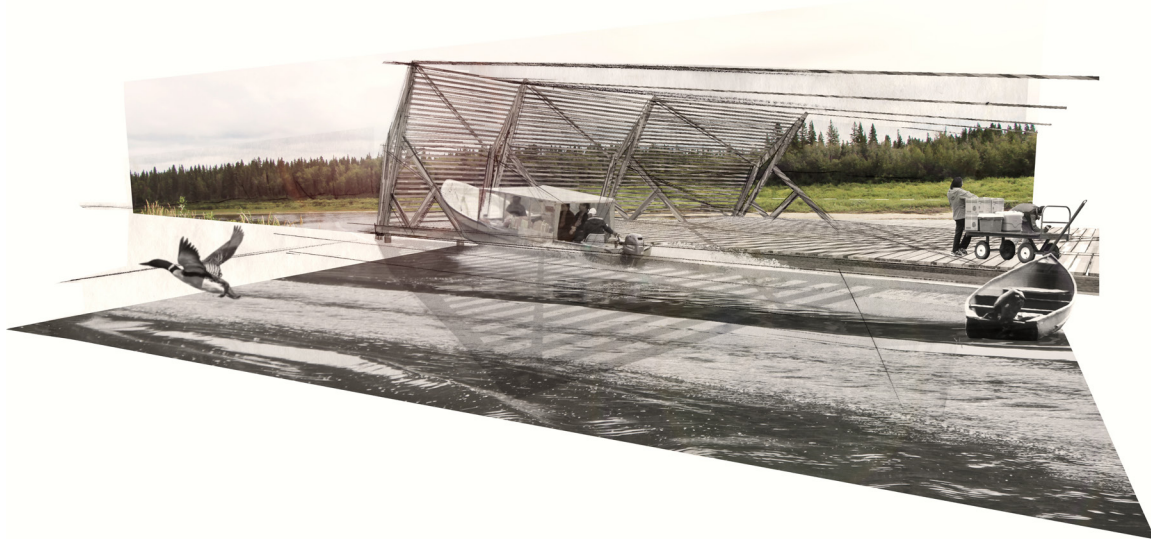
38. Justin Forrest Breg, “Ab Condita” (Master’s Thesis, University of Waterloo, 2013), 107.



While the circular plan and conical form certainly hold deep symbolic meaning, this project strives to demonstrate the applicability of the technical strategies of the tepee in a contemporary context. From a building systems perspective, these instrumental characteristics still hold true today as they have since time immemorial. The conical form is at once the most efficient shape to maximize building footprint while economizing material used in the buildinging envelope and cladding. It also inherently creates “stack-effect” which ensures passive ventilation and eases the re-distribution

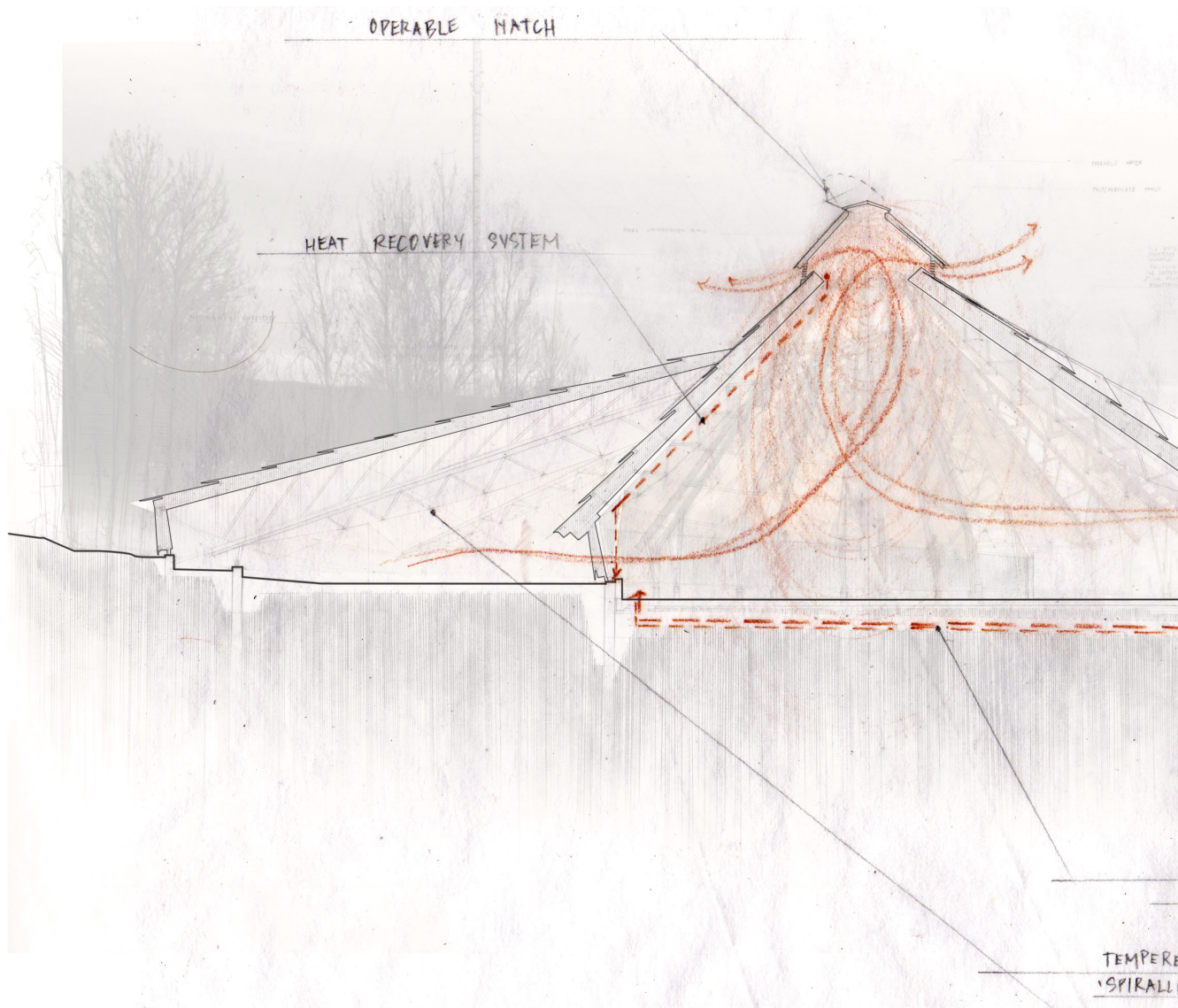


Winter condition: occupiable drift and mesh reinforced ice road.



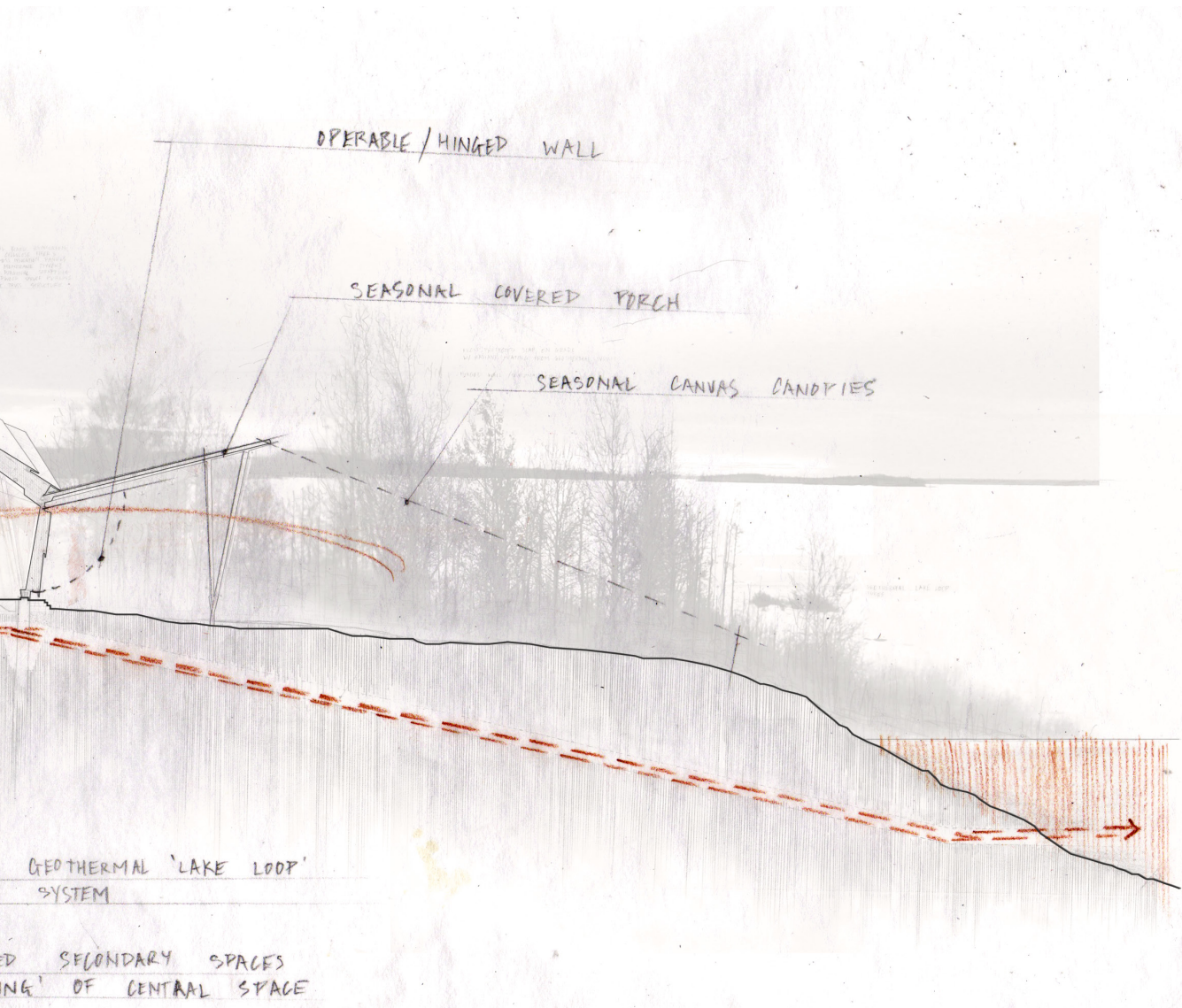
Summer condition: wind-break, shading device and dock.

of warm air collected at the cone's peak through a heat-recovery system. The cladding system is made up of secondary round-wood purlins, diagonal board sheathing, and cellulose insulation panels that could be made of a composite of compacted recycled fibres and sphagnum mosses capped by a panelized vertical board rain screen. Importantly, this assembly eliminates the need for sheet-goods like plywood or drywall which would necessarily be imported at great expense. These triangular tilted panels span between the trusses, which vary in length or join end-to-end to double the span, creating clerestories at their intersection. These seams in the spiralling form



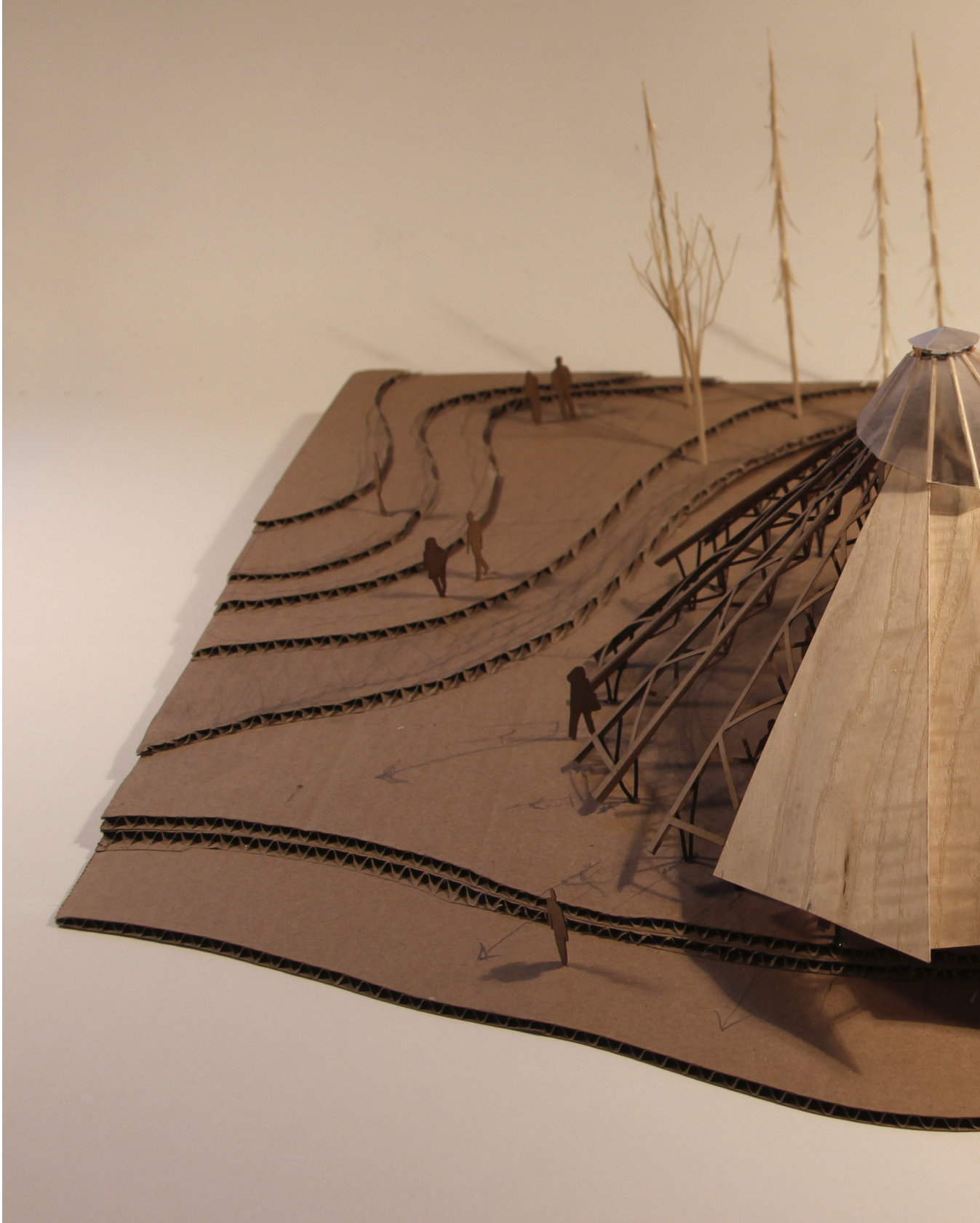


create entry points in plan while filtering indirect light into the building, giving the space the translucent and filtering quality of the stretched canvas that wraps the poles of a traditional tepee. Pile foundations aim to minimize the use of concrete and provide a level of structural flexibility, allowing the building to negotiate the changing seasonal properties of the ground condition. Finally, a geothermal “lake loop” system is proposed as additional system for tempering air and serves to merge the symbolic connection of the space to the water with its more technical function.

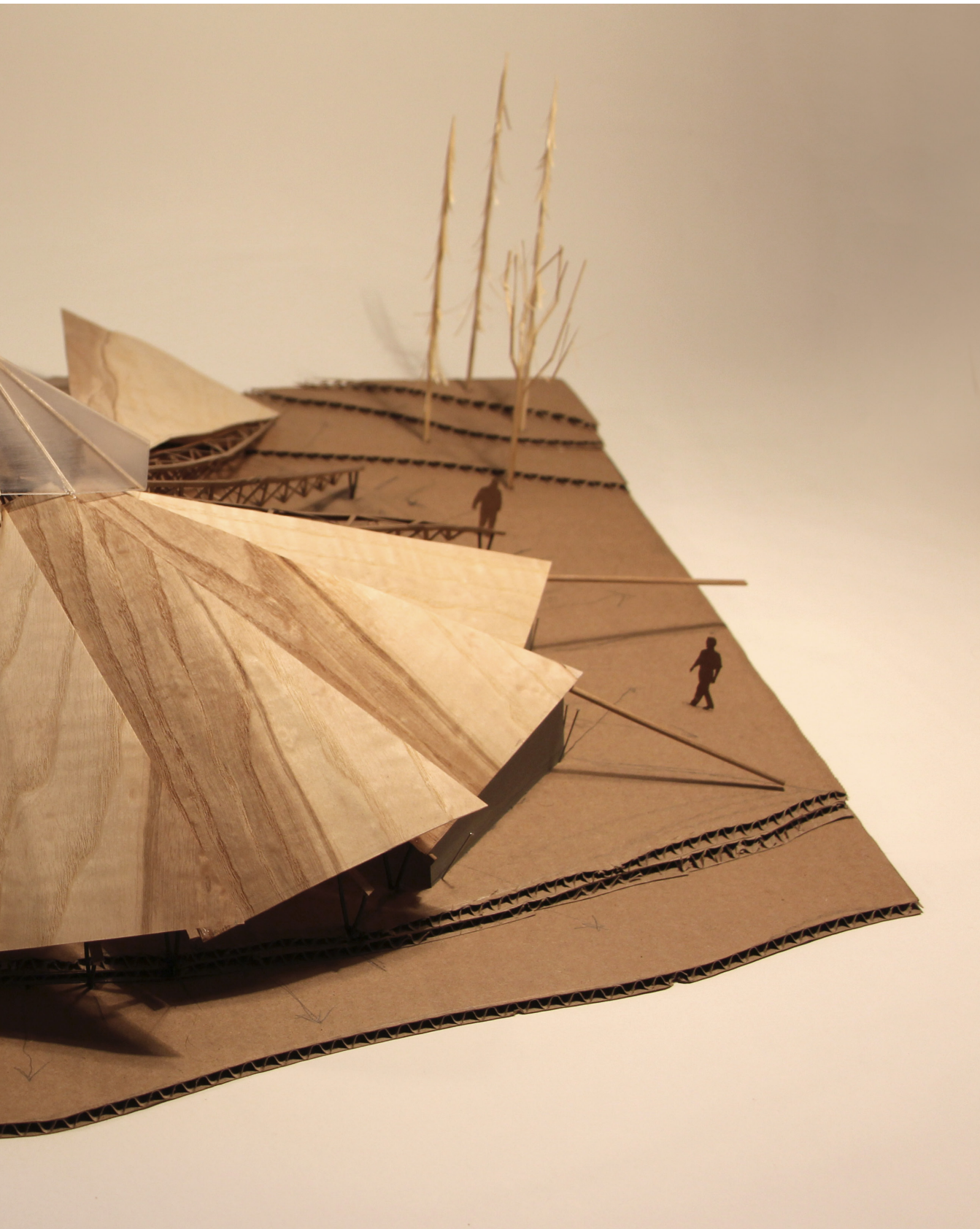


Sectional Diagram - illustrating passive building system strategies and seasonal adaptability



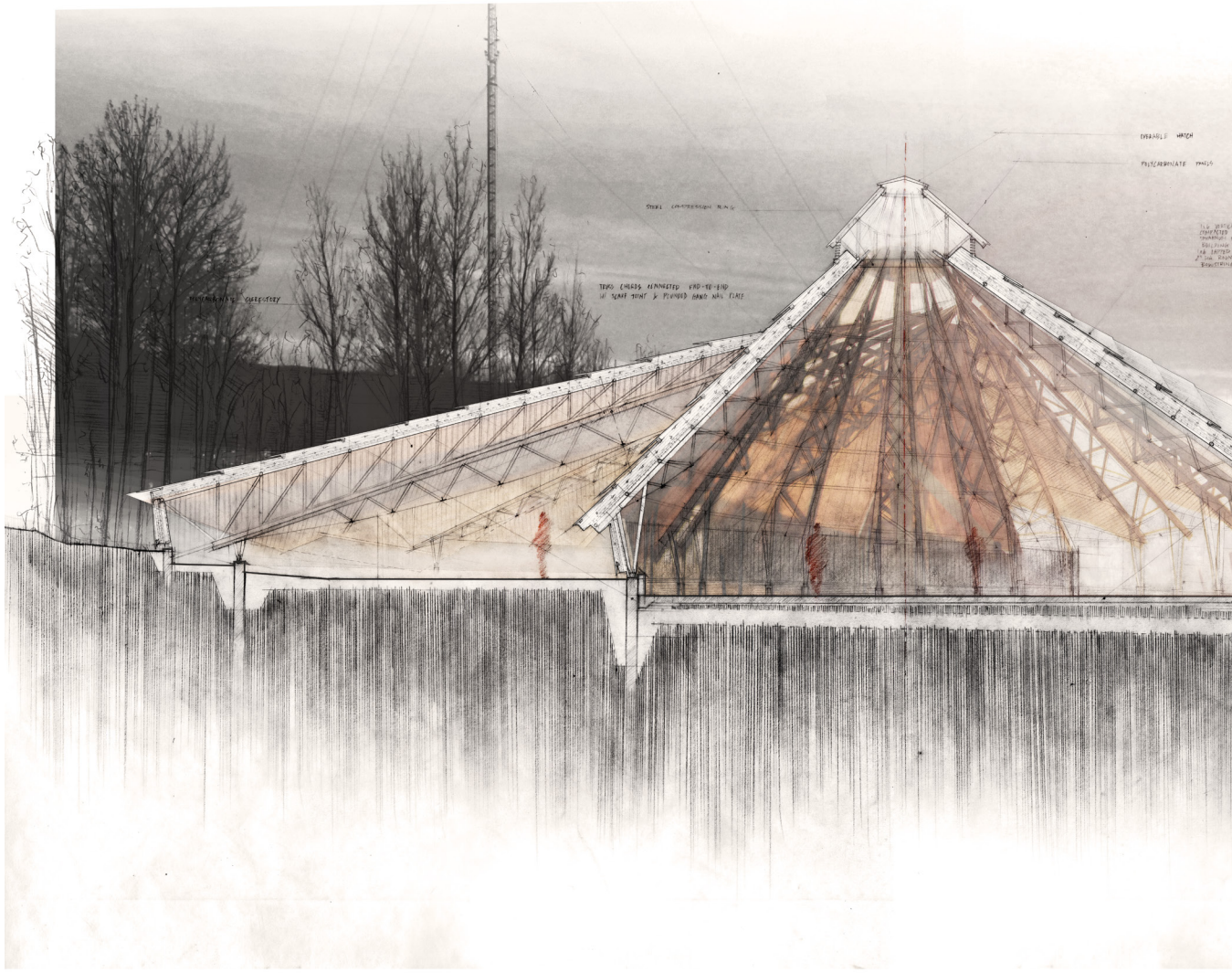






1:50 Sketch Model



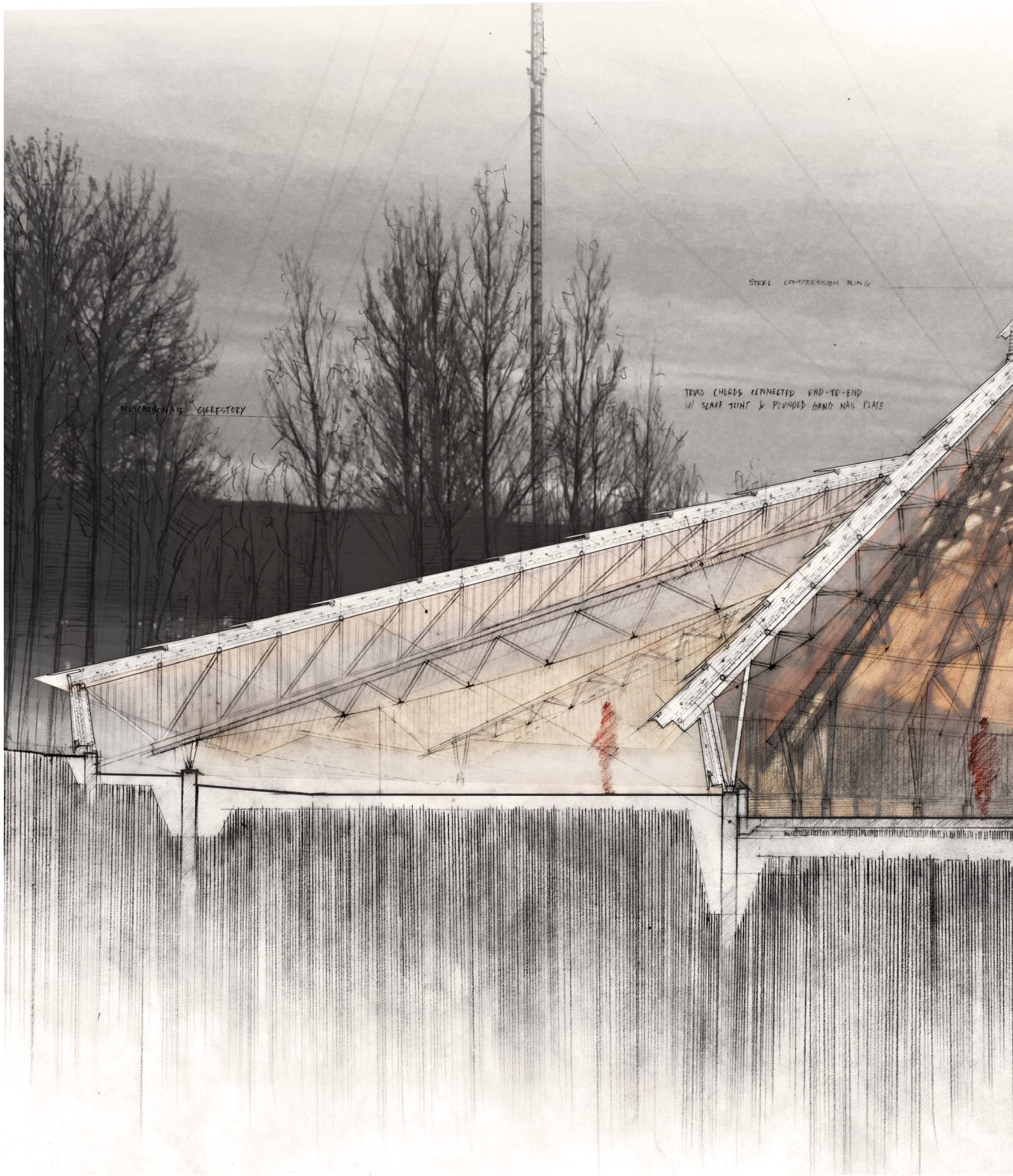




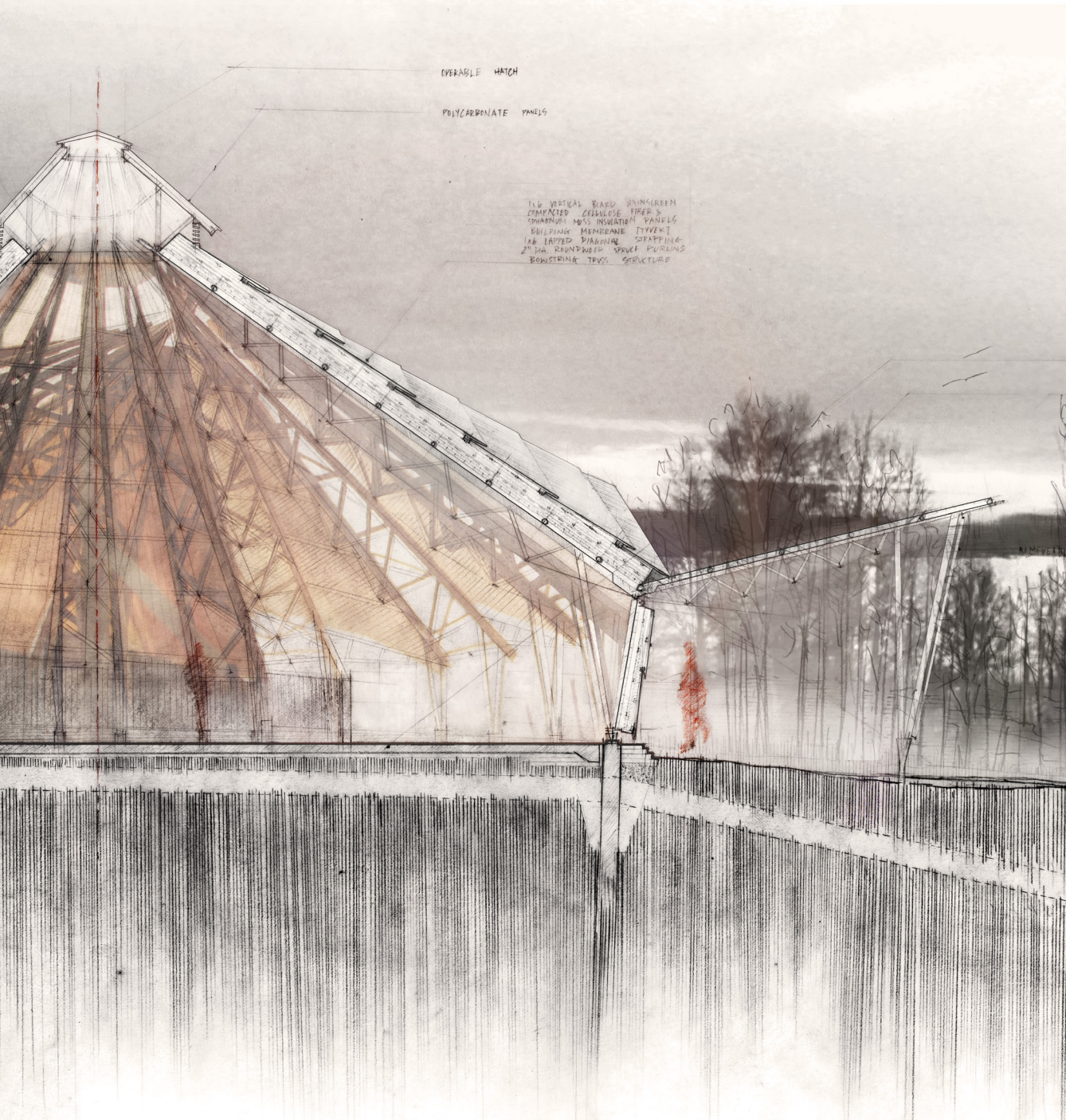


Building Cross-Section - Towards Eabamet Lake



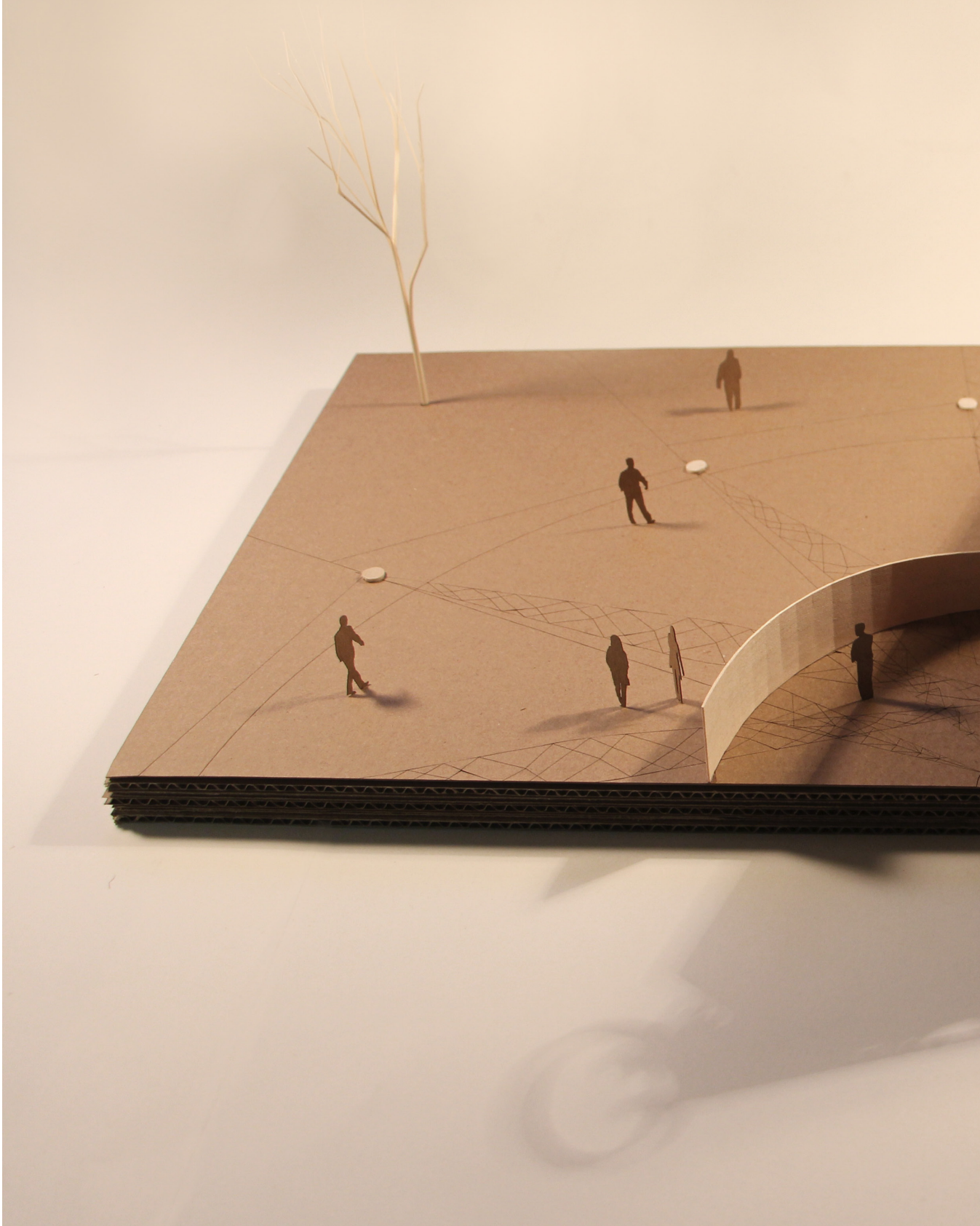




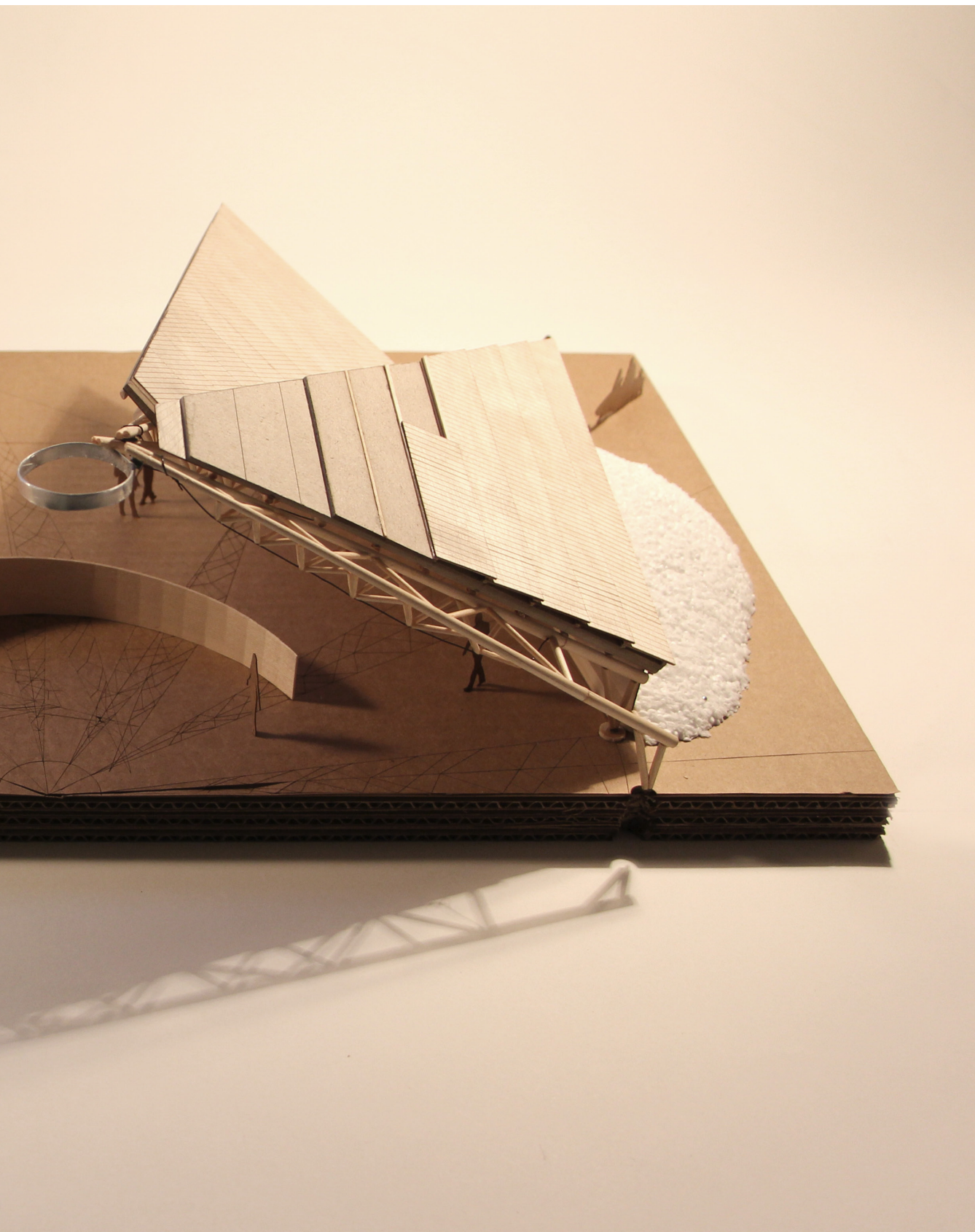


Building Cross-Section (Zoom-In)



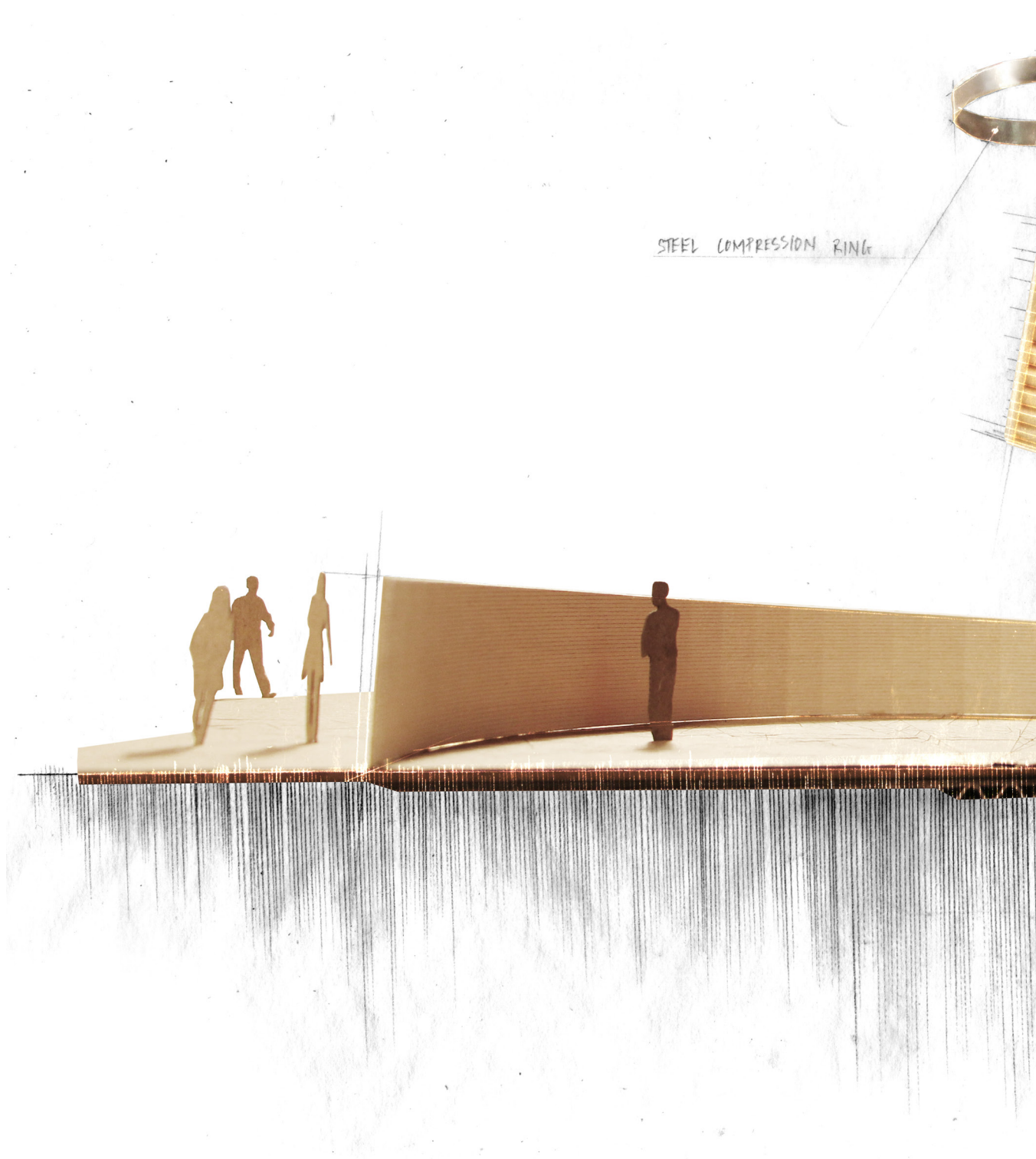




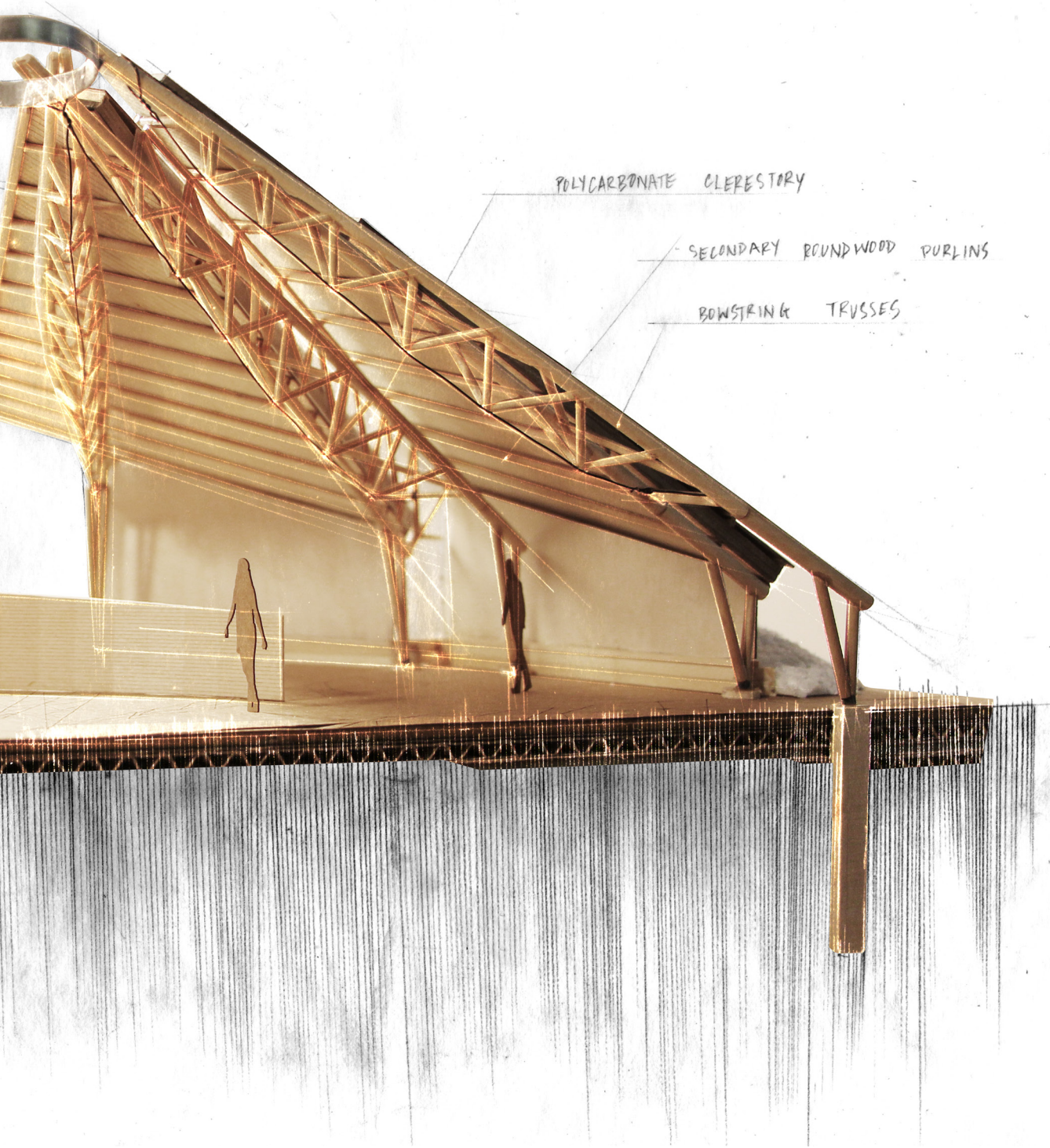


1:50 Detail Model of Structural System and Roof/Wall Assembly





STEEL COMPRESSION RING



Structural Model 1:50



## Conclusion

This is not the way we think of our lives today, or of life in general. We see ourselves on a road, moving forward, progressing down some linear track that promises constant improvement and discovery, from cancer cures to life on Mars. Our eyes are forward, the past is of largely academic interest, the present only an instant we race through to arrive at a different tomorrow. In our belief system we dedicate ourselves to a single task: creating change.

But what if we did not have that conviction underlying our every thought, the conviction that tomorrow, for each of us, if we all work hard, there will be more and better everything?



Approach from Eabamet Lake; showing re-activated community waterfront condition

What if our conviction was not that we were born to continue travelling down an infinitely changing road, but instead, that our destiny was to repeat what had been done before, to walk in the footsteps of all who had gone before, to think the same thoughts they had already thought; to take, in effect, their place on the slowly revolving wheel of eternally repeating existence? What if we defined our lives not as occupying new ground of our own discoveries but as revisiting ground already occupied by all our ancestors? Our predominant sense of self would be largely shaped by the conviction that we were going where others had gone before and where others would always go. We would be taking our turn at the wheel of life rather than moving ahead from where others had left off. The shape of existence would be *circular*, not evolving, but *revolving*.<sup>39</sup>



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39. Rupert Ross, *Dancing with a Ghost*, 102-03.









Approach from Eabamet Lake; showing re-activated community waterfront condition



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