Seeking Refuge: A Place of Recovery in the Cascade Mountains

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To my mom and dad for their support

To Tiff for her patience

To Rick and Susan for their guidance through this program

Contents

1. Examining the Topography

Topography is not just what it appears to be; indeed it is this but also what it conceals…Like the Horizon at the edge of all that I see, it is both apparent and recessive or manifest and withdrawn; although articulated it is also indistinct, which is to say it is both what has emerged and what is still emerging.[1]

David Leatherbarrow, *Uncommon Ground*

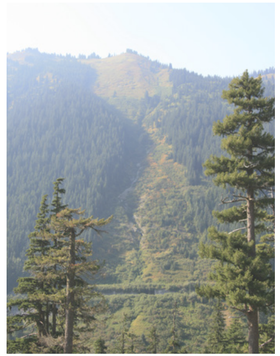
Site location 1.

I.

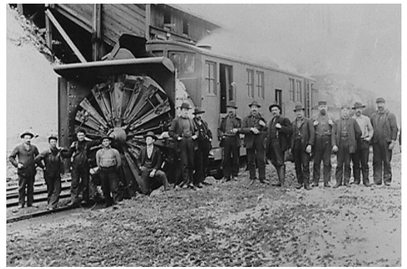
As the last obstacle to the Pacific, the mountains of the West Coast stand in opposition to the expansive landscape of America. Thousands of enclaves were carved into the rugged terrain, driven by the spirit of conquest and the promise of industrialization. Westward expansion required these outposts as support points to connect people and goods to the coast. Theses are sites of struggle where people faced the harshest of conditions with the hope of opening new chapters in their lives. High in the Cascades Mountains, Wellington Washington was one such settlement. It is a place of layered history, one event after another shaping and reshaping the topography, with each layer setting the context for future events[2].

Before the railway there was only the wilderness, a deep valley just to the west of the divide in the range. As an image it represents all of the serenity that comes to mind when one pictures the mountain landscape: fields of snow extending from the dense forest, creeks that cut through the evergreen blanket allowing the morning sun to illuminate the fresh green leaves. Reading deeper into these images, one finds signs of another character: the timeless patterns of the site are projected on the landscape, mountainsides bearing wide scars of violently sliding snow, channels carved by the ensuing rush of water each spring. The loose soil and the web of mangled tress culminate in the ravine below, the consolidated residue of the renewed landscape washing slowly downstream.

2. Stevens Pass



3. Fields of snow
4. Creeks cutting the evergreen forest
6. Scars of violently sliding snow
5. Residue of a renewed landscape



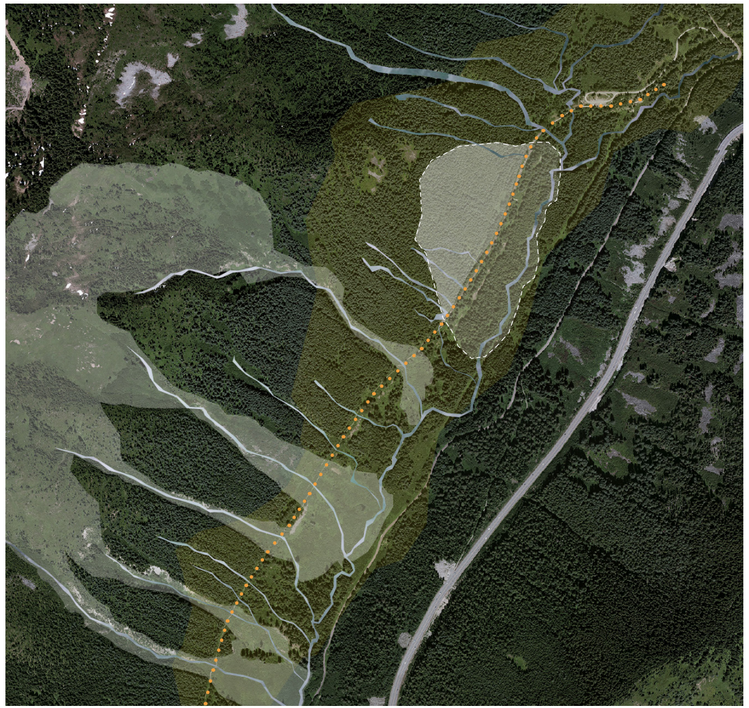
Rotary plow 7.
Cleared tracks 8.

While it may seem sensible to distinguish two agencies at work in the process of sedimentation, whereby topography accrues and extends history, human and environmental forces, only their compounded effects give it its proper voice.[3]

David Leatherbarrow, *Topographical Stories*

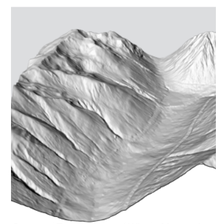
II.

The first layer of human history came in the form of a railroad grade cut low on the steep slope of Windy Mountain. A town grew around the railroad depot. Men were lulled in during the few beautiful months that belie the struggle ahead. The trains would persistently grind up the grade, destabilizing the natural condition by running in opposition its ingrained patterns. Rain fell constantly. Snow was measured in feet. Water eroded the grade and men rebuilt. Snow covered the tracks while shovels and rotary plows pushed it further down the slope. Existence here was a long and grinding battle between natural and human intent. Even the few dry months were fraught with destructive potential. The trains billowed smoke and ash as the labored along their path, the hillsides were left bare with smoldering stumps. The forest no longer restrained avalanches to the established paths. Layer by layer the events built to create immense tension, working toward to an inevitable point at which all this potential came to bear, flattening this layered history into a singular moment that defines the violent nature of this place.



9. Layers of human & natural forces

Hydrology patterns
Avalanche channels
Cutting the railroad grade
Burning the forest
Destabilizing the hillside
1910 Avalanche



10. Sculpted Topography of Windy Mountain

Train wreckage 11.
Avalanche debris 12.

How puny is man in the face of angered nature! And yet how indomitably and hopefully persistent. He is swept from the earth like the wheat before a sickle or the chaff before the wind. His toilsome labors are made nothing of; his greatest achievements are crumbled to dust. Yet, driven by that impulse within him, he buries his dead, clears up the debris, and returns to his task, even while he can yet feel the wings of Death hovering over him.

Seattle Star editorial, *1910*[4]

In February of 1910 heavy snowstorms cut Wellington off from the outside world. The passengers and crew of 2 trains were stranded with the inhabitants of the town. 6 days into the storm the snow turned to freezing rain, adding pressure to the accumulated layers of snow. After midnight on the first day of March a slab of snow 2,000 feet wide broke loose from the slope above the railroad grade crushing 2 trains full of sleeping passenger tearing them down into the frozen ravine below. 96 people died and dozens of others maimed. Cut-off from the outside world for a total of 16 days, the bystanders were left to recover the dead and injured from the icy landscape.

The people lashed out at the landscape by cutting deeper into the hillside and building a concrete snow shed. It is the only structure that remains in tact, a seemingly permanent scar as a reminder of the catastrophe.

The 1910 avalanche was the catalyst for the slow decline of the town. The shed was a temporary measure of protection from the landscape. As plans were made for a new tunnel to be cut deep under the mountain, people continued to struggle against the impulsive and inevitable natural forces. 2 decades after the disaster the Cascade Tunnel was opened, bypassing the entire valley and ultimately ending the inhabitation of the area. Wellington now lays in isolation for over half of the year waiting to open itself anyone who will come to see the few remaining ruins and twisted bits of steel that hint at the memory of the former town and the disaster that defined it.

13. Concrete shed cutting into the hillside

The serene winter landscape 14.

15. The violent aftermath

2. Interpreting the Topography

This place is characterized by the contrasting traits of pure serenity and furiously destructive potential. Its history is a case study in the struggle between human will and natural forces, a collision between a determined culture and an indomitable landscape. The idyllic scenery contradicts the embodied struggle. The snow softens the landscape, concealing an arduous environment that is finely balanced. This character of poise and ferocity frames one's existence in this landscape.

Come to the woods, for here is rest. There is no repose like that of the green deep woods. Here grow the wallflower and the violet. The squirrel will come and sit upon your knee, the logcock will wake you in the morning. Sleep in forgetfulness of all ill.[1]

John Muir

I saw a man lying on the snow and I went and got him, and put him on my back ...and while I started up the hill, another slide hit and knocked me down underneath it, and I lost this man, I was sort of dazed and was underneath the snow some ten or 15 feet. I started to dig and climb out along the side of a tree, and finally got out, and I was in such a dazed condition that I walked down and walked into the river up to my shoulders, when I came to and realized what I had done.[2]

William Edward Flannery,
Great Northern Railroad Telegraph Operator

To understand the dichotomous temperament of nature Leo Marx looks to personal accounts of 16th century expeditions across the Atlantic. Reports typically fall into one of two categories: depictions of America as a great and abundant garden of life, or tales of revulsion, savagery and danger. The former "was no mere rhetorical commonplace. It expressed one of the deepest and most persistent of human motives. When Elizabethan voyagers used this device they were drawing upon utopian aspirations that Europeans always had cherished, and that had given rise, long before the discovery of America, to a whole series of idealized, imaginary worlds."[3] The latter category "is to envisage it as another field for the exercise of power. This violent image expresses the need to mobilize energy, postpone immediate pleasures, and rehearse the perils and purposes of the community."[4] It is these two understandings of nature that are critical to revealing the potential of the Wellington site, but first it is necessary to look again to Marx to understand the meaning of these representations:

> *What is most revealing about these contrasting ideas of landscape is not, needless to say, their relative accuracy in picturing the actual topography. They are representational images. America was neither Eden nor a howling desert. These are poetic metaphors, imaginative constructions which heighten the meaning far beyond the limits of fact. And yet, like all effective metaphors, each had a basis in fact. In a sense, America was both Eden and a howling desert.*[5]

The site at Wellington is both Eden and a howling desert. It offers the utopian image that is so commonly held in the minds of humans as well as the intensity necessary to mobilize and sacrifice to overcome challenges. In addition to this duality is Wellington's period of isolation during the winter months, this time of such intensive extremes. The seclusion creates an environment of focus and a purity of thought. To be in such a place is to be mesmerized, made to feel powerless, and then challenged to continue and overcome.

This Thesis proposes that the concerted qualities of violence and serenity can be fundamental to processes of personal renewal. We find ourselves lulled into a place of beauty, when challenged by its volatile nature we search our capabilities in order to persevere only to once again find ourselves in a place of tranquility to reflect upon the process. Set intimately into this foreign environment, with a set of new challenges, past problems seem insignificant, new possibilities are still to be defined.

Struggle and challenge create a state of instability. At points of uncertainty it is would seem reasonable to look to the most constant of elements; the natural world. Explaining the critical role of nature in the self-definition of man, Marx states, "Here, as in a dream, the superfluities and defenses of everyday life are stripped away and men regain contact with the essentials. In the wilderness only essentials count."[6] To survive in the wilderness is to forget about the constructed reality based on the formalities of everyday life. Wellington is a concentrated sector of the wilderness, richly exhibiting natural forces and displaying the cyclical processes that form the basis of the world's constancy.

In his examination of one's ability to place themselves in the world, Juhani Pallasmaa looks to psychology: "In the words of the American therapist Gotthard Booth, 'nothing gives man fuller satisfaction than participation in processes that supersede the span of individual life'. We have a mental need to grasp that we are rooted in the continuity of time."[7] Here we see that it is essential to our personal fulfillment to understand ourselves as part of something more meaningful than the segregated span of an individual life. Humans must believe that they are deeply intertwined with both the natural history of the earth, as well as the common history of mankind.

With its indissoluble geographical and social histories, Wellington is a laboratory of personal experience, abounding with opportunities to challenge and redefine one's concept of self. Its elegance and grandeur is seducing, its vehemence is trying. This is a place of revival.

3. Deriving the Program: A Wilderness Recovery Center

I.

Program Spaces

Sleeping Accommodations
- 6 Individual Shelters
- 6 Grouped Bunks
- 5 Staff
  - Expedition Leaders, Therapist, Program Director

Cooking Facilities
Dining/Common Areas
Staff Library/Office
Warming/Drying Room
Toilet & Shower Facilities
Gear Storage
Ration Storage

This thesis proposes the addition of a new layer in the history between man and this landscape, one in which the relationship encourages recovery from the traumas of the past for the people who come here and possibly the place that has endured. The program is developed from the detailed examination of this history and character of the site. The natural history is one of continuous renewal, the human layers have brought conflict resulting in trauma, and the enduring character of the site is one of violent potential and alluring elegance. The synthesis of these elements creates an understanding of the existing topography. This new layer of inhabitation seeks to use the sites potential to help people recover from their own struggles, while redefining the relationship between man and nature, and possibly paving a path for an appreciation of this landscape as a place of value.

17. Trail along railroad grade

II.

The natural environment has a fabled history as a place withdrawal, redemption, and recovery. In his continued analysis of the relationship between man and the wilderness Marx examines Shakespeare's *The Tempest*. The hero is the Duke of Milan and we find him in exile on a foreign and untamed island. The play begins with a scene of destruction as a furious storm brings a second group of travelers to the island in the same disastrous manner that Prospero found his party abandoned on the island 12 years before. Ultimately a tale of exile and redemption, Marx finds *The Tempest* to set a precedent for the timeless American tale of man retreating to nature to overcome its challenges, as well as his own:

The Tempest, T. Cole (ca. 1826) 18.

The play, in its overall design, prefigures the design of the classic American fables, and especially the idea of the redemptive journey away from society in the direction of nature. As in Walden, Moby-Dick, or Huckleberry Finn, the journey begins with renunciation. The hero gives up his place in society and withdraws toward nature…In The Tempest the island is not an ideal place, any more than the woods in Walden, or the sea in Moby-Dick, or the river in Huckleberry Finn. And yet, in a world that contains corrupt Milan, the island does offer hope. Precisely because it is untainted by civilization, man's true home in history, it offers the chance of a temporary return to first things.[1]

To give up one's place in society is a choice that one may make in order to overcome the ills that have plagued them. In order to reconsider the nature of one's problems it may be necessary to withdraw from the context that supports them, a temporary withdrawal to a place that presents a completely different concerns. Early in his exile Prospero seeks to use his skills of magic and manipulation to restore his family to their rightful position. As the story unfolds, the hero finds his the error in his manipulative ways of controlling nature and other characters on the island. It is at this point that he admits to exploiting those around him, renounces his actions, and paves the path for his return.

Through isolation and withdrawal from society, one can forget about the constructed reality that has clouded their vision. It is there one may 'regain contact with the essentials,' taking things back to their elemental roots, offering an opportunity to restructure their understanding of themselves and their relationship to the world. All of this in preparation for a return:

What finally enables us to take the idea of the successful "return to nature" seriously is its temporariness. It is a journey into the desert and back again – "a momentary stay against confusion." On the island Prospero regains access to a source of vitality and truth. This we must grant even if we deny that the island, representing external nature, provides anything more than a setting for the renewal that Prospero achieves through an effort of the mind and spirit. What happens during his exile is what may happen to any of us in our departure from routine waking consciousness…The contrast between "city" and "country" in the pastoral design makes perfect sense as an analogue of the psychic experience. It implies that we can remain human, which is to say fully integrated beings, only when we follow some such course, back and forth, between our social and natural selves…What is ascribed to "nature" in the design may plausibly be understood as the vitality of unconscious or preconscious experience.[2]

In this context, Wellington would seem an ideal setting for such a 'departure from routine waking consciousness.'

There are valued times in almost everyone's experience when the world is perceived afresh: perhaps after a rain as the sun glistens on the streets and windows catch a departing cloud, or, alone, when one sees again the roundness of an apple. At these times our perceptions are not at all sentimental. They are, rather, a matter of fact, neutral and undesiring—yet suffused with an unreasoned joy at the simple correspondence of appearance and reality, at the evident rightness of things as they are.[3]

Michael Benedikt, *For an Architecture of Reality*

III.

Wellington is rich with experiential opportunities for reflection and a fresh perception of oneself. The obvious challenge and intensity of this program will not appeal to everyone but is well suited to those who choose a path of challenge to regain their strength. Participants in these programs may have a variety of needs or underlying problems, requiring multiple methods of appeal and engagement. The isolation of the winters ensures an atmosphere of focus. The sense of struggle, tragedy and stoic persistence that is inherent to its social history offers a point of reflection and a personal connection to man's relationship with the site. The intensive natural forces on the site offer genuine exposure to the essential cycles that govern our existence. The site is full of simple tasks like snowshoeing and collecting firewood as well as the specific challenges of mountaineering and climbing, or just building a simple fire to cook a meal under harsh conditions. These, and many other specific tasks can be integrated into outdoor expeditions that the participants can begin to use as resources for reconstructing a capable and strong self-image. The methods of engagement can vary between groups, tailored to the desired intensity of exposure to the landscape. To Marx it would seem to matter little whether it was the fundamental connection to nature that allows for revitalization but rather that the critical experience is the psychological shift away from our accepted reality, toward a more elemental existence, and back again that is critical to irreversibly altering our perception of ourselves within the world.

19. North Entrance to shed

This ability to learn a new strategy by reordering and reorganizing concrete memories is the fundamental process - the active ingredient - in traditional psychotherapy and education. It is also the way in which anecdotal and experiential metaphors help people change and grow. However, the metaphoric approach is usually more powerful and more permanent than conventional approaches.[4]

Stephen Bacon, *The Conscious use of Metaphor in Outward Bound*

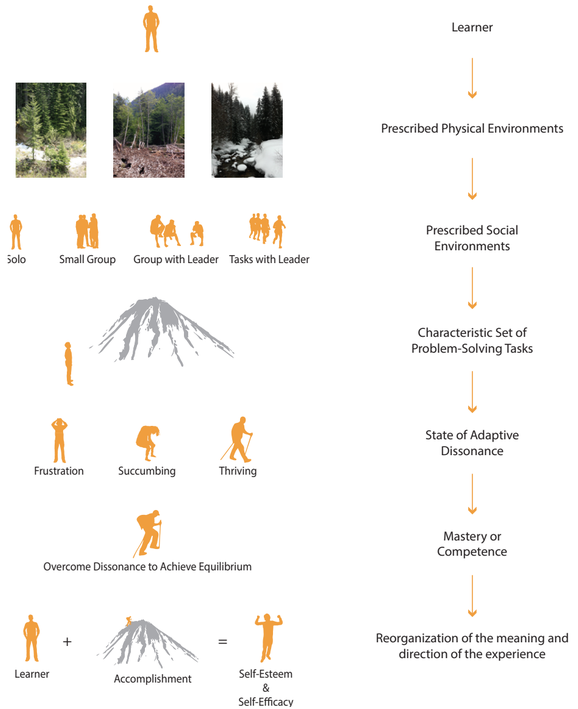
People unconsciously and consciously upset themselves about bad happenings or happenings that they view as bad…For the most part, people traumatize themselves by the attitudes that they take toward traumatic events.[5]

Dr. Albert Ellis

IV.

This program combines elements of the Wilderness Experiential Therapy Model[6], most commonly associated with Outward Bound, with more traditional forms of psychotherapy. The facility is a platform that allows for varying levels of challenge with particular scenarios offering a more intense experience. The process is designed to challenge the participants in new ways, develop new technical and coping skills and eventually translate their success into other realms of their lives through direct transference and implied metaphor. The program operates during the months of isolation in which the site is accessed by snowshoeing in along the 9-mile railroad grade and supplies can only be delivered by snowcat. During the late summer and early fall months, when the site is accessible by car and trail, the necessary privacy is lost and the facilities can be rented to generate funds to subsidize the recovery programs.

The role of the Outward Bound model in this program provides a platform for venturing into this new environment and exploring some of its harsher and more violent characteristics. The program uses expeditions into environment to test the participants in new ways, relying on natural consequences to reward appropriate actions and provide disincentive to inadequate effort and engagement with the process. When participants learn the skills and apply them correctly, they



Desired Outcome:

The learner continues to be oriented toward living and learning

20. Wilderness Experiential Model (Walsh and Golins, 1976)

are rewarded with the comforts that result from their success. When they disengage and reject the process, they are naturally exposed to less desirable conditions. The direct feedback is particularly motivational and allows the individual direct ownership of their sense of accomplishment.[7] A particular strength of this process, is its ability to provide a framework for building self-efficacy. Through the process of frustration, succumbing, success, and reflection it provides concrete experiences that can be used to form the basis of a renewed confidence in one's ability to cope with challenging experiences.[8] Through reflection and counseling these experiences metaphorically reinforce the one's sense of capability in other realms.

The integration of more traditional therapy into the program acts to deconstruct existing patterns of thought that limit a participants ability to recover from traumatic experience and eventually reinforce the process of renewal. Examining ones constructed reality in order to understand its role in the patients behaviors has its basis in *Rational Emotive Behavior Therapy*, which contents that individuals "are strongly inclined by their biological tendencies, their human experiences, and their social learning to often make themselves self-defeating."[9] This process involves the formation of irrational and rigid views of reality that can ultimately contribute behaviors that add to emotional pain. Building off of this basic platform, clinical psychologist Al Mahrer developed a model known as Experiential Psychotherapy which:

> *…depicts a person as building, creating, organizing an external world to serve as appropriate and useful situational contexts to enable the experiencing it is important for this person to experience. And the external world is shaped and organized as externalizations of the person's own deeper potentials, again to enable the experiencing of what is important for this person to experience. There are ways that a person builds and constructs his or her own person external world…Whatever ways the person uses, the person is the one who builds, shapes, creates, constructs, gives meaning to, and uses the external worlds, and the person may use building blocks that are quite real or are utterly and fancifully unreal.*[10]

Patterns of thought that limit one's ability to overcome problems are based on their interpretation of events. Often this interpretation is applied to all realms of one's life, creating a scenario in which the symptoms govern and limit their entire understanding of their potential. Therapy helps to break down the established interpretation. The process of achievement in unfamiliar realms acts to undermine previously determined limits while establishing a basis for renewed belief in one's ability.

Typical Wilderness Therapy Program Components		Components Identified as Building Self-Concept
Service Project		Service Project
Individual Success	→	Individual Success
Course End-Run		Course End-Run
Physical Challenge	→	Physical Challenge
Group Problem Solving		Group Problem Solving
Individual Responsibility	→	Individual Responsibility
New Skill Development	→	New Skill Development
Reliance on Group Members		Reliance on Group Members
Setting & Achieving Goals	→	Setting & Achieving Goals
Adaptation to Environment	→	Adaptation to Environment
Wilderness Setting	→	Wilderness Setting
Structured Group Discussions		Structured Group Discussions
Solo Outing	→	Solo Outing
Informal Conversations		Informal Conversations
Challenging Weather	→	Challenging Weather
Reflection	→	Reflection

(McKenzie, 2003.)

In the closing scene several of the "lost" Europeans find each other and themselves…
And so to Naples and then Milan. The play fosters no illusion that a permanent retreat from the city is possible or desirable…Thus the symbolic action, as in our American fables, has three spatial stages. It begins in a corrupt city, passes through a raw wilderness, and then, finally, leads back toward the city…There is now some hope that what has been learned on the island can be applied to the world.[11]

V.

If a key to helping people overcome the problems they face is to encourage a new understanding of themselves, and this enclave in the Cascades is understood to be a place of renewal capable of connecting to the more essential nature of humanity, then it is an atmosphere perfectly suited to aid people in their process of recovery. It is place to help people who are in need of an opportunity to redefine their understanding of themselves and carry that new understanding into their daily lives.

21. 9-mile hike along grade

Degraded concrete column 22.

Historic wood cabins 23.

Sheet metal in the landscape 24.

4. Material Evidence

A building's capacities and identity become apparent through resistance…The force-counterforce relationship results in a alteration to the building's physical body, that demonstrate its ability to respond to ambient conditions. Stains on the building are evidence of its capacity for resistance. Cracks in the wall indicate limited success on this front.[1]

David Leatherbarrow, *Architecture Oriented Otherwise*

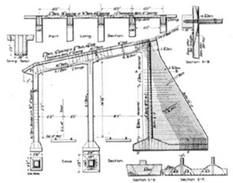
I.

Throughout the 35-year history of the site there have been 3 primary building materials used; wood, reinforced concrete, and steel. Each of these materials has proven well suited to particular uses as well as shown to be susceptible to the natural forces that exist on the site. The nature of the individual materials as applied to construction either requires continued maintenance or the acceptance of their limited capabilities and life span. An analysis of the historic construction on the site offers a glimpse into the environmental impacts, and potential for approximating the future condition of materials in this context.

25. Collapsed wood snow shed

Wood

The majority of the interior space built in the in the original town was of typical wood framing, sometimes on concrete footings but often on stacked heavy timbers similar to railroad ties. To the south of the site, along the railroad grade there was a series of heavy timber snow sheds. Current conditions on the site leave very few traces of previous structures. Only heavy timbers and rough hewn logs remain as evidence of the wood construction tradition on the site, most prominently in the ruins of the early wood snow sheds. The lack of any considerable presence of light wood construction today, and the condition of the few heavy timber structures still existing illustrates its relative weakness and precludes that it will completely wither under these conditions.



Original engineering drawings 26.

Weep drains - frozen and flowing 27.

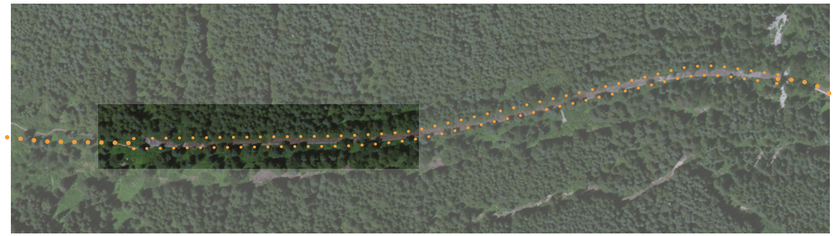
Run-off undermining footing 28.

Concrete

The concrete shed was initially constructed as a response to the avalanche in 1910. Examining the shed today helps to understand the forces it was designed to contend with as well as the toll that this resistance has taken.

The simple intent of the structure was to protect the main line and passing tracks from both catastrophic and slowly creeping snow by bridging the tracks while maintaining a slope that does not significantly impede the force of the snow. Along the path, at the base of the retaining wall weep drains attempt, with varying effect, to relieve the hydrostatic pressure that builds up in the mountainside and channel it toward the south. At many points the water has established its own path, in one case it flows underneath a grade beam that connects the outer row of columns.

29. Interior bay of shed



Degraded roof slab 30.

South end of shed showing run-off paths above 31.

Collapse at south end 32.

Toward the south end of the shed the slope begins to transform from a relatively even hillside to toward the avalanche channels further down the grade. At this end the surface water commonly flows over the top of the shed. Within the structure, several small channels attempt collect and distribute water in a more condensed manner, the effects of which are evident at acute points by the condition of the concrete. Much of the structure bears marks of a long opposition to the water but the south end bears definitive scars.

Descending Windy Mountain, the water channels in two distinct and destructive ways, both of which have left their impact on the concrete snow shed. The impact of the constant exposure to water that freezes and thaws several times throughout the year is evident in many places through the cracks in the slab that are discolored and highlighted by the white efflorescence that accumulates along the edges. One area of extreme exposure has worn through the mass of the concrete and corroding apertures in the roof large enough to fit a hand through. These openings expose the steel reinforcement leaving a view into the glowing snow pack above.

At the far south end of the shed is the most dramatic indication of the capacity for destruction by the natural forces on the site. The last 2 bays of the snow shed, unable to rely on continuity of structure and undermined by water collecting at the footings, have completely collapsed.

Historic steam tank 33.
Bent steel plate 34.
Steam piping intertwined with the landscape 35.

Steel

The steel remaining on the site today can be distinctively divided into two categories: the few elements not removed with the tracks in the 1930's and those in the ravine below, that were carried it to the bottom of the slope by the avalanche.

With the major components of the trains, engines, and rotary plows removed, many of the remaining pieces of rusted steel are embedded in the wet cedar grove. Close inspection finds evidence of momentary force and years of material degradation; steel steam tanks blown open from the impact, twisted steel plate, steel rails rusted clear through, and the evidence with the most graphic history, the steam piping that braided the trees, earth and bodies together as the avalanche tore the hillside down.[2] In many of the traces of steel one finds on the site are reminders of the avalanche but the are also icons specific routines associated with the period. Perhaps they can be understood as the tools of the men who worked with them everyday as well as for their position at the bottom of the slope.

Although wear and tear result in subtraction, they also allow for a significant sort of addition. Over time and through use, architectural settings accrue legibility…Time does not pass in architecture, it accumulates.[3]

Leatherbarrow, David. *Architecture Oriented Otherwise*

II.

These constructed elements chronicle the past 100 years forces inflicted on the built elements, measuring and setting an expectation for their performance. Through the lens of this town and from the distance of a century since its development and demise, one gains insight into the relationship between nature and constructed elements. However, it is only evidence of the past, the difficult issue with trying to project that understanding into the future is that the destructive potential of this place is anything but predictable.

36. Emerged & emerging topographies

5. Emerging Topographies

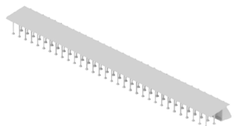
I.

The design of this thesis begins with understanding of the layered history of this site, a history began with the landscape, and will end with the landscape. The human interventions on the site relate to daily, seasonal, and annual processes that occur here but they are still counting on a scale that reveals their relative impermanence. The site's first inhabitants are gone, as is the massive corporation that sent them here. The original railroad grade dissolves into the forest at points and narrows to a terrifying width for hikers at others. The only elements that bridge the scales of human inhabitation and that of the landscape are the massive concrete structures inserted along the grade. Although it inevitably belongs to the human time scale, there are many conditions in which the concrete seems to have been cast recently and the shed will long persist in opposition to the landscape, as a scar from the tragic past.

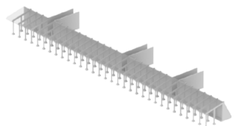
This thesis proposes an approach that draws from the human and natural forces while addressing each condition relative to its own character and scale of time. The project seeks to provide for the basic physical and emotional necessities of the new inhabitants during their time at the site while making approximate gestures toward the conditions beyond this period.

Site strategy 37.

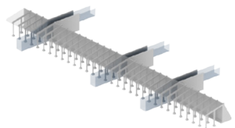
II.



Existing shed 38.



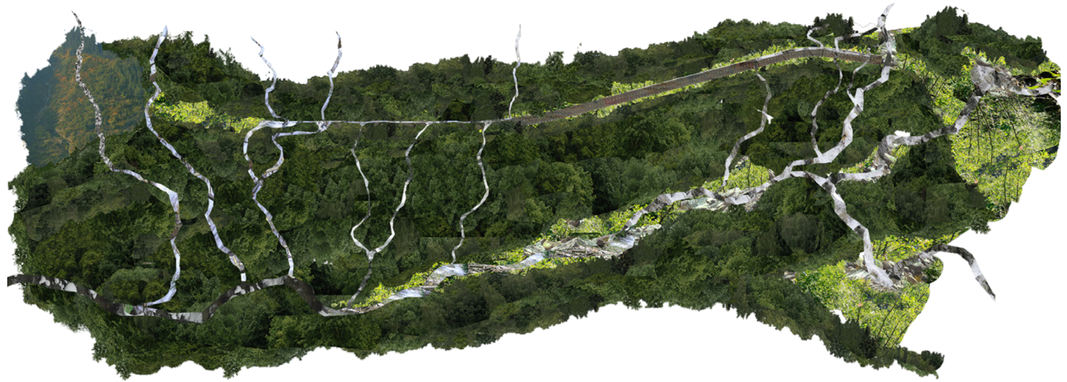
Opening channels 39.



Resumed flow 40.

Through the preceding process of analysis and the testing of other areas of intervention, the concrete snow shed reveals itself as the defining element that captures the struggle between human and the natural forces on the site. Examining the condition of the shed, one finds the southern half of the structure to be a particular point of instability with the landscape because the slope of the hillside focuses water away from the central and northern portions toward the south.

The flow of water, the site's most active element of both renewal and destruction, is an opportunity to articulate a condition of conflict between the existing shed and the natural forces acting upon it while providing a metaphorical connection between the site and program. As the primary element opposing drainage patterns, the retaining wall of the shed is removed at 8 individual bays. New retaining walls that run parallel to the flow open channels for creeks as well as provide relief at intermediary points for seasonal surges. The current condition of intermediary weeps that guide water down to the end of the shed has resulted in the concentrated destruction of the last bays. With the understanding that the water will eventually overwhelm any planned methods of control, these new channels distribute the insidious but destructive force in a more even manner. The process is similar to one that has been making slow progress for a century: the gradual erosion of the earth surrounding the grade beams that connect the outer column foundations. The intent of this intervention is not to stop the weathering of the shed but rather, considering the nature of its lifespan, to approximate a condition of its eventual failure.



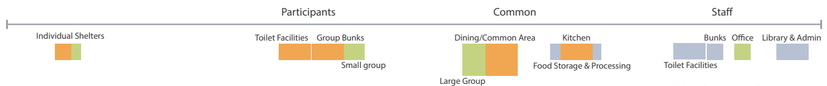
41. Emerged & emerging topographies

In examining the strength and endurance of both the shed and the landscape, this strategy is intended as a small gesture toward the landscape's effort to reestablish its former character while providing a meaningful system of organization for the architecture that supports the program.

Gradient of stability 42.

III.

Looking back to the current condition of the shed, the theme of stability resurfaces to form the organizing logic of the program while the site intervention discussed above provides the framework for integrating the built elements that emerge.

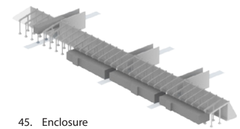


Consolidated program diagram 43.

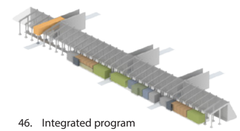
The most stable elements; the staff and core elements of the program fall to the more stable northern area of the shed. The common areas that provide comfort and a stable community of support to the participants are further south on the scale. 6 bunks grouped together come next in the array. Finally, 6 individual shelters spread along the remaining length of the shed provide individual places of refuge as a counter to the lack of personal space that characterizes the common areas. Opportunities for therapy are appropriately spread along the gradient as they act in both a stabilizing, and intentionally destabilizing capacity. The program elements are then consolidated into groups based on relative levels privacy for staff, participants, and group interactions.

44. Site diagram

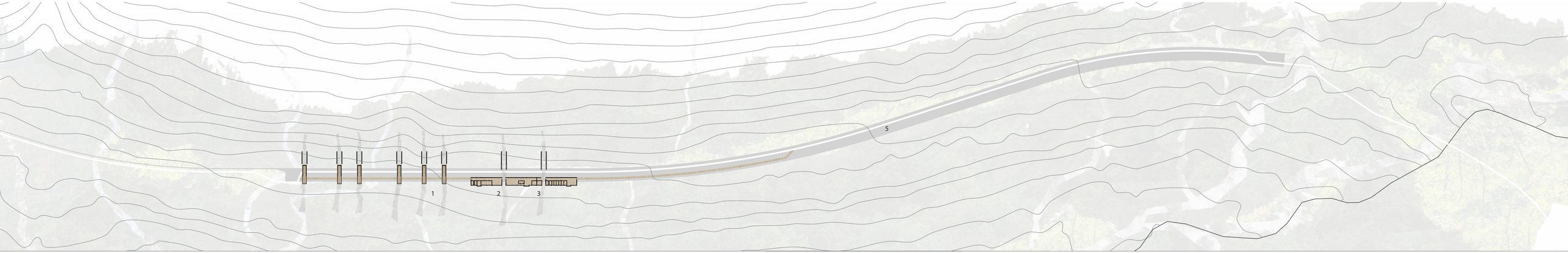
Integrating the programmatic diagram with the site strategy, the system of channels reinforces the grouped organization, forming three enclosed spaces containing the specific program elements aligned along the shed. Zooming out to the site scale, the 6 individual shelters follow to the south, placed in correspondence with channels running below.



45. Enclosure



46. Integrated program



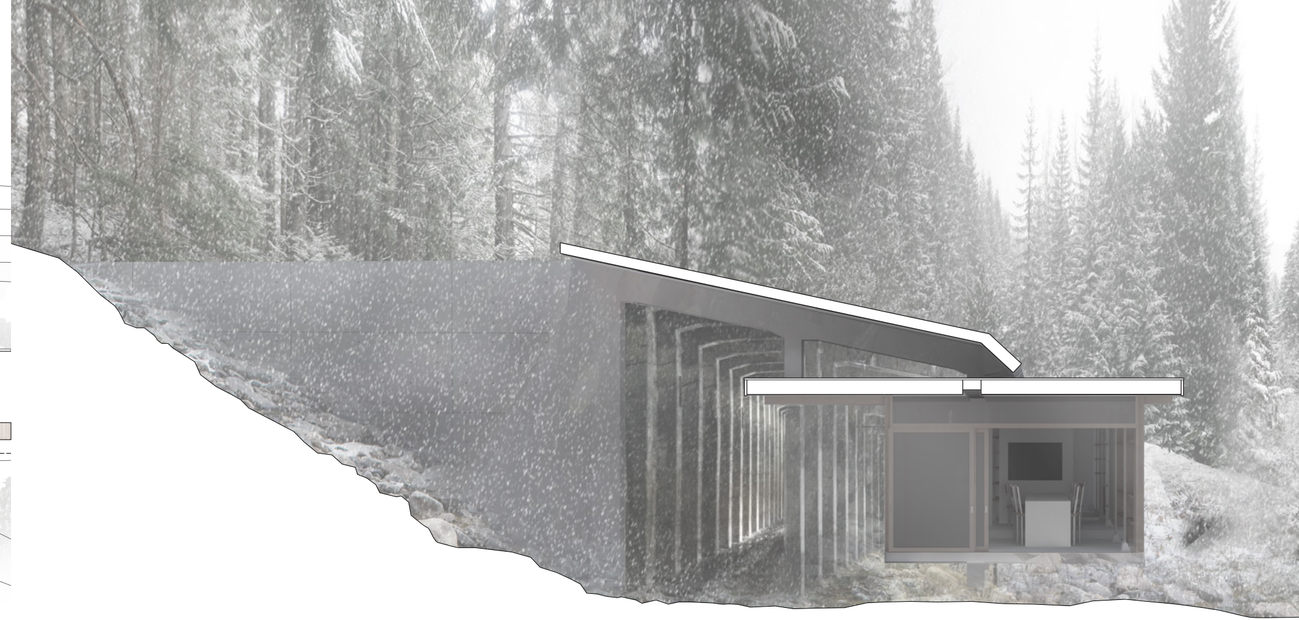
0 200′ 400′

Site plan 47.

1 Individual Shelters
2 Bunks
3 Common
4 Staff
5 Railroad Shed

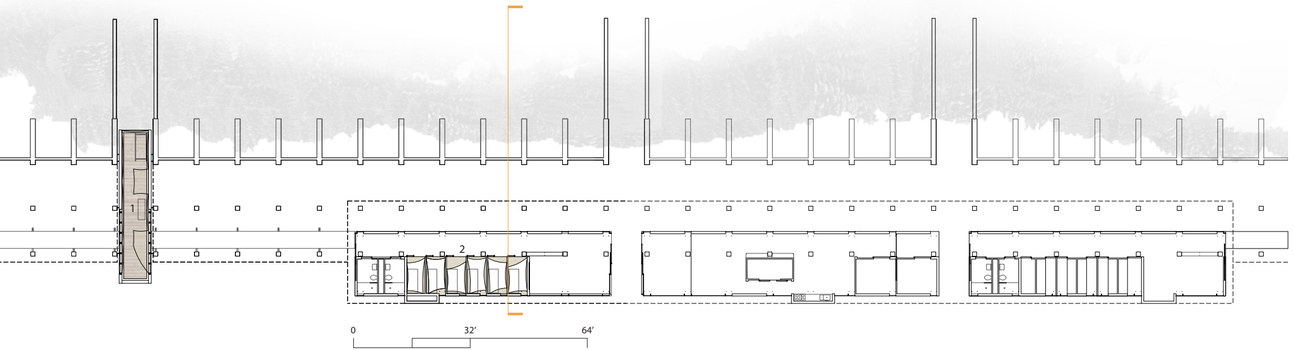
Lower floor plan 48.

1 Individual Shelter (Above)
2 Wood-Fired Boiler
3 Warming/Drying Room
4 Common Room
5 Dining/Common Room
6 Kitchen
7 Gear & Ration Storage
8 Staff Bunks
9 Staff Library & Office



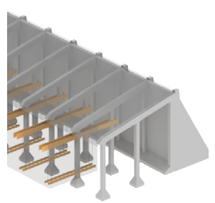
0 8' 16'

Section @ Channel 49.



Upper floor plan 51.

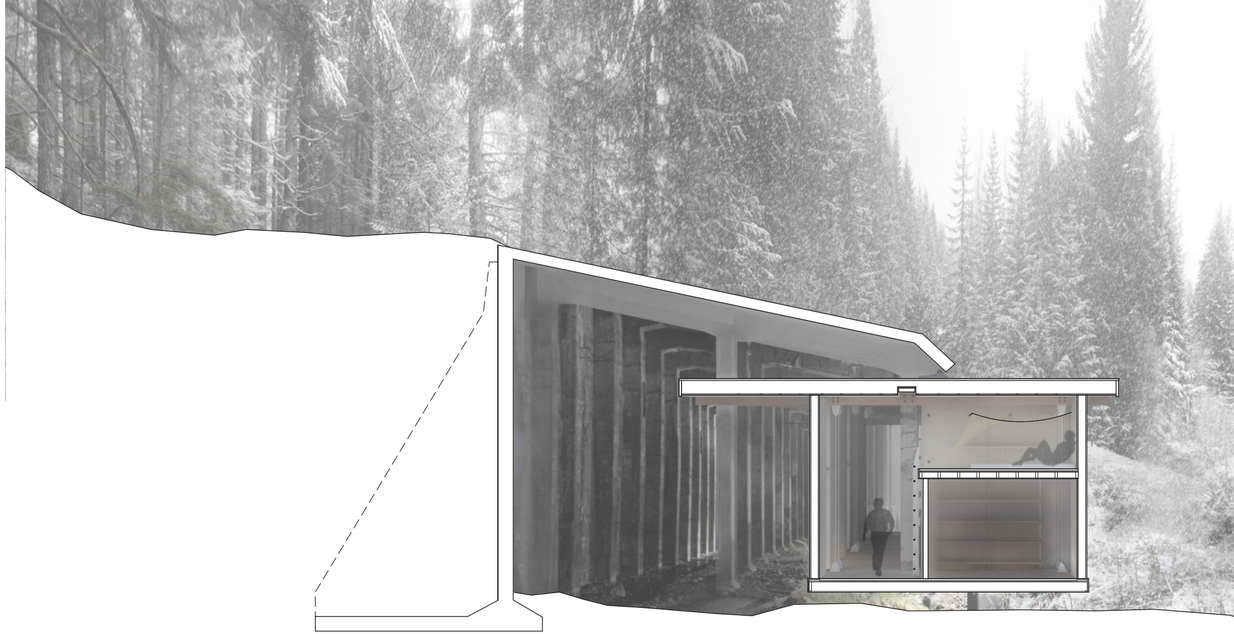
1 Individual Shelter
2 Group Bunks
(Above Drying Room)



Structural diagram 50.

IV.

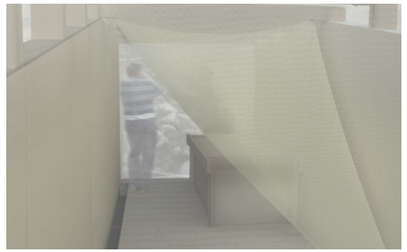
The tectonics of the building that is emerging begins with the established understanding of the shed as an element of extreme strength and endurance. Looking to the precedent construction from the initial settlement of Wellington, one sees the lifespan of wood structures paling in comparison to that of the shed in this environment. This logic forms the structural hierarchy of the main building.



Massive glu-lam beams by-pass the two internal rows of concrete columns at each side. Working in pairs they mimic the rhythm of the existing shed creating the structure for a single continuous roof that begins at the central column and extends to cantilever out of the shed. The roof relies on the immense mass of the shed to bear its gravity and overturning loads, while steel rods suspend a light floor plane below. This strategy is based on 3 motives: removing the necessity of an extensive and intrusive concrete foundation, expressing the relative significance of the snow load on the roof, and illustrating the extreme strength of the concrete shed. The remaining tertiary elements utilize light wood framing and plywood for insulated enclosure balanced with glazing that blends the interior with the surrounding context.

0 8' 16'

Section @ Bunks 52.



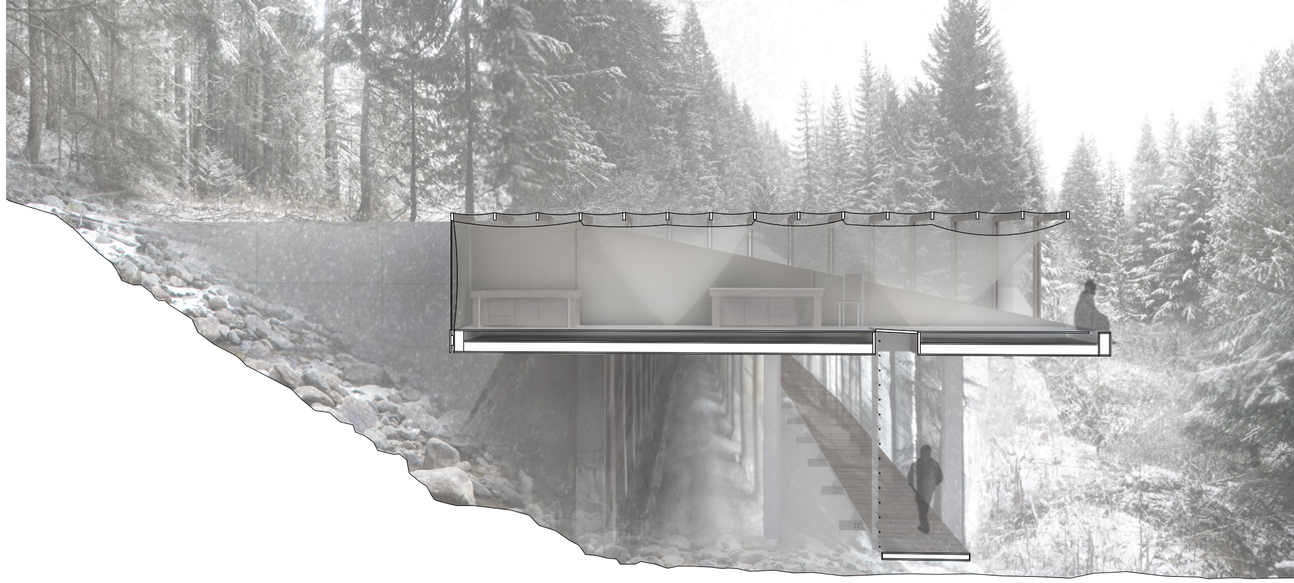
Shelter interior 53.

Refuge always maintains some distance, hiding life. Dry-stone walls of a shepherd in the Andes, or the caves of the orthodox monks in Meteora are good examples.

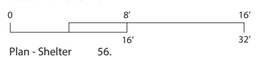
Such refuge avoids direct transmission, hyper-connection and instant forgetting. It is the last container, the last trunk where civilization or any single life can store its remains – the board for kneading dough to make bread, a triangular fire guard, cooking pots, water drums, stone mortar also sometimes in our mountains. It is an imprint of a time of physical absence, capturing a lost time, an extinct luxury.[2]

Smiljan Radic, *Refuge*

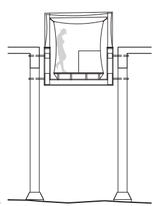
The shelters are perched within the structural bay of the shed at an elevated level, occupying the space of the removed retaining wall and roof slab. The structure is a wood frame, clad in plywood a the lower condition while the upper portion is a lighter, water-proof construction similar to a yurt, just strong enough to allow the snow to bridge the spacing. The volume pushes into the void of the channel to create an internally focused space that becomes shrouded and insulated with snow as it accumulates. The opposite end projects just beyond the edge of the shed roof creating a position of prospect at the level of the trees. During wilderness exercises the participants use a waterproof fabric as their method of protection from the weather. When in the field it is their tent, poncho, wind screen, whatever may be necessary to afford them a minimum of protection. This idea of a shrouding fabric informs interior. A flexible canvas lining allows the space to manipulated and divided into intimate spaces. It can wrap the sleeping platform at the back, or it can visually open the space, connecting the shelter from the water running in the channel to the forest it extends to at the front.



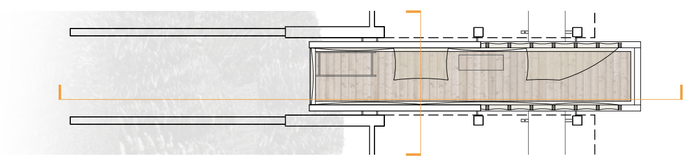
Section - Shelter 54.



Plan - Shelter 56.

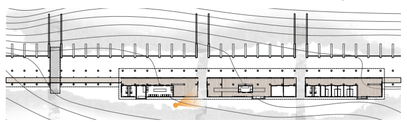


Section - Shelter 55.



V.

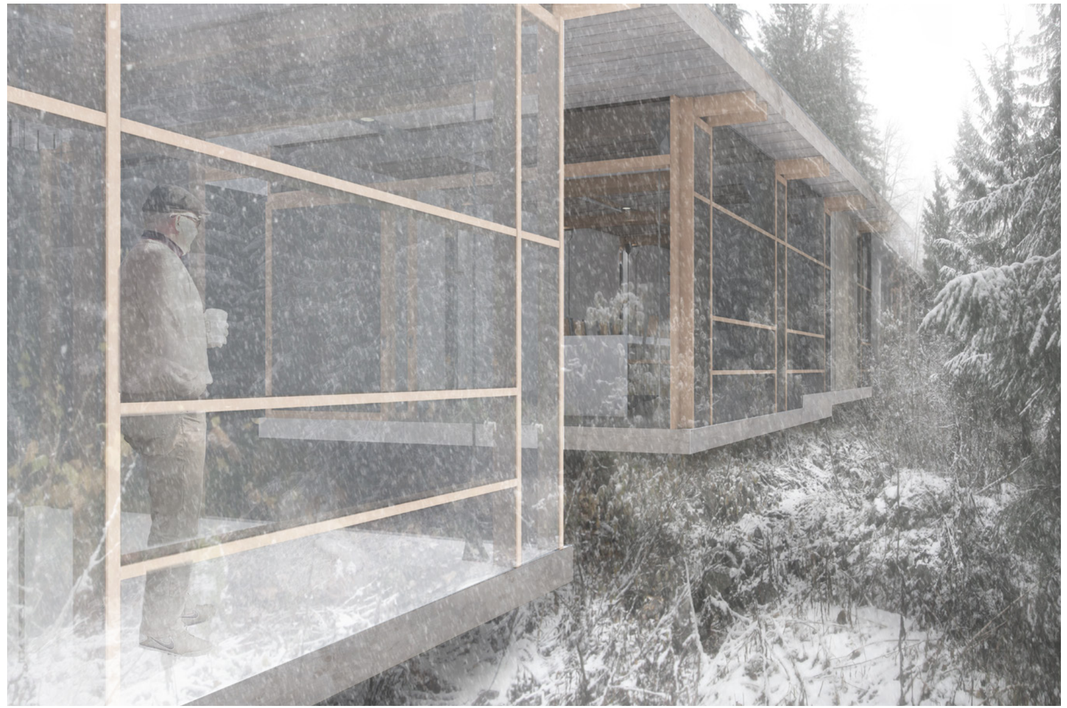
The process of defining the role of architecture in a program that derives its most meaningful experiences from a specific lack of architecture presents an interesting quandary. It is apparent that the relationship between people and the landscape is the core of this program, and not in the way that architects often speak of. The motive is not a seamless transition between interior and exterior. The core of this program is about being away from architecture, slipping into a creek when you have miles to go, cutting your hand on a jagged rock and bleeding onto the snow, using the challenge the landscape presents in its purest form to improve yourself.



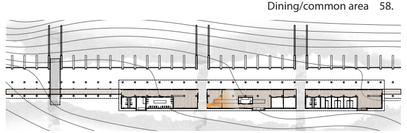
Exterior view toward common spaces 57.

Taking on the rigorous challenges of this place is a daunting task, even for those who choose it as a path to recovery. The violent nature of the site can be terrifying. So what role is left for architecture? It too goes back to its most essential roles. This thesis recognizes the secondary and supporting role of architecture in this program, its objective is to be shelter from the landscape. Architecture in this context is about finding a safe place, with people to support you.

The design takes a dual approach to accommodating the process of the participants. The common areas become a place in which the group interaction is inevitable. As with the expeditions, everyone acts together as support, and with the significant challenges there is inevitable friction. The shelters counter this condition. They are a place of reflection and privacy that strips away all but the necessary elements. These two conditions work together to create a shift between the communal and individual experiences. The participants must find a balance between the group dynamic and a higher degree of comfort with the need for individual space with its accompanying austerity.



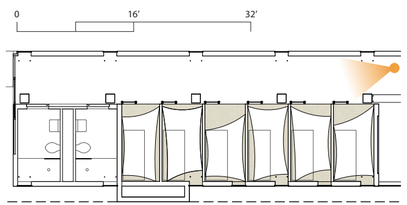
The common areas become a place to celebrate successes, plan tomorrow's route, or debate whose turn it is to split the wood and stock the boiler. Shared experiences and conflict become an essential tool in the program. They set the basis for understanding each other and developing a sense of common interest. The constant interaction encourages the daily practices of the group, adding to the meaning of the process.



Dining/common area 58.

The bunks are intended to provide a small individual space for sleeping while maintaining the group dynamic. They are located above the gear drying room, which radiates heat through the shared surface of the floor. Similar to the individual shelters, each bunk has canvas lining for visual privacy when required while not allowing for any significant distance between oneself and the larger group.

Floor Plan - Bunks 59.



The shelter is the individual's place of respite from the tensions of the program. As a contrast to the common building, they are much more exposed to the elements. The winter snow builds a buffer around them, the spring melt runs just beneath, and the uncommon ray of sunshine lights up the enclosure. They embody the challenges of the site, allow for distance, and provide refuge when it is needed most.

Shelter 60.

63. Traces of habitation in the topography

Historic traces of the railroad 61.
Bunk ladder & structural steel rod 62.

VI.

As a specific gesture to the understanding of the extensive history and future of the site the design considers the treatment of certain specialized components of the construction. The steel components of the railroad remaining today speak to the past of the site on a scale that is relative to out bodies; the rusted lever connected to a braking mechanism for the train for instance. The construction takes into account these traces of existence and plants potential seeds for future traces; the stainless steel rods that figure prominently into the structure and the interior space, the stainless steel ladders that one will know intimately from climbing into their bunk at the end of a long day. These are elements that will remain. They will creep slowly down the hillside with the remains of the building, pulled by the annual layer of snow. When the wood is gone they will find themselves embedded in the landscape as artifacts of this period of inhabitation, only slightly differentiated from those of the last.

6. Conclusion

The qualities of topography I have stressed include its horizontal character, its mosaic heterogeneity or contrariness, its recessiveness, and its compact temporality. Each of them suggests that topography escapes the limits of discrete projects both spatially and temporally, or reveals the enmeshed character of those limits.[1]

David Leatherbarrow, *Topographical Stories*

The conditions that define this place - its natural splendor and violent potential, the struggle, the tragedy and perseverance that mark its past - contribute to the richness that create its potential. This thesis uses the term topography as a broad understanding of the landscape, one that includes the natural conditions as well as all of the layers of complexity that have been overlaid. It uses this term because it hopes to convey the undefined nature of 'what has emerged and what is still emerging.'

Before this thesis began the advice was to narrow, to focus in on specific ideas with a well-defined scope of inquiry. However, the process was often overwhelmed by the complexity of topography. At times the inquiry became confused by the dualities of the site - wilderness and railroad, violence and serenity, struggle and renewal, and the reading of a distant past to approximate future conditions. The strength of this project was its inclusive approach. By failing to narrow the focus the project revealed its own limits. It demonstrated that Architecture cannot reconcile the vast dichotomies of this topography but must take a more humble approach. The architecture respects the history and present conditions by allowing them to inform its design. It makes gestures to important concerns that are ultimately out of its control. It provides for people when they need it most.

This thesis discovered that within this context, architecture can only be a thin layer in the context of history and geological time. Doing so it frees itself from the effort of resolving every issue and instead assumes a more fundamental role of architecture as place to gather, protect, and seek refuge to find the strength to face hardship. Withdrawing architecture into the wilderness has allowed an understanding that 'regains contact with the essentials' as well, perhaps this understanding will carry forward into other realms.

64. Looking back at Wellington

Notes

1. Examining the Topography

1 Leatherbarrow, David. Uncommon Ground: Architecture,Technology, and Topography. Cambridge, MA: MIT, 2000. 201-02.

2 The theme of a layered history will continue through this document. The line of thinking was originally derived from conversations with Glenn Murcutt and his understanding of one's contributions to architecture as "only a thin layer" in a much longer history.

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2. Interpreting the Topography

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4 Ibid, 43.

5 Ibid, 43.

6 Ibid, 69

7 Pallasmaa, Juhani. The Eyes of the Skin: Architecture and the Senses. Chichester: Wiley-Academy, 2005. 32.

3. Deriving the Program: A Wilderness Recovery Center

1 Marx, 1964 69.

2 Ibid, 69-70.

3 Benedikt, Michael, *For an Architecture of Reality*. New York, NY: Lumen, 1987, 2.

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6 Walsh and Golins' (1976) model of the Outward Bound process.

7 Bacon, 1983, 1.

8 McKenzie, Marcia. "Beyond "The Outward Bound Process:" Rethinking Student Learning." The Journal of Experiential Education 26.1 (2003): 8-23.

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4. Material Evidence

1 Leatherbarrow, David. *Architecture Oriented Otherwise*. New York: Princeton Architectural, 2009. 58

2 Burwash, Martin. Vis Major: Railroad Men, an Act of God-- White Death at Wellington. Bloomington, IN: IUniverse, 2009.

3 Leatherbarrow, 2009, 82

5. Emerging Topographies

1 Oshima, Ken Tadashi. *Global Ends: Towards the Beginning*. Tokyo: Toto, 2012. 292.

6. Conclusion

1 Leatherbarrow, 2004, 253.

Image References

All images by author unless noted otherwise.
All aerial images compiled from Flashearth.com using Bing Maps imagery.

7. Rotary Snow Plow and Crew - Pre-1910. 2012. http://myplace.frontier.com/~mvmmvm/picts/pre1910.html 10

8. Cleared tracks - Post 1910 Avalanche. 2012. http://mammothtales.blogspot.com/2010/03/wellington-avavlanche-1910.html 10

11. Curtis, Asahel. Train wreckage. 2010. UW Special Collections 12

12. Curtis, Asahel. Avalanche debris. 2010. UW Special Collections 12

18. Cole, Thomas. The Tempest. ca. 1826. 20

23. Curtis, Asahel. Historic wood cabins. 2010. UW Special Collections 30

26. Reinforced-Concrete Snowshed at Wellington, Wash.; Great Northern RY. *Engineering News*, Vol. 64, No. 24 (1910): 653. 32

65. Kingsley, Jesse. The Light at the End of the Tunnel. 2012. 69

65.