# Occupying the Threshold: Voids as Opportunities

by

Megan Florizone

Submitted in partial fulfilment of the requirements
for the degree of Master of Architecture

at

Dalhousie University
Halifax, Nova Scotia
March 2016

# CONTENTS

# ABSTRACT

Cities begin as vast vacant land; when physical form is inserted a void is created.

Infrastructure is the foundation that enables the growth, mobility and exchange of cities and their inhabitants. As these infrastructures and corresponding industries begin to change, they reshape the voids within the city fabric and create both physical and psychological divide. This thesis explores the potential, within this physical divide, to stitch together communities fragmented by deindustrialization through cultural engagement and production. By manipulating the physical and psychological boundaries that have existed within Regina's city fabric over time, the proposed architectural interventions add a parasitic layer to the warehouse district to socially recharge voids and thresholds that have become lifeless. This layer acts as both the adhesive between past and future development, and the binding agent between disjointed communities, ultimately creating opportunities that become catalysts for urban revitalization.

## ACKNOWLEDGEMENTS

To my committee, Diogo Burnay and Catherine Venart, thank you for allowing me the freedom of design and the structure of your guidance.

Thank-you to my loved ones and family for every way you support me and my passions, and thank-you to those along this journey with me, it wouldn't have been the experience it was without you.

# CHAPTER 1: INTRODUCTION

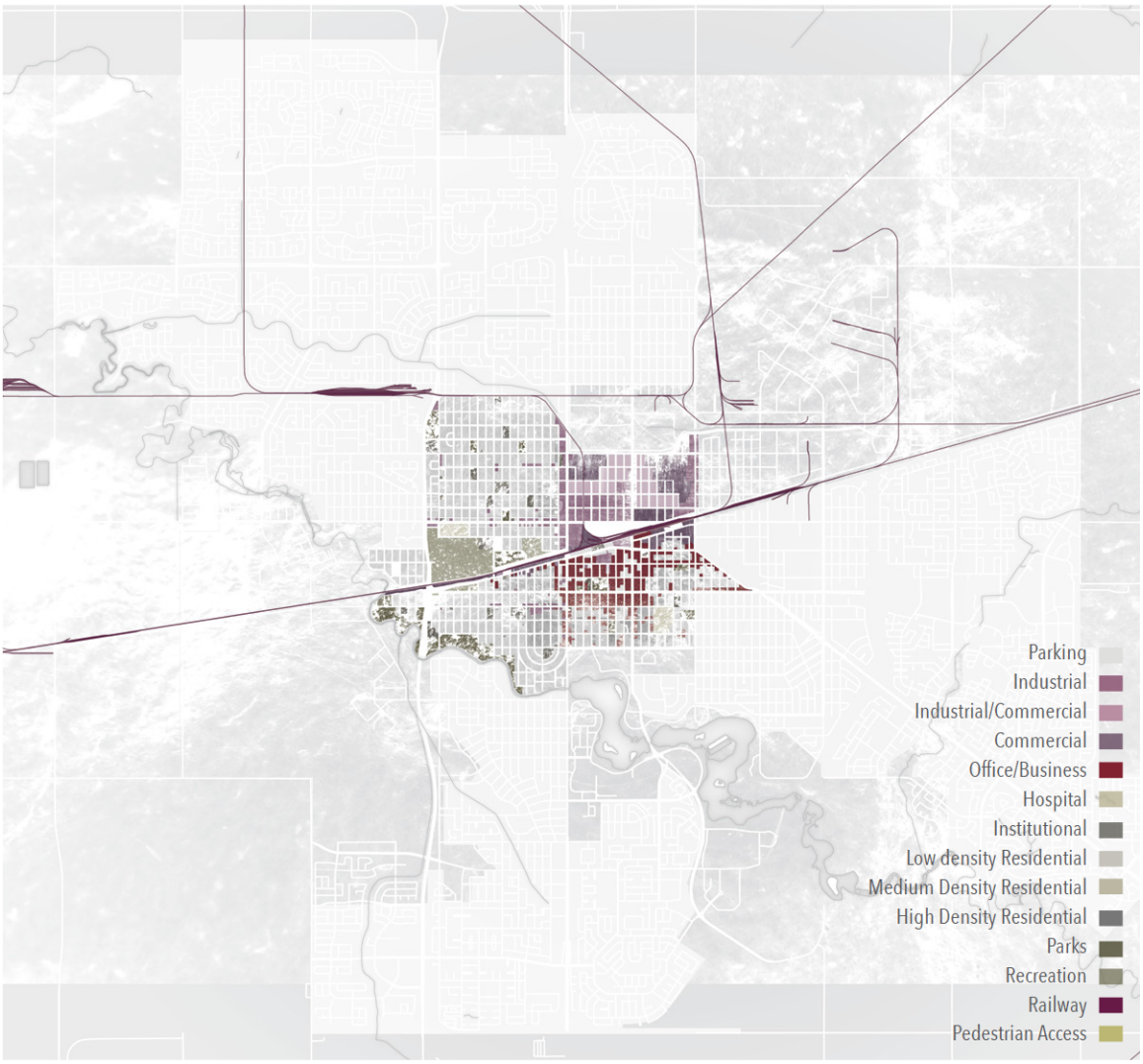
Transportation infrastructure is the physical network that enables goods, services, and cultures to connect over all scales of geographies. It also plays a large role in regards to the patterns and shapes of cities and the lives of their inhabitants. When these infrastructures start to dissolve with their corresponding industry, it can cause major issues and leave awkward voids at the centre of urban developments. The results of deindustrialization include fracturing the relationship of communities to industry, and leftover latent spaces that no longer have purpose in city centres.

Railway infrastructure and its related industries are no exception. As the need for these industries decrease, the urban fabric is left with scars from disused infrastructure and high vacancy rates. This, in turn, creates voids that physically and psychologically disconnect adjacent communities. This thesis looks at these spaces as an immediate opportunity for interventions that will stitch together communities by creating both an interstitial link between the past and the future development within the district, and from one community to the next. This will ultimately create instances of cultural engagement through economic, social, and incidental events, and act as a catalyst for constructive urban revitalization.

Urban master plans can take years to be implemented; therefore, it is a necessity to develop a layer of interstitial use to promote areas of cultural interaction that can facilitate a direction for urban revitalization. By unfolding the past and present instances of the physical and psychological voids, this thesis will find relationships between form and activity that can positively charge latent, left over space. Voids can be defined here as vacant lots, buildings, and even the uninhabited vertical realm. Form is what defines the void; it exists between spaces as a material assembly that can redefine the human relationship with what would otherwise be a open field. Form can act as a threshold between voids or an object that generates energy within the a void. By studying the thresholds between voids and the voids between the thresholds localized elements are revealed that can be translated into a strategy to reconceptualize the human inhabitation of these spaces.

This overarching strategy is of particular relevance to Regina because of the city's shift in industrial practices at the urban core. The major issues that Regina is encountering are

the fragmentation due to shifting railway activity, and the programmatic contrasts of poor city planning. As rail infrastructure and the industrial practices within the warehouse district begin to disperse, the district loses its active nature and becomes populated with vacant buildings and latent in-between spaces. Although the City of Regina has been trying to generate a master plan since the late 1970s, the area has yet (2016) to be developed. It is the purpose of this thesis to develop an approach that looks at the present instances of opportunities within the voids that deindustrialization has created, and prepare the existing site for development that will be responsive to current cultural and social needs and desires.




Programmatic fragmentation at the core of Regina; base map from Regina Open Government Data Catalogue; data from City of Regina City Planning Department, Neighbourhood Profiles, and City of Regina, *Design Regina, Part B - Secondary Plans*

An overall strategy involving four approaches will be explored to regenerate the warehouse district in Regina. Each of which belongs to a larger network of potential interventions, or nodes, that are located where spur tracks historically formalized the relationship between the exterior and interior void. This network will function as a form of architectural infrastructure and allow for both formal and informal instances of cultural exchange through hybridizing provocative activity with existing events. Each intervention is able to be occupied, provides activity for public and private users, and most importantly, each design will play with public perceptions of latent urban spaces.

The first approach within this strategy is Re-imagine. This design takes place as a large urban park on 17.5 acres of the historic Canadian Pacific (CP) freight yards, located on the southern portion of the warehouse district. The purpose of this approach is to create new relationships between the city, its inhabitants, and the changing landscape. The scale enables accessibility and discovery at the core of the city while acting as an orientating device for uncovering new cultural interventions located throughout the district.

The second approach is Wrap. This intervention is located where a line of tracks historically came to an end and goods were further distributed from the building. The wrapper provides a space where individuals are invited in for creativity, collaboration and celebration through the placement of unconventional voids and forms within and surrounding the building. This method takes advantage of the building's position at the northern most position in the district and becomes an advertising tool - for the potential of the entire district - through its gesture and program.

The third approach is Blend. This method looks at the potential of blending contrasting programs to hybridize space and provide activities, on site, for a longer duration of the day. It repeats the structural grid of the existing building parallel with a historic spur track to provide the organizational structure of the new program.

Approach four is titled Puncture. The aim of this approach is to redefine the porosity of existing façades that faced onto the historic spur tracks. It provides a innovative way that design can act as a venue for a private residence and public users. By attaching like a parasite on a window and occupying a parking spot, this design creates a new dynamic within the void, and begins to redefine conventional ideas about public space.

## Question

How can design take advantage of interstitial opportunities to promote cultural engagement and provide a direction for constructive urban renewal in cities fragmented by shifting economies?

# CHAPTER 2: URBAN VOIDS

## Deindustrialization

One of the leading organizational systems prominent in many North American settlements is the method in which goods, services, and people are moved in relation to each other. The infrastructure that permits these flows and movements become the structure of the city and dictate the patterns of connection within it. Other than an organizational tool, infrastructure also has the ability to penetrate borders between cities, rural communities, countries, etc. Ultimately, infrastructure is the foundation in which, events, culture, and economics are formed and are connected.

Transportation takes on many forms and speeds. Therefore, the infrastructure that accommodates each can be radically different. For the transportation of humans, it can range from interstates for automotive travel to sidewalks for pedestrian travel. For the distribution of goods and services, infrastructure can range from train tracks and canals to pipes and cables. Although not all of these are visible, each system plays a key role in economic development and the accessibility of goods and services to the city's inhabitants.

Every industrial space has a corresponding infrastructure allowing the income and output of their specified product. Example of this includes oil refineries with pipelines and warehouse districts with train tracks. These spaces have been designed to efficiently exploit and refine the landscape in order to turn it over to make a profit. These landscapes have been "shaped by the processes of industry, economics and consumption."[1] Many older industrial sites correspond with the original resources and the economic value of a given environment. Consequently, many western cities developed in relation to these sites, which centred these landscapes within the urban realm. Although the role of the inner city in North America has changed dramatically since the industrial revolution, many of these industrial spaces still exist; some are disused, some have been converted, and others are still thriving practices. Stephen Cohen and John Zysman argue that a completely postindustrial culture will never completely exist. Although "the production process

1. Allen Berger, *Drosscape: Wasting Land in Urban America* (New York: Princeton Architectural Press, 2006), 14.

[is becoming] far more indirect…. We are shifting not out of industry into services, but from one-kind of industrial economy to another."[2]

It is inevitable that the industries that once helped initially shape many North America cities, such as rail infrastructure and the shipping industry, will change or are currently changing. The massive scales and frequent activity of these sites greatly influenced the organization of city districts and the patterns of movement found within them. The issue that follows the changing roles and forms of many of these sites and districts is the awkward in-between spaces that end up in the centre of these cities. The scale, expansion, and dissolving nature of these sites is what Berger refers to as a "horizontal city." He does not consider it negative, but does acknowledge that it does "appear diminished and wasteful... poorly planned, designed, and unmaintained... as irregular and indiscreet leftover from other, more dominated forms of development."[3]

This critique is true for both the industrial wastelands as well as a city's sprawl. The centrifugal forces of economically thriving industries provide opportunity for the expansion of its city, and this typically result in low density suburban developments. Albert Pope argues that these developments must "be recognized… less [as] an extension or outer growth of the core than a unique organism, presently at the brink of overwhelming the host."[4] This especially becomes true in regards to the programmatic fragmentation of a city, as well as the frequency of use of each district. This fragmentation results in districts that only come to life at certain hours of the day and therefore become an inefficient system within the city.

The dissolve of industrial spaces is also a major contributor to 'dead zones' or voids without human activity within the city. The scale of these voids can drastically vary. Vacant buildings, unkept sites, abandoned spaces, or "terrain vauges"[5] can appear with the dispersal of these landscapes, and effect the image of the city centre.

> All deindustrialized sites are not equal. Some find new life immediately by filling an economic niche, such as the immigrant labor force in Los Angeles, or by filling a cultural niche, such as the California Speedway in Fontana. Others are immediately cordoned off due to

2. Ibid., 47.
3. Ibid., 26.
4. Albert Pope, *Ladders* (Houston, Tex. Rice School of Architecture, 1996), 3.
5. Manuela Mariani, and Patrick Barron, *Terrain Vague: Interstices at the Edge of Pale* (New York: Routledge, 2014)

> severe contamination. Many others are left abandoned for decades until market forces or technological innovation produce resources for their rehabilitation.[6]

In this statement, Berger addresses the opportunities in which these sites produce for a changing city. They provide space, typically within the centre of the city, to meet the new needs and desires of the people. It is within the voids that there is opportunity for life to materialize and for design to accommodate and facilitate new activities. Pope abstracts this further by claiming, “it is not built form which characterized the contemporary city, but the immense space over which built form has little or no control.”[7] The void provides space, both interior and exterior, for formal, informal, planned, or spontaneous activities to occur. These instances are what defines the life of the city.

## Opportunity to Intervene

When spaces lay idle for years after industry and infrastructure has been removed they often are used for storage, parking, or are simply left abandoned. There is immense opportunity within these spaces; industrial practices prime the canvas that is the current city. The layered city provides a dynamic model to work on and present unique opportunities for future development. Paraphrasing Dorion Sagan and Eric D. Schneider, Berger States that, “The first step in delineating and reclaiming the potential of these physically excluded sites is to mentally recognize that such waste deposits are an inevitable result of growth, waste landscape is an indicator of healthy urban growth”[8]. These sites include spaces such as vacant lots, buildings, in-between spaces, transportation networks, etc. Each of these spaces have the opportunities, as voids, to be retrofitted and promote urban revitalization.

Changing industrial practices also reflects a changing culture within a city. When industry moves away from the city core it effects the relationship and activities that exist between urban life and industrial spaces. These spaces are often left unused because of their complexities and contrast to the rest of the urban centre. In turn, creating a physical and mental divide within a city. These uninhabited spaces become “foreign to the urban system, mentally exterior” although they exist at the centre of the city.[9] A void that is no longer

6. Berger, *Drosscape*, 51.
7. Pope, *Ladders*, 3.
8. Berger, *Drosscape*, 36.
9. Ignasi de Solà-Morales in Manuela Mariani, and Patrick Barron, *Terrain Vague: Interstices at the Edge of Pale* (New York: Routledge, 2014), 26.

occupied “disrupts our established expectancies because it emits a sense that something went wrong.” There is a distinction between “empty and emptied” space and humans react differently to each. “Emptiness may indeed convey a feeling of unease, anxiety, or even fear, because it vaguely hints towards a past of fullness, a past that can be imagined from the traces it has left.”[10] To reduce the negative effects of this physical and psychological gap and reduce inappropriate development within these industrial spaces they must be actively developed in response to the current - even if short term - cultural niches. These new programs do not need to be permanent, but they must have the ability to pop up quick and be provocative to attract positive revitalization and potential development. It can be said that “deindustrialized sites are all transitional places. They await some form of reclamation prior to reprogramming and reuse.”[11] These voids that were once densely populated with activity will provide deindustrializing cities with the space, at their core, to instate new social and economic activity that will redefine life within the city. Unfortunately, these places typically remain inactive for long periods of time while planners develop a futuristic master plan or developers wait for property prices to increase. This results in uninviting dead zones that have ill effect on the existing divide.

On the positive side, these vacancies provide opportunities for both constructive design as well as a creative approach to development. A designer or entrepreneur can become the advocate for positive impulses in future development. Kunstpark Ost in Munich, Germany is an example of this. Wolfgang Nöth used an old Pfanni Factory close to the Eastern Railroad Station in Munich as a centre for an art and recreation space. When the lease expired and the factory was scheduled for demolition to provide room for new development, the recreation and commercial aspects of the Kunstpark Ost created and ‘impulse’ and the Kultfabrik sprung up in close proximity, It became “Europe’s largest party zone with 60,000 square meters of floor space.[12]

It is important to see this approach from an architect’s and designer’s perspective as well. Where many professions do not have the ability, designers can provide interventions that can stimulate, intrigue, and generate activities to promote constructive impulses. Inter-

10. Stavro Stavrides in Mariani and Barron, *Terrain Vagu*e, 58.
11. Berger, *Drosscape*, 51.
12. Philipp Oswalt and Klaus Overmeyer, *Urban Catalyst: The Power of Temporary Use* (Berlin: Dom Pub, 2013), 39.

ventions can range from the macro to micro scale within these latent spaces and voids to activate and promote a desirable location that result in culturally driven development. As Berger states, “It is time for designers to find opportunities within these processes by advocating more culturally ambitious ways of challenging urbanization”.[13] This can be achieved though interstitial designs that advocate future programmatic functions and challenges the typical master planning design process. In instances where a high rate of flux is occurring over a short amount of time, such as industrial sites, it is imperative to design for the current condition and allow the new and old to coexist to minimize the lull between the industrial state and future development. This allows sites to maintain a loose fit and grow as needed to ease the divide between adjacent districts in order to minimize physiological barrier that vacant industrial sites can create.

## Transforming Latent Spaces

One of the benefits to in-between spaces in deindustrialized sites is the lower cost of occupation. The downside is that city developers do not see value in voids. Rather, they put value on programs that generate profit, which typically results in thoughtless quick infill projects.[14] If designers can strategically manipulate these latent spaces, they can attract social programs at low cost, and create a cultural awareness about the potential of the voids. These interventions should have a dynamic and complex relationship with the existing site and encourage multiple users, rather than focusing on single use income generating programs. Maintaining open availability and low operation costs attract a diverse range of individuals and provide a platform for start up businesses and other temporary uses. Ultimately, these interventions should provide a “possible avenue for the potential establishment of an economic, cultural, or social connect”[15] that can result in an impulse of expansion and growth based on current cultural needs. Thus, creating a flexible system for rejuvenating industrial sites.

“Any city worth living in is a place of contradictions that live side by side, pile up, and potentially continue to grow indefinitely”.[16] A site with remnants and scars from previous

13. Berger, *Drosscape*, 239.
14. Ibid., 27.
15. Oswalt and Overmeyer, *Urban Catalyst*, 53.
16. Christoph Schäfer in Oswalt and Overmeyer, *Urban Catalyst*, 149.

contradictory activity provides the optimal location for this dynamic. “Instead of strictness, we encounter here imperfection. Instead of boring logic, we are confronted with intriguing irrationality. Instead of usual banality, we experience here poetical paradoxes.”[17] It does not only appeal to those looking for a low rent, but it also attracts the creative collective looking for inspiration in the conflict. This art movement then creates an attraction for visitors and cultural hubs to accommodate it.

A city develops a culture through this iterative process. Artists and new people moving into a neighborhood provides a link between the demographics within the city as well as a link between the city and global events.[18] Cultural production is achieved by creating and making things that have connection with local circumstance while understanding global effects. Local character is revealed in the networks and traditions that characterize the city.[19] The facilities for these spaces must be loose fit, provide a dynamic workspace, be affordable, and accessible. The goal of such a facility and program creates an area of connection, production, exchange, and education that can act as a catalyst to promote density in a post industrial area ultimately, encouraging urban renewal through cultural engagement.

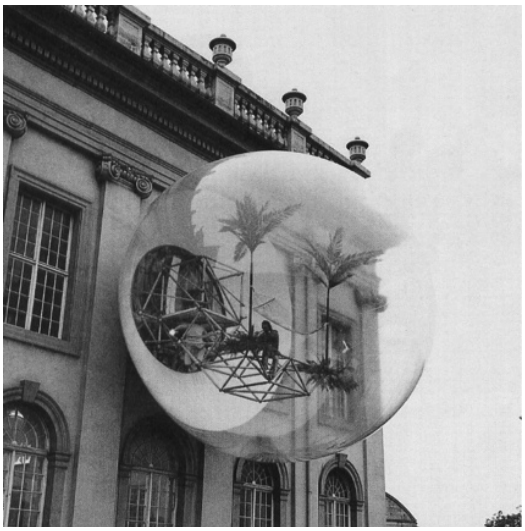
Without someone in power to accelerate this process, it can often have a long timeline. As cultural shifts occur there are generally initiatives in the form of political groups, non-profits, architecture, and art to help change the pace of redevelopment. That being said, the form of initiative can take shape at a variety of scales. Although not directly related to the gentrification of a neighborhood, Haus-Rucker-Co’s work can be related to this process by their critique of pubic space and the location of their installations among urban dwellers. The groups main objective was to “shift public perceptions of everyday urban experience” by “initiating new modes of spatial consciousness.”[20] They created form that made users and observers aware of their surrounding through sensory experiences, through senses that are largely part of the subconscious. Oase No. 7 provided an oasis exterior to the interior space that could be publicly viewed by the street, but was still private as far as the physical accessibility from the public realm was concerned. By creating tension between

17. Guy Königstein in Mariani and Barron, *Terrain Vagu*e, 131.
18. Monique Yaari, “The Urban Park of La Villette,” in *Rethinking the French City: Architecture, Dwelling, and Display after 1968*. (Amsterdam: Rodopi, 2008), 357.
19. Janet Abu-Lughwid in Oswalt and Overmeyer, *Urban Catalyst*, 135.
20. “06 Four Urban Projects | Haus-Rucker-Co,” WORK Gallery, accessed February 18, 2016, http://www.workgallery.co.uk/shop/06-haus-rucker-co-four-urban-projects.

the ground plane and what appears to be a dominant physical barrier of the wall, Haus-Rucker-Co energized the space between, or the void at that particular site. Installations such as these heightened the urban public's awareness of their environment; in turn, leading "to changes in society that the group felt were necessary."[21]

Vito Acconci and Steven Holl's Storefront is another example of how to generate void space near a solid edge condition. Their goal was to create a loose fit and flexible artist space, one that did not shape the user, but allowed the user to shape it and occupy it. A wall is typically a divisional element and is not inhabitable or interactive. The design allows the sidewalk to flow into the gallery and the gallery to "ooze out, onto the street"[22] What is provocative about the design is that it provides "occasions" and "situations" that people, "though bodily use", can come up with their own "methods of interaction...between person and person... [and] person and culture".[23]

How does one activate the potential in an open void without a hard edge condition such as a wall? 'Taking the Streets' by Santiago Cirugeda does just that. Working between the



Haus-Rucker-Co: Oase No. 7; from Ortner & Ortner Baukuns "Inner World / Innen Welt"

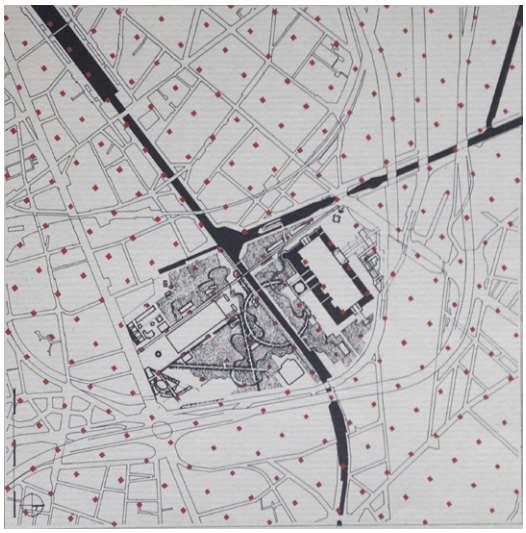
Vito Acconci and Steven Holl: Storefront; from Hedges, Presidents Medals: Art Becoming Architecture

21. Torsten Schmiedeknecht, "Surface, Metaphor and Virtuality," in *Zamp Kelp: Expanding Space* (New York: John Wiley & Sons, 2000), 11.
22. Acconci in Tom Finkelpearl, "Four Experiments in Public Art as Architecture and Urban Planning," in *Dialogues in Public Art*, 172-95 (Cambridge, MA: MIT Press, 2000), 179.
23. Ibid., 182.

lines of a strict set of by-laws, Cirugeda found a way to bring play into neighborhood in much need of recreational space. The containers could be set up and used as a “zone of games, point of information, room of reading, explanatory space, Tablado Fleming or giant flower-pot stand”.[24] Cirugeda developed a set of rules for those wanted to set up a dumpster themselves, providing the opportunity for citizens to take initiative for the future development of their streets.[25] By working around the by-laws, Cirugeda was able to activate these urban voids by not touching the streetscape.

Sometimes providing the recipe for citizens to engage in the production of cultural changes can push forward development. That being said, Bernard Tschumi’s Parc de la Villette provides the conditions for possibilities, rather than prescribing them.[26] Located on a historic slaughter house site in Paris, the park has revitalized a large void within the city. It has done this through the structure of its powerful parti. Points, lines, and surfaces are superimposed  to blend and contrast each other in such a way that each visit is a new


Santiago Cirugeda: Taking the Streets; from “Perfil: Santiago Cirugeda, El Arquitecto Rebelde”



Bernard Tschumi: Parc de la Villette; from Auricoste, Jungmann, and Tonka, *Vaisseau De Pierres*

24. Javier Sanchez Merina, “El Paisaje Urbano Según Santiago Cirugeda,” Veredes, November 18, 2013, accessed February 18, 2016, http://veredes.es/blog/en/el-paisaje-urbano-segun-santiago-cirugeda-halldora-arnardottir-javier-sanchez-merina/.
25. “Taking the Streets. Skips. Dumpsters.,” RECETAS URBANAS, accessed February 18, 2016, http://www.recetasurbanas.net/index1.php?idioma=ENG.
26. Yaari, “The Urban Park of La Villette,” 352.

experience. There is an order as well as a disorder though the organization and layout of program, or lack of formal program. Architecture is socially responsible for opening up "possibilities", "event", and "innovation", ultimately pushing forward cultural changes.[27]

## Architecture as Infrastructure

Architecture has the opportunity to function as infrastructure in the sense that architecture, throughout a city, acts as rooms within a house – having different functions and used for different activities at different times of the day. Buildings in a city act much like Bernard Tschumi's follies in Parc de la Villette, which he describes as "the largest discontinuous building in the world".[28] Critiquing this concept George Perec asks:

> Why not set a higher value on dispersal? Instead of living in just one place, and trying in vain to gather yourself together there, why not have five or six rooms dotted about Paris? I'd go and sleep in Denfert, I'd write in the Place Voltaire, I'd listed to music in the Place Clichy, I'd make love at the Poterne de Peupliers, I'd eat in the Rue de la Tombe-Issoire, I'd read by the Parc Monceau, etc. Is that any more foolish, when all's said and done, than putting all the furniture shops in the Faubourge Saint-Antoine, all the glassware shops in the Rue de Paradis, and the tailors in the Rue du Sentier, all the Jews in the Re des Rossiers, all the students in the Latin Quarter, all the publishers in Saint-Sulpice, all the doctors in Harley Street, all the blacks in Harlem?[29]

Although it is humorous, it is imperative to determine whether it is best suited to hybridize or fragment uses to revitalize and activate an urban core. In the case of a 'horizontal city' this concept could be tested by developing interventions that appear fragmented initially, but have the potential to grow and multiply to create a density that hybridizes a district.

In Stan Allen's *Points and Lines* he suggests that "architecture is uniquely capable of structuring the city" in ways other practices cannot. He then continues to state that, "infrastructure prepares the ground for future building and creates the conditions for future events".[30] This theory also relates to the effects of interstitial programming and the way they create information and cultural networks that branch off as they grow. When a void, a form, and a social program are combined they create a set of complex relationships that

27. Ibid., 359.
28. Ibid., 358.
29. Georges Perec, *Species of Spaces and Other Pieces*, trans. John Sturrock, Rev. ed. (London, England: Penguin Books, 1999), 59.
30. Stan Allen, *Points and Lines: Diagrams and Projects for the City* (New York: Princeton Architectural Press, 1999), 54.

generate a synergy that encourages patterns and flows of people, events, knowledge, and provide the framework for development to mature.

This framework is a part of the architectural detailing as well as the larger language found in each node pertaining to the network as a whole. When these nodes become successful, networks branch off of them and start to build communities. It is this architectural conversation that also moves people around and encourages social and cultural relationships to emerge. Diana Agrest notes that design "is that mode by which architecture relates to cultural systems outside itself".[31] This starts to suggest that local activity and the ability of the design to be integrated into its context is more powerful than the form itself. After all, it is the voids in the system that become occupied and provide the space for interaction between people and form. In Allen's discussion about field conditions he proposes, "form matters, but not so much as the forms of the things as the forms between things".[32] Thus suggesting that the voids that form creates become the active elements in the system of architectural infrastructure. These spaces not only provide space for planned use but also the everyday informal or non-intended use.[33]

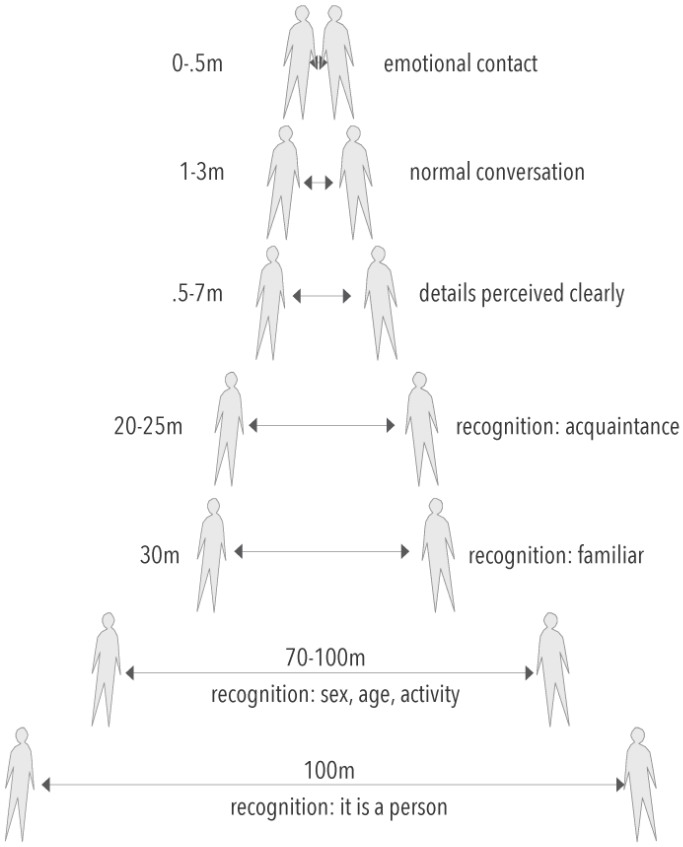
## Voids and Edges

The question still remains: how does form define space and the activities within latent spaces? When designed, many of these industrial sites and their corresponding infrastructures were laid out for the efficiency of moving goods and services from one point to the next. Originally the in-between space (both interior and exterior) had purpose – whether it was to accommodate train tracks, provide the appropriate turning radius of a truck or barge, or provide the height needed to lift and transport heavy goods. The relationship that these in-between spaces have with each other is dictated by the form or edge that lies between them. To further understand this, the concept of an edge must first be understood. An edge can be in the form of a wall, fence, curb, change of material, traffic obstruction, etc. These edges can be soft or strong transitions; "strong edges are not necessarily impenetrable", they can create inaccessible spaces, but they can also be "seems" and

31. Diana Agrest, and Mario Gandelsonas, "Semiotics and Architecture: Ideological Consumption or Theoretical Work," in *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995* (New York: Princeton Architectural Press, 1996), 200.
32. Stan Allen, *Points and Lines*, 92.
33. Jan Gehl, *Life Between Buildings: Using Public Space* (Washington, DC: Island Press, 2011), 59.

connect spaces lineally and laterally. That being said, the strongest edges are those that are visually dominant, continuous, and restrict most lateral movements. These edges act as “the boundary between two kinds of areas”[34] or voids. Soft edges provide accessible spaces, good thresholds between private and public spaces, and create a space that allows activity to be fluid.[35]

Voids, or in-between spaces, are the occupiable areas that are defined by the edges. These two elements are in constant conversation with one another, and allow movement between voids and over or through edges and thresholds. In his book *Ladders*, Albert Pope suggests that the void or in-between space is the dominant element between the

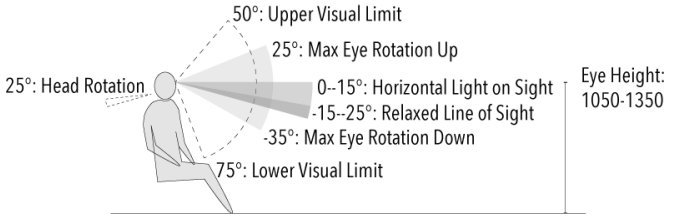


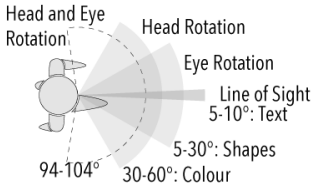

Horizontal thresholds for human interaction

34. Kevin Lynch, *The Image of the City* (Cambridge, Mass.: MIT Press, 1960), 62.
35. Jan Gehl, *Life Between Buildings*, 186.

two. Form or, the edge, is “subordinate”. The edge and void in conversation with one another enhance the occupiable environment. He argues “the dialect between space and form remains operative, if not actually heightened, by the primacy of space”.[36] That being said, it is unfair to suggest that form and edge conditions do not create dynamics within space. Built form can activate and give function to space that was not there originally. As mentioned, the voids in post industrial spaces where dimensioned according to their specific roles. If the edge (such as a building) are in good condition to be adaptively re-used, the challenge is to redefine the edge and create new relationships between the voids with regards to new programs and new construction.

Voids in deindustrialized areas appear at all different scales. They can be the result of disused freight yards, abandoned warehouses, vacant lots from removed infrastructure, etc. Each of these will have a unique relationship with the existing architecture and the urban fabric that occupy or border it. Many of these spaces begin as inaccessible to the average pedestrian and are perceived as unwelcoming and dangerous. It is the responsibility of the architect or designer to apply cues and symbols to indicate their new informal accessibility. This goes for any well-used public space. Although these voids can provide a “complexity” and “disorder” that leads to spontaneous encounters with other users, sights, smells, and activities,[37] it can be difficult to encourage people to occupy what they once understood as formal, unsafe, and private property. These ‘rules’ become imbedded in our minds and they are automatically triggered when we occupy these places.



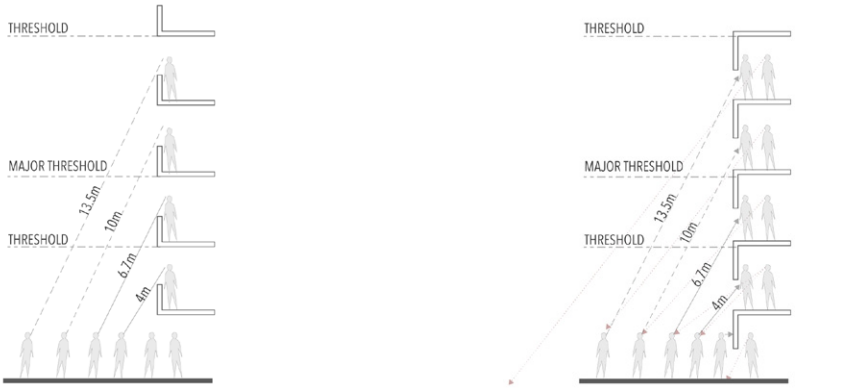




Human cone of Vision

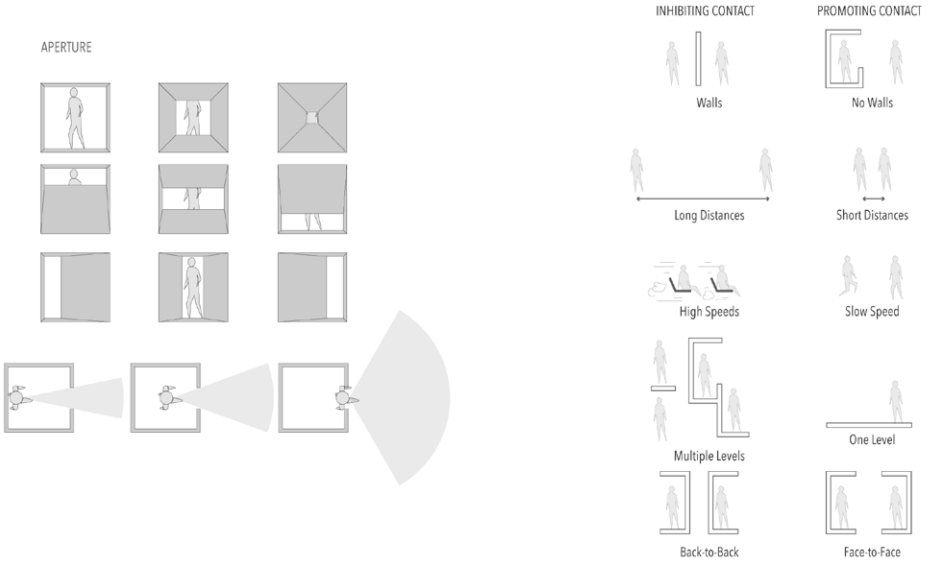
36. Pope, *Ladders*, 8.

37. *Charles Montgomery, Happy City:Transforming our Lives through Urban Design (Toronto: Doubleday Canada, 2013).*

Neuroscientists have found that environmental cues trigger immediate responses in the human brain even before we are aware of them. As you move into a space, the hippocampus, the brain's memory library, is put to work immediately. It compares what you are seeing at any moment to you earlier memories in order to create a mental map of area, but it also sends messages to the brain's fear and reward centers. Its neighbor, the hypothalamus, pumps out a hormonal response to those signals even before most of us have decided if a place is safe or dangerous. Places that seem to sterile or too confusing can trigger the release of adrenaline and cortisol, the hormones associated with fear and anxiety. Places that seem familiar, navigable, and that trigger good memories, are more likely to activate hits of feel-good serotonin, as well as the hormone that rewards and promotes feelings of interpersonal trust: oxytocin[38]




Vertical thresholds of human interaction and the manipulation of the edges




Manipulating the interaction and experience with form, speed, and distance

38. Ibid., 157-158.

It is necessary to occupy uncommon spaces with familiar elements and social activities that will work as a type of architectural acupuncture and become an aggregate for a cycle of new functions. This type of aggregation planning is not conceived of as a master plan, but as single entities that create a ripple effect, which provides room for new and unique pieces to fit as needed. It is possible for these pieces to take the shape as physical edges and forms or as new voids with the "capacity of ordering a diffused but related set of urban forms."[39] These pieces and programs do not need to be permanent, but they must instill an intertemporal effect over time by establishing local connections and networks[40] in order to become successful catalysts for urban change.

## Summary

Architecture and design have a powerful position within an urban setting to act as infrastructure and shape a city's future. Infrastructure is the foundation for the patterns, events, cultures, and economics that make up a city. Visually, architecture it is the dominant sign of development and should therefore be thoughtfully inserted into areas of deindustrialization. Industry and its corresponding infrastructures typically effect the shape of the surrounding city through economics and form. The form and dimension of these landscapes are based on the machine and their financial benefit to cities often result in sprawl. Therefore, when these industries become obsolete, they leave awkward voids that create tension at the core of the city.

These voids vary in size depending on the industry and the function of the specific space. Although voids appear empty, they are not negative. Voids are "absence" yet they hold "promise", a space of possibility and "expectation."[41] These underused and complex spaces within the city are filled with potential because changing industrial practices also results in a change in culture. To prevent this from fragmenting the city, an interstitial layer of design within districts in transition is beneficial to stitch industrial landscapes and current culture together. In other words, aggregate planning will provide the optimal foundation for constructive urban revitalization.

---

39. Albert Pope, "From Form to Space," in *Fast-forward Urbanism Rethinking Architecture's Engagement with the City*, ed. by Dana Cuff and Roger Sherman, 143-175 (New York: Princeton Architectural Press, 2011), 154.
40. Oswalt and Overmeyer, *Urban Catalyst*, 178.
41. Solà-Morales in Mariani, and Barron, *Terrain Vague, 26.*

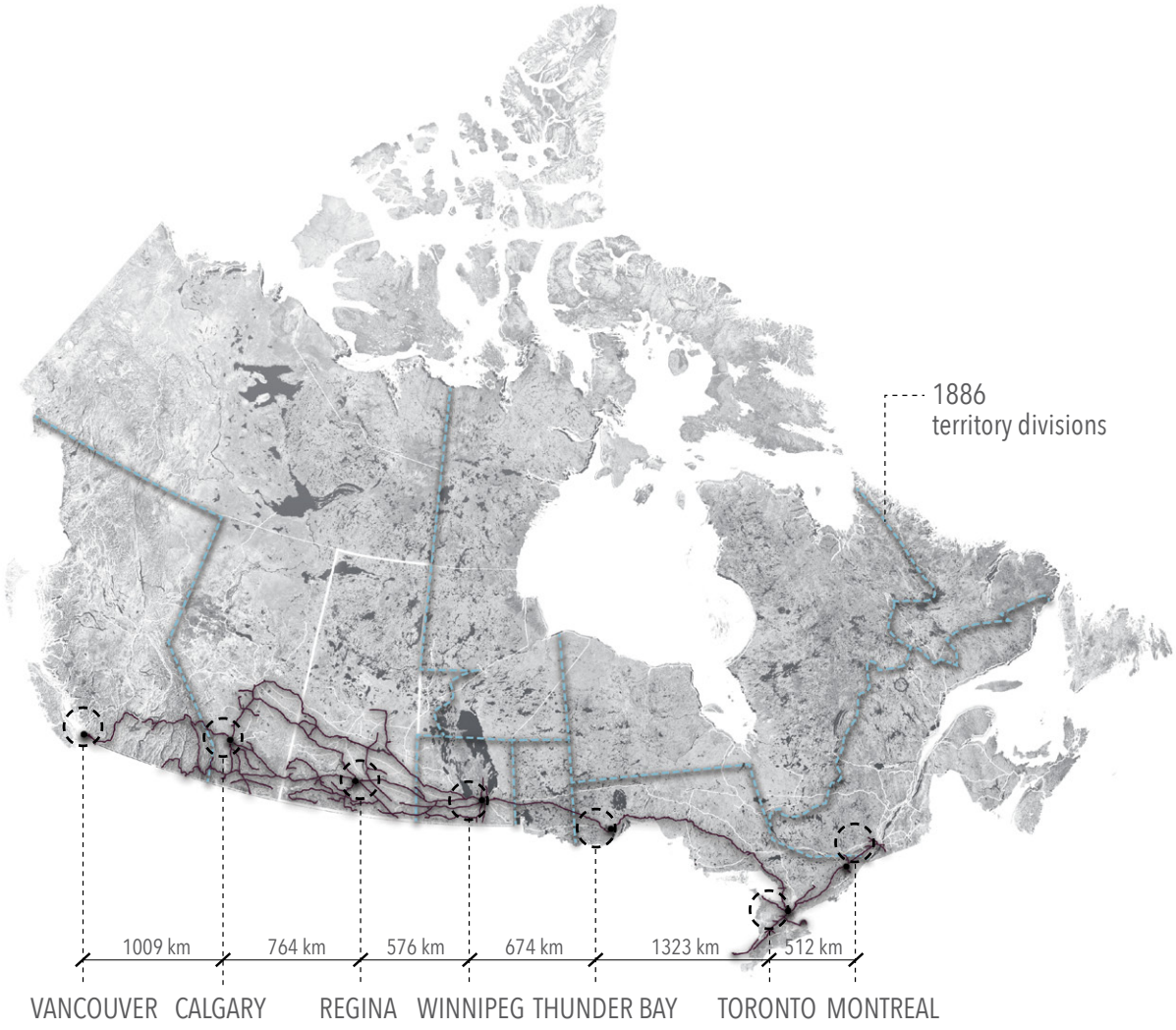
In order to be successful, these spaces must be a loose fit and allow the new cultural and social dynamic to fit its way into the new landscape. The benefits to many post-industrial sites are the low occupation costs and physical contradictions of the urban fabric. This makes these spaces attractive for artists and start up businesses so long as there are appropriate facilities available. Architecturally reconceptualized spaces, the placement and production of local art and craft, and new demographics within a district are the first steps to its revitalization. These elements help to redefine the perception of space in relationship to the public by opening up the possibilities for the interaction between person and person, person and form, and person and culture. Many of these interactions provide the formal or informal foundation for the public to take initiative in the redevelopment of post-industrial landscapes.

As mentioned, architecture has the unique ability to structure a city as a form of infrastructure. Through design, architecture is able to communicate with cultural systems beyond itself. This conversation allows the development of a larger network. Although architecture creates the physical form within these urban landscapes, the active element within this network is in fact the voids. Architecture and design provide the surface and edge conditions that activate and define voids. Edges have the capacity to both divide and connect though soft and hard transitions. In post-industrial landscapes - where voids and edges were originally placed in purposeful relationships to one another - the edge and void relationships need to be redefined to accommodate new programs and a changing culture. Opportunities lie within the contradictions of the historic dynamics of the space and the potential future uses. Designing within these voids means creating new conditions that contrast with the old or current uses and shift the public perception of everyday life within a deindustrialized landscape.

# CHAPTER 3: LAYERING REGINA

## Introduction to Regina

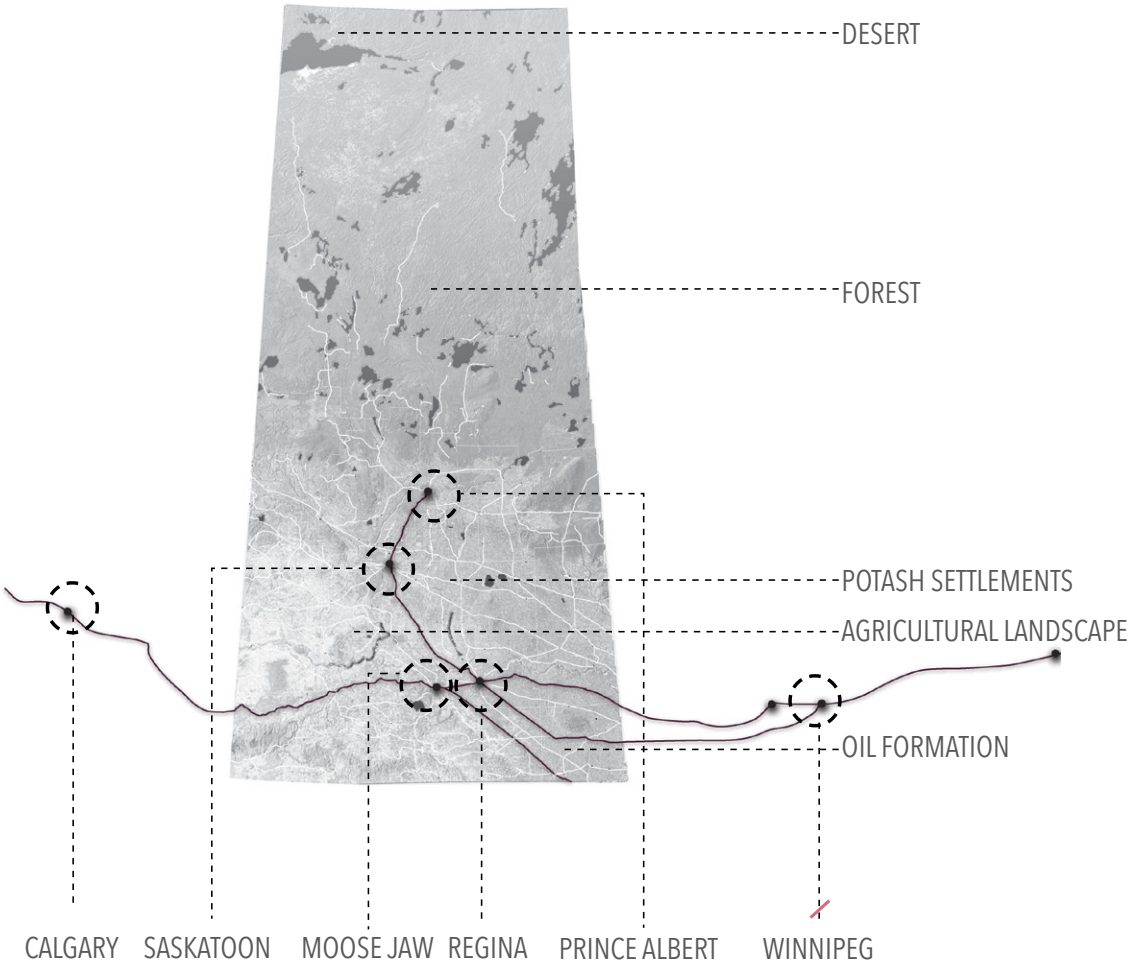
In the late 1800s the Canadian Pacific Railway (CPR) made its way across Canada. It was, at that time, the quickest means of transportation spanning the entire country. It provided the opportunity for immigrants, goods and services alike to move efficiently between settlements. At this time, the country was still getting settled into what we currently know as the provincial and territorial divisions. Prior to 1905 a large portion of the prairies, including Saskatchewan, was part of the Northwest Territories. Non-the-less the trains ran




Canadian Pacific Railway route across Canada and territorial divisions (1886 and current); base map from Department of Natural Resources Canada; data from Government of Canada, Open Data and Canadian Pacific, CP Network Map

across the country consistently transporting immigrants from the eastern shore to the prairies.[42] The tracks also promised economic security and undoubted prosperity. The CPR was in fact the critical economic foundation to which Regina laid its roots.[43]

At the same time the railroad was being constructed across the country, a new location for a capital of the Northwest Territories was to be founded. Edgar Dewdney, the Lieutenant Governor or the Northwest Territories, and W.C. Van Horne, General Manager of the CPR, were responsible for choosing the original townsite of Regina. The final townsite




Saskatchewan: city locations, initial CPR routes, current short tracks, and provincial resources; base map from Maphill, Satellite Map of Saskatchewan; data from Government of Canada, Open Data

42. J.G. Cariner in Ian E. Wilson and William J. Brennan, *Regina Before Yesterday a Visual History, 1882 to 1945* (Regina: Historical Committee, 75th Anniversary Management Board, City of Regina, 1978), 76.

43. William J. Brennan, *Regina: An Illustrated History* (Toronto: J. Lorimer and Canadian Museum of Civilization in Collaboration with the Secretary of State, 1989), 21.

was situated on a plot of land where the tracks would pass through and located just east of the small Pile O' Bones Creak.[44] In 1883 Robert Sinton proclaimed, "Situated as Regina was, and prior to railway competition in her early history, and landlocked to a greater extent than any other Provincial or State capital on the continent, our single line of railway held within her grasp our very existence and to some extent our destiny as a coming metropolis".[45] Being landlocked wasn't Regina's only downfall as a site. Located where it was, there was no topography to provide shelter or slopes for proper drainage, there was no natural water source on the original plot of land, meaning there was insufficient water, and the land was also barren, with no trees for lumber, or fuel.[46] It would seem as though there was no natural reason for human settlement here.

So why does Regina exist at this location? Dewdney claimed the city's location occupied "… a central position within the Provisional District of Assiniboia, and also on account of it being the natural centre of a vast and rich agricultural country." [47] This statement is supported by central place theory, which assumes "the role of the central place is to act as a service and distribution centre for its hinterland, providing its own, and the adjacent population, with goods and services".[48] This insinuates that Regina was positioned to economically profit from its adjacent land and become a powerful economic centre. Dewdney and Van Horne's decision was also based on where the track was laid. The CPR had performed three surveys while planning the route through what is now Saskatchewan, and each time resulted in a slight route shift. The first, in 1881, planned the rail to run further south, the second swung the track north, and by the third they had straightened out the track to where it was built. Reasons for rerouting the track included avoiding squatters, and reducing unnecessary mileage.[49] The final, most speculative reason for the position of Regina is the alleged ulterior motives of Dewdney. Dewdney, along with 11 other participants owned a plot of land adjacent to the Northwest corner of the original townsite. [50]

---

44. Wilson and Brennan, *Regina Before Yesterday*, 3.
45. Robert Sinton in Wilson and Brennan, *Regina Before Yesterday*, 29.
46. Earl Drake, *Regina, The Queen City* (Toronto, ON: McClelland, 1955), 9.
47. Edgar Dewdney in Wilson and Brennan, *Regina Before Yesterday*, 3.
48. Jack C. Stabler, *The Changing Role of Rural Communities in an Urbanizing world Saskatchewan, an Update to 1995* (Regina, SK: Canadian Plains Research Center, University of Regina, 1996), 5.
49. Drake, *Regina, The Queen City*, 5.
50. Ibid., 10.

Tension arose when the CPR found out about Dewdney's plot of land. The CPR was the "largest landowners in Regina"[51] and were determined not to share their profits. That being said, Dewdney successfully positioned three major government buildings sprawling westward to try and encourage western growth. They included the Territorial Government building, the Residence of the Lieutenant Governor and the North West Mounted Police (NWMP) barracks.[52] To counter this development, the CPR built the train station "two mile east" of Dewdney's plot. "Unhappily, for the future of the town, this station site was some distance from water supply, in a sight, muddy depression."[53] "The Customs Office, Dominion Land Office and Post Office were all located near the station at the urging of the C.P.R." as another ploy by the CPR to promote development away from the west.[54] The CPR fought a tough battle and won, businessmen were drawn to site just south of the tracks, and this area became the central business district.[55] The conflict was soon calmed, but unfortunate results emerged in regards to the planning of the town, as Drake expresses, "The conflict over public buildings was resolved by compromise… but paid scant attention to elementary common sense in town planning"[56]

The struggle between the location of buildings and the CPR's "unimaginative rectangular grid" that was laid in "most American and Canadian cities"[57] were the main influences on the pattern of growth and movement throughout the city. The city was splayed out and even the rigid grid was not regarded in much of the early developments in 1883. Tents and houses were built on streets and on land reserved for the railway.[58] Eventually, as the city grew, districts were settled, including the business district south of the tracks, and a "labor class district" north of the main CPR line that consisted of many tradesmen and others employed by the incoming rail companies such as the Grand Trunk Pacific (GTP).[59] Unfortunately, when the city began to densify, the conflict between the constant train activity and the poor quality access between the north and southern portions of the city caused "fric-

51. Wilson and Brennan, *Regina Before Yesterday*, 3.
52. Brennan, *Regina*, 37.
53. Drake, *Regina, The Queen City*, 12.
54. Wilson and Brennan, *Regina Before Yesterday*, 3.
55. Brennan, *Regina*, 37.
56. Drake, *Regina, The Queen City*, 14
57. Brennan, *Regina*, 14.
58. Ibid., 17.
59. Wilson and Brennan, *Regina Before Yesterday*, 122.

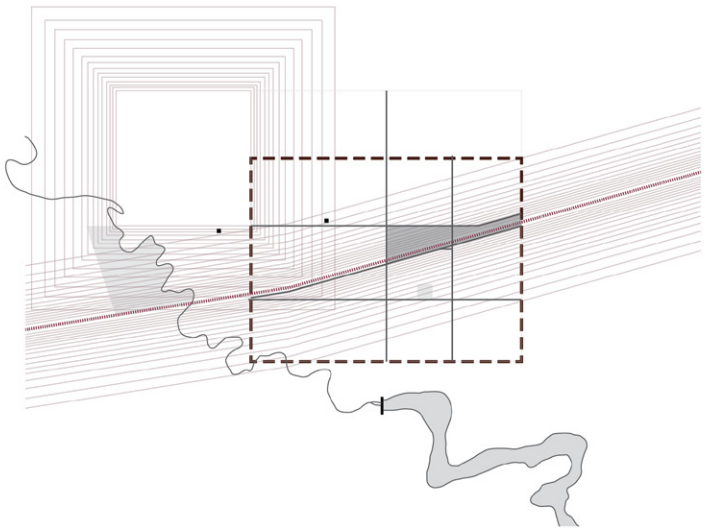
tion between the town and the CPR".[60] To resolve this issue, two underpasses were constructed: the Albert Street underpass in 1911 and the Broad Street underpass in 1913.[61]

> The lack of precise planning merely echoed the situation found in most other Canadian cities of the same size… the history of Regina's planning has shown three themes: private plans have been allowed to take precedence over public interest; public planning has concentrated on regulation rather than public policy; and planners have made no attempt to define and lead in the field of public policy.[62]

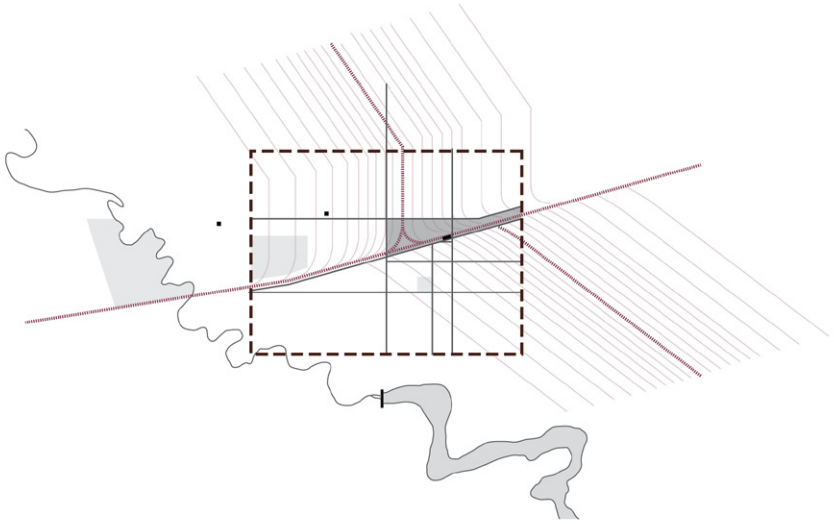
Although it was an uneasy start to development do to the lack of town planning, some interesting organization strategies came out of the settlements. A large area of land North of the CPR main line was mostly undeveloped so the city reserved it for the allocation of industrial and commercial warehouse facilities. Starting in 1908, the CPR, the Canadian Northern Railway (CN) and GTP agreed to position spur tracks within this area providing warehouses with access to their services.[63] Although the tracks physically fragmented the warehouse district from the rest of the city and the scale of the voids created a massive disjointed appearance, the district prospered and wholesale businesses flourished. The district continued to grow to the North East and gradually became more industrial as economics shifted. The 1960s and 1970s brought the development of an oil refinery and steel pipe factory. They were positioned to the northeast where the rail could easily be extended to.[64]

The rail provided the infrastructural foundation for Regina to develop from. The rail was designed to distribute the "region's staple products to world markets". At it's largest expansion the "average distance" for Saskatchewan farmers was "only 7.4 miles" and businesses providing services for agricultural production settled at many of these stops.[65] Although Regina originally benefited from grain exports, the production distribution for farm implements was a growing industry as well, especially with the establishment of "a wholesale district and laid trackage and ground facilities to accommodate any wholesaler". Regina finally had the opportunity to become something of a large distribution

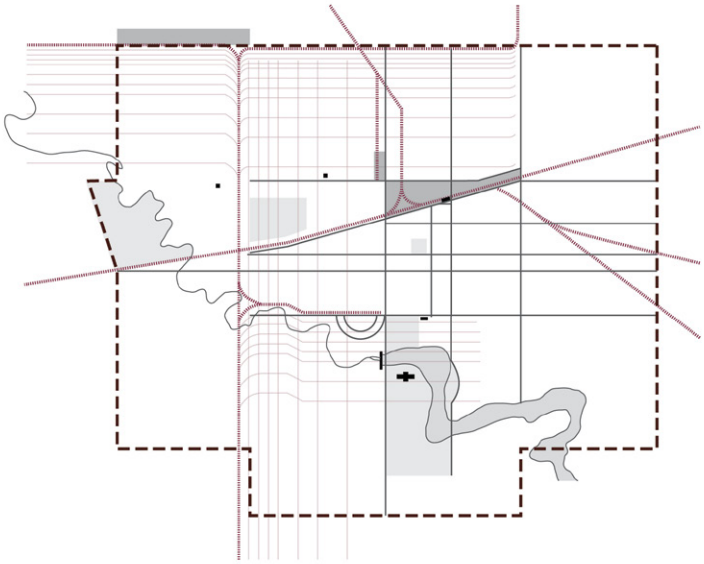
60. Brennan, *Regina*, 39.
61. Ibid., 74.
62. William A. Riddell, *Regina, from Pile O'Bones to Queen City of the Plains an Illustrated History* (Burlington, Ont.: Windsor Publications (Canada), 1981), 119.
63. Brennan, *Regina*, 57.
64. Ibid., 167.
65. Stabler, *The Changing Role of Rural Communities*, 1.



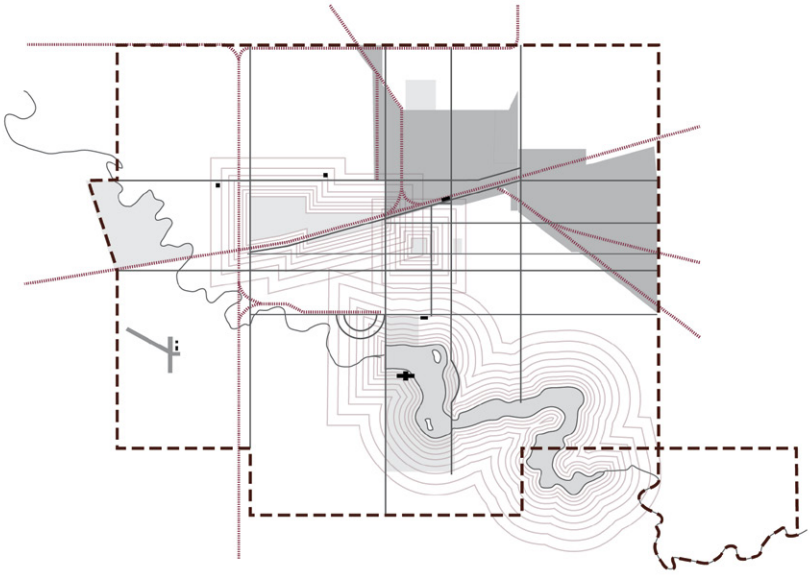
1883 Regina - lines of influence: The CPR was the leading economic driver in the initial town development. The plot of land owned by Dewdney (top left corner) was also influential in disjointing the town plan; data from Brennan, *Regina*



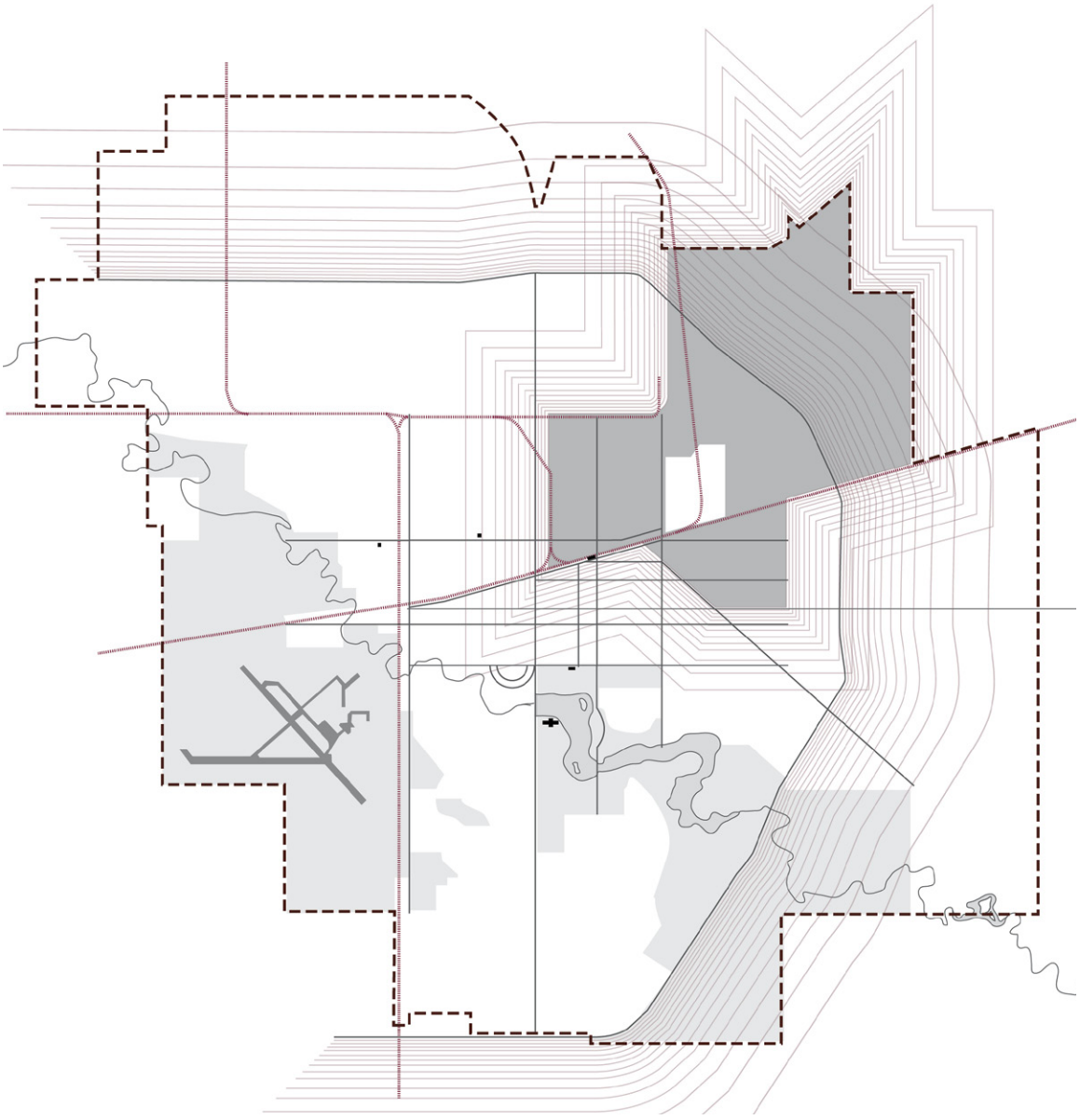
1905 Regina - lines of influence: The town became the capital of Saskatchewan and more spur tracks branched from the main line influencing growth to the north and south; data from Brennan, *Regina*



1913 Regina - lines of influence: Pre-war the city was economically booming. More rail lines were added, the city expanded, and hopes were high that it would become somewhat of a major distribution centre; data from Brennan, *Regina*



1939 Regina - lines of influence: The First World War and the great depression in the 1930s halted major growth. The city looked inward to beautifying and rejuvenate the city; data from Brennan, *Regina*



1978 Regina - lines of influence: Oil and potash surpassed the economic income of agricultural and wholesale businesses. The refinery and a larger industrial districts expanded the city to the northeast. This resulted in a ring road around the city and another major city expansion; data from Brennan, *Regina*

city.[66] Although the tracks seemed to fragment the communities within the city, they were also the leading influence for many of the businesses established.

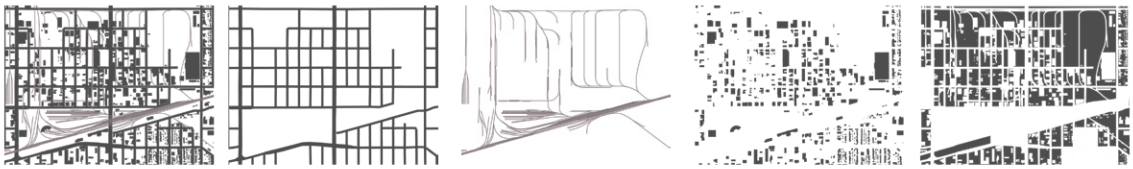
The original town grew quickly as a 'horizontal city' due to its close relationship with the CPR, the employment opportunities, and the governmental advantages of maintaining the position as a capital city when Saskatchewan was designated as a province in 1905. This allowed the city to rapidly expand without regards to strategic planning. This growth however, was halted by the misfortune of the 1930's. That being said, not all that came out of this period was negative. The city looked inward to create jobs for those stripped of an income during this time. These projects included widening the Albert Street bridge and deepening Wascana Lake.[67] Again, during the Second World War, the city saw little outward development.[68]

The city steadily grew after the war and in 1966 the council approved a ring road that would allow further growth.[69] By the 1970s potash, oil, and steel pipe manufacturing created a rich and diverse economy for Regina, and these industries surpassed the income of agricultural and wholesale distribution.[70] This economic surge created another spike in population, which meant the city began to expand outward again. The issue with this pattern of growth is that it has placed the warehouse district at the centre of the city to dissolve. As wholesale practices lost value, they began vacating the area and as a result voids have been left at the city core.

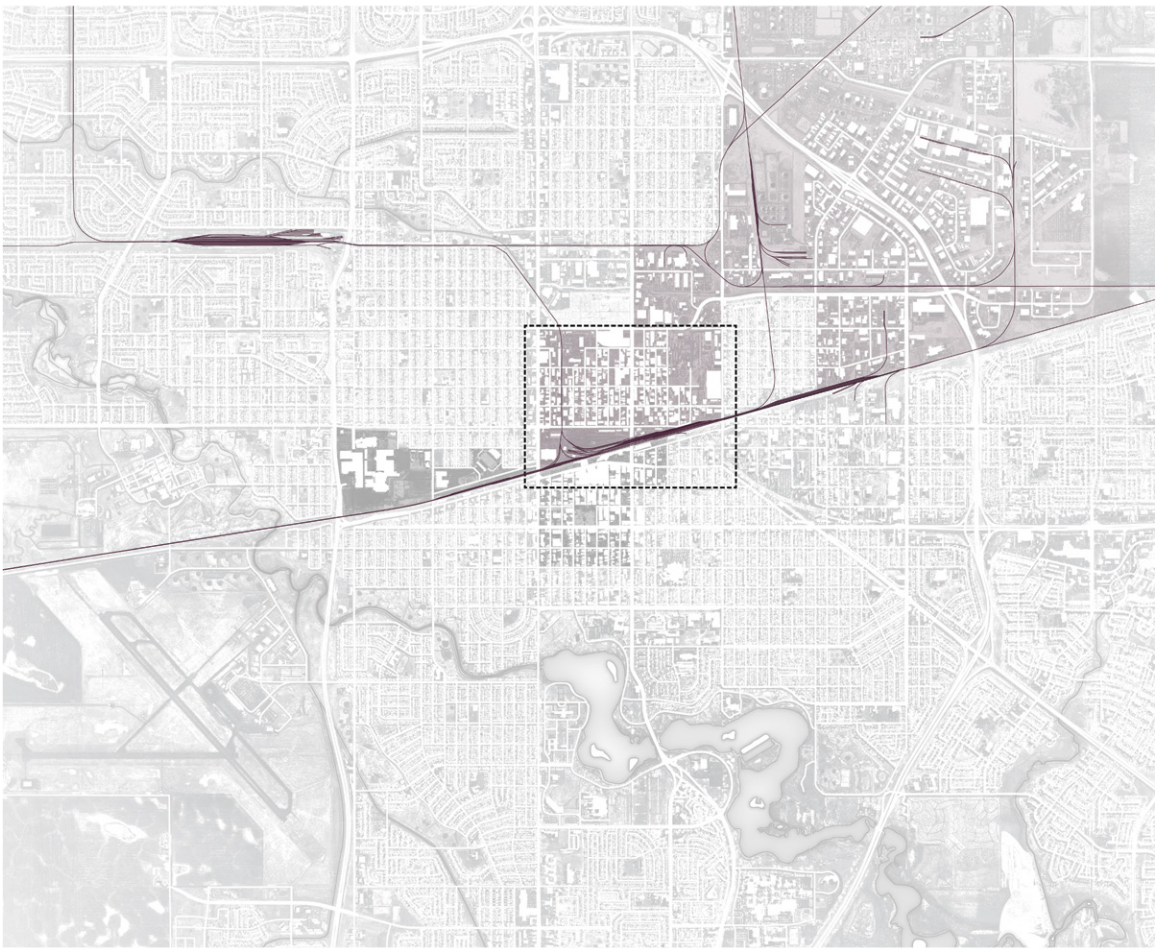
The city understood that it was physically changing along with the economic shift, so they proposed, at the end of the 1970s to hold an international competition for the relocation of the Railway. The intention of this plan was to connect Downtown and the warehouse/commercial district. In 1977 a winner was chosen (Duplay and Duplay from France), but the scheme was never initiated because of its costs. Still understanding that something needed to be done, the city created a department, in the 1980s, to design a new feasible plan for

66. Peter McAra in Wilson and Brennan, *Regina Before Yesterday*, 82.
67. Wascana Lake is man made stemming off of the meandering Pile O' Bones creak. Brennan, *Regina*, 136.
68. Wilson and Brennan, *Regina Before Yesterday*, 167.
69. Riddell, *Regina*, 119.
70. Brennan, *Regina*, 151 & 157.

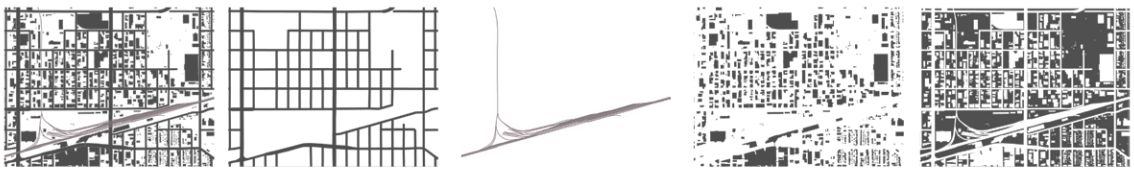
1950




Map of Regina from 1950 showing the scale of the city and the patterns found at the core; base map from Regina Open Government Data Catalogue



2015




Map of Regina from 2015 showing the scale of the city and the patterns found at the core; base map from Regina Open Government Data Catalogue

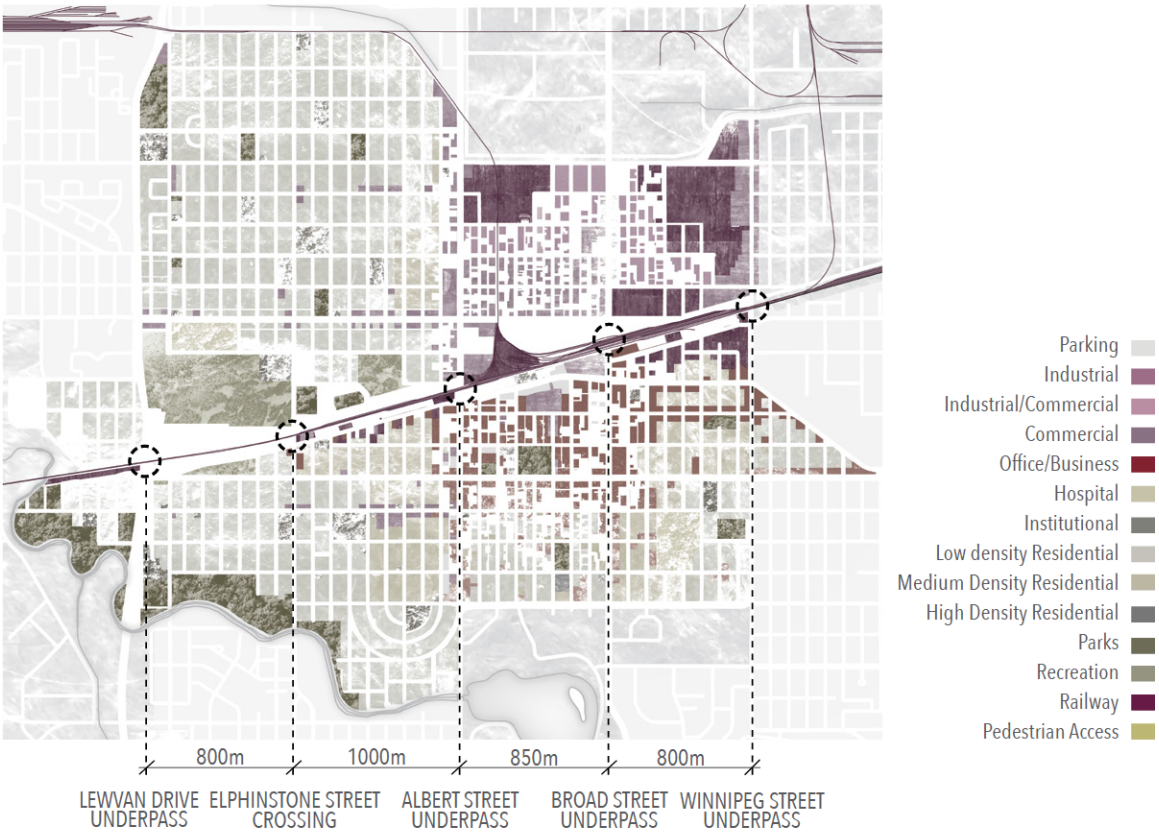
the yards. Still, nothing was conceived.[71] Shortly into the 2000s, the city is still working to develop a master plan. Strategies to develop the area have been proposed by Dialog, Office for Urbanism, and The Metropolitan Collective. In 2012 the city of Regina bought 17.5 acres of the freight yard from the Canadian Pacific (CP) in hopes that it will push development forward at a quicker pace by allowing private investors to develop the land.[72] Unfortunately, the city is falling into the same problem as Riddell mention where “private plans [are] being allowed to take precedence over public interest”.[73] Furthermore, most of these plans do not include a development strategy for the whole of the warehouse district.

What the past 35 years has taught us is that the amount of time it takes to develop and initiate a master plan for a deindustrialized city core is a complex and long process. While decisions are being made on paper, sites are losing their character as industry and infrastructure are removed. These latent spaces begin to dissolve without maintenance and the character of the history of the site is lost. It is imperative that there is a bottom-up approach to encourage the maintenance of these voids and provide a possible cultural foundation for public engagement in the development of the warehouse district and adjacent CP freight yards. An approach like this ultimately provides places for people to engage with the district and act as a catalyst for the revitalization of a city core.

## The Warehouse District

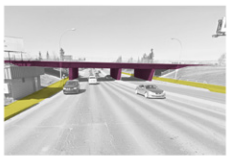
The first step to develop of a strategy that begins to inhabit the interstitial spaces of the warehouse district in Regina is to outline the present issues. The warehouse district was historically filled with activity with material and goods moving in and out of it. This fragmented the city programmatically, but activity allowed it to be a flourishing district. Since the spur tracks have been removed the programs of the warehouses in the district are changing or become vacant. As a result, the programmatic separation between the district and the city is becoming greater. Physically, the district was originally built to accommodate tracks, freight trains, and loading decks. Currently, many leftover spaces remain

71. Bernard Flaman, *Architecture of Saskatchewan a Visual Journey, 1930-2011* (Regina, SK: CPRC Press, 2013), 99.
72. Railyard Renewal Project, accessed March 4, 2016, http://www.reginarevitalization.ca/railyard-renewal-project/.
73. Riddell, *Regina*, 119.




view north on Lewvan Drive, no pedestrian thoroughfare at underpass

view north on Elphinstone Street, on level crossing for automotive and pedestrian traffic

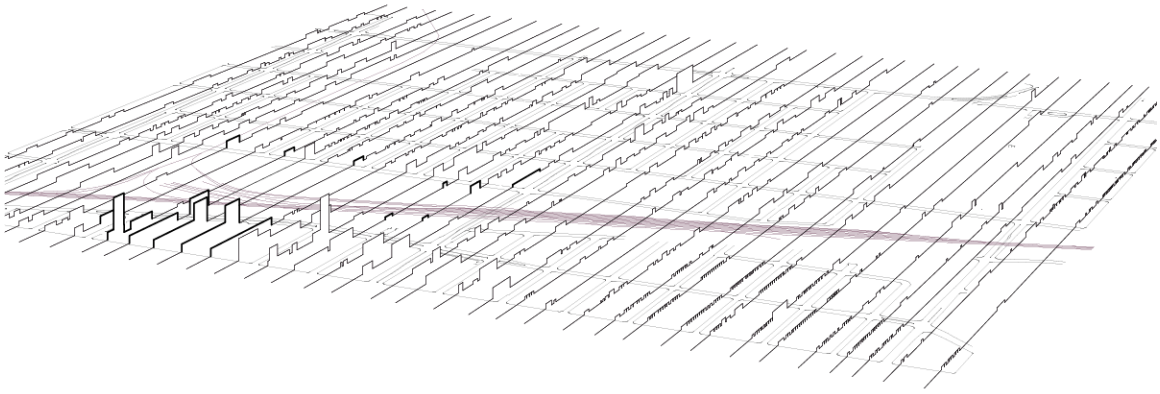


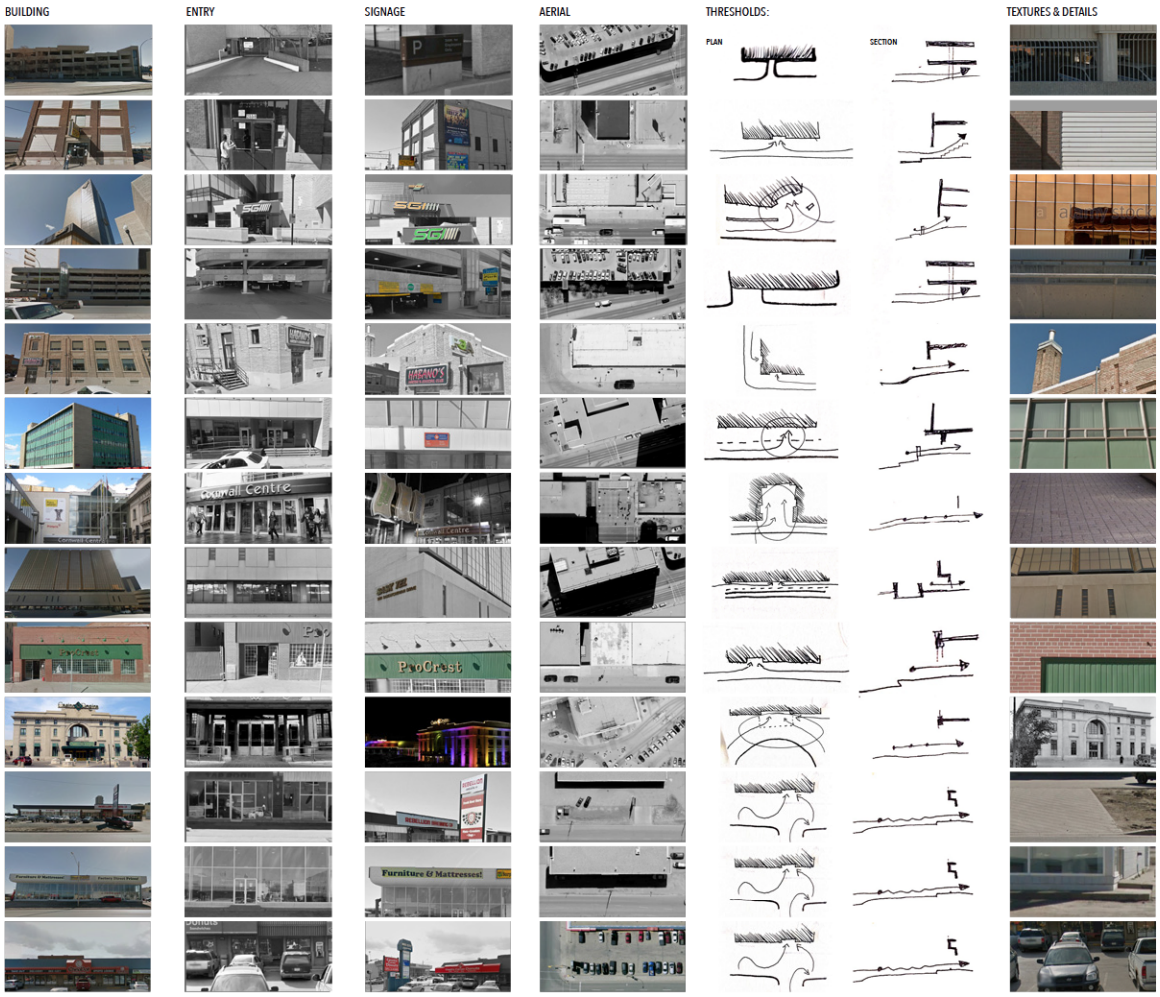
view north on Albert Street, pedestrian thoroughfare on either side of the underpass

view north on Broad Street, pedestrian thoroughfare on one side of the underpass

view north on Winnipeg Street, only one pedestrian thoroughfare on the east side of the underpass

Voids at the core and the distances between formal track crossings; base map from Regina Open Government Data Catalogue; data from City of Regina City Planning Department, Neighbourhood Profiles, and City of Regina, *Design Regina, Part B - Secondary Plans*

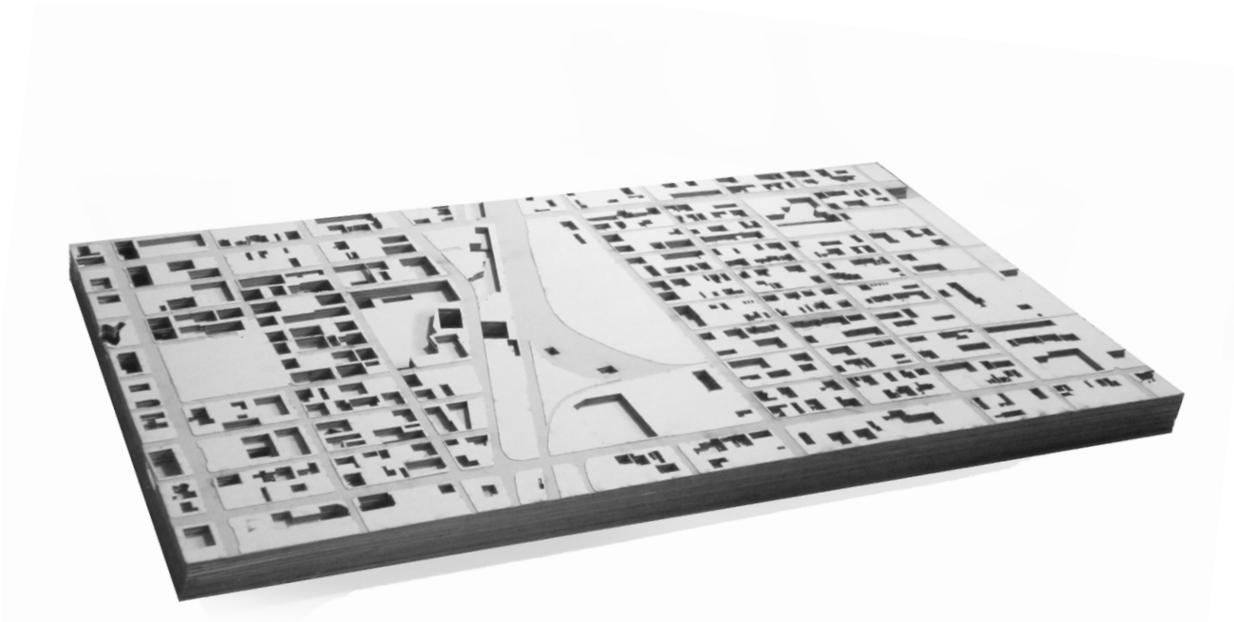




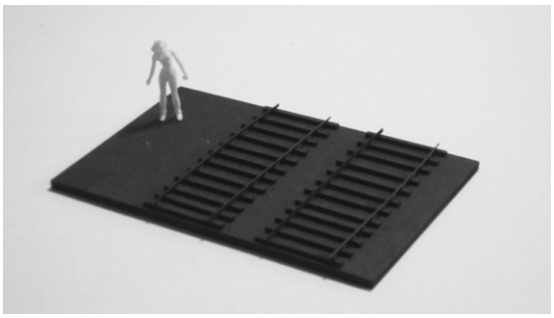

This matrix is a brief overview of the characteristics found at the core of the city. The chosen buildings are all located near or adjacent to the freight yards and demonstrate the similarities and contrast between downtown and the warehouse district

where the spur tracks and buildings once met, and large gaps between buildings remain where more than one track ran side by side. With new uses, these spaces are typically awkward, and largely underused. Consequently, this large district at the core of the city has lost its dense activity. Instances where the tracks have existed, or still exist, need to be reintegrated into the city fabric both physically and psychologically to ensure that this district can accommodate new activity simultaneously with the industry that still exists.

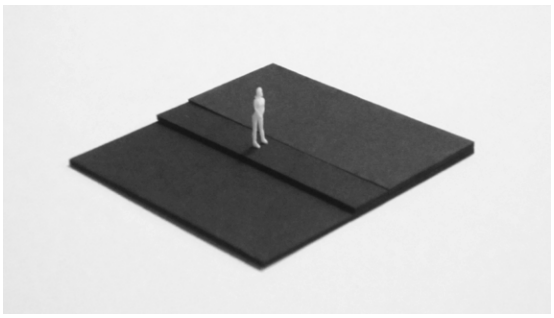
These in-between, disused, void spaces are full of opportunities. The spaces between buildings, on vacant sites, and within abandon buildings provide opportunities to reconceive our relationship with the urban fabric. The initial layer is the result of a history that has created a complexity within the warehouse district. This complexity provides unique opportunities for new interactions and ways of perceiving everyday life within these spaces. They are continuous in their opportunity, and one design move can lead to a ripple effect of new potentials.



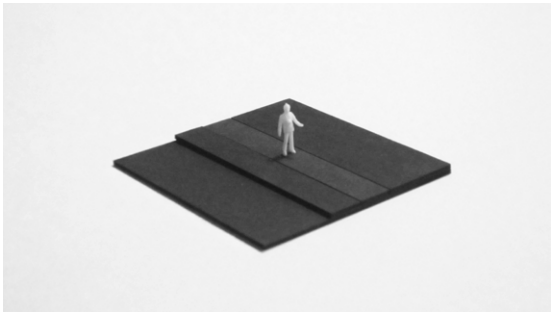
A study that inverts the solid and voids within the core of the city. This section compares the downtown (on the left) and the warehouse district (on the right)



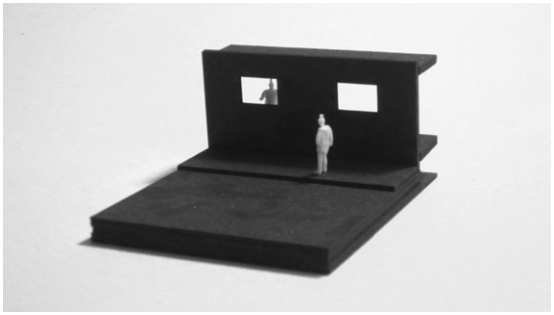
Field to train tracks



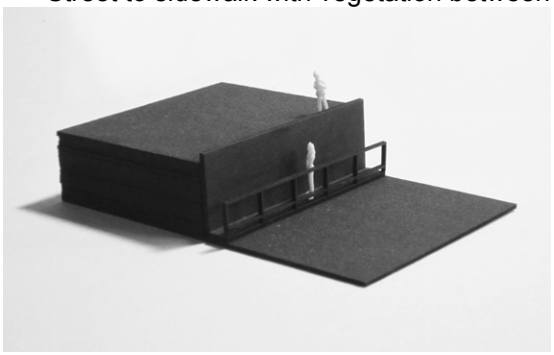
Street to sidewalk



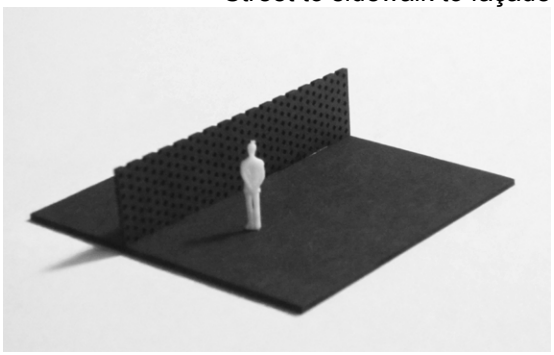
Street to sidewalk with vegetation between



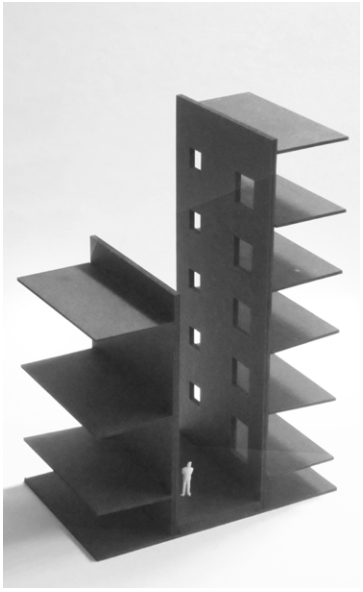
Street to sidewalk to façade



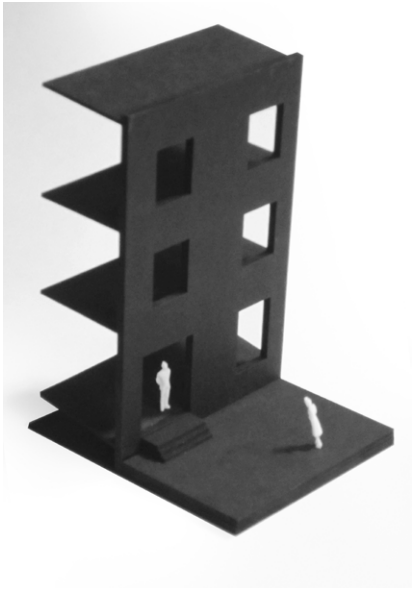
Street to sidewalk at an underpass



Field to fence



Alleyway between buildings



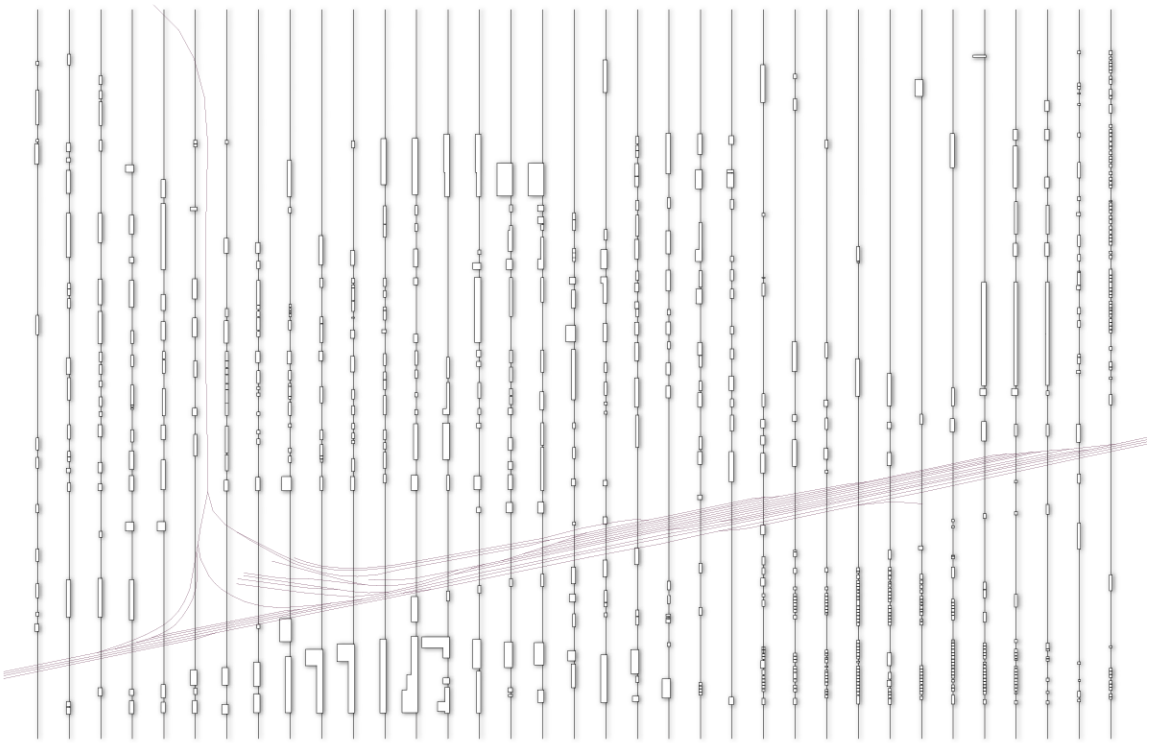
Open alley to façade

Typical edge conditions found throughout the warehouse district

## Strategy

> The first quality of unit aggregation is that urbanization is not restricted to a single time: building campaigns can occur at various times, with long periods of dormancy in between. Cycles of boom bust, for example, result in a rich fabric of building from different periods of urban growth. Only the most restrictive measures could schedule the untold industry that goes into producing the aggregate effects of a city. The second advantage of unit aggregation is that urbanization is not restricted to a single place. Unbuilt parcels are skipped over, leaving gaps to be filled in at a later date. There is thus no need for seamless development when various infill options are available. The third advantage of unit aggregation is that urban construction is not restructured to a single scale. Projects can range from the development of single buildings on small parcels to the construction of larger, multiple units or superblocks that spread multiple buildings across the block structure. A fourth, and perhaps the most important advantage of aggregation is that the incremental growth is not restricted to a single outcome. This eliminates the folly that invariably attends the prediction of future events. It also removes the need for any kind of ultimate authority to mandate a fixed or final form.[74]

The warehouse district in Regina holds countless opportunities within void and in-between spaces. These voids range from small alleyways to a large unoccupied freight yard. Strategically occupying these spaces can provide inspiration at an achievable scale for individuals and organizations wishing to further develop the network. The Network Plan shows



Iterative sections analysing the horizontal voids found throughout the district

74. Pope, “From Form to Space,” 151-152.

the countless possibilities and interventions that could pop up throughout the district over any duration of time. There are four main criteria for the points outlined. The first is to position the intervention along the old rail network, where tracks have been removed and new threshold tensions have arisen. Secondly, the intervention must have a relationship with a historic building. Historically, the rail had a specific relationship with existing buildings, which generated life between them. Currently, these spaces are largely undefined and lifeless, which is the bases of the third criteria. The third criteria takes a critical eye to identify spaces that provide greater potential than their current use, or lack of use. These spaces can exist as a lot, or edge condition that is underused, unoccupied or used in a wasteful manner. The fourth criteria is the potential for private function to benefit from a pubic event or activity. This point is subjective to the interaction between the designer and the public,


Four diagrams representing the vertical voids throughout the district

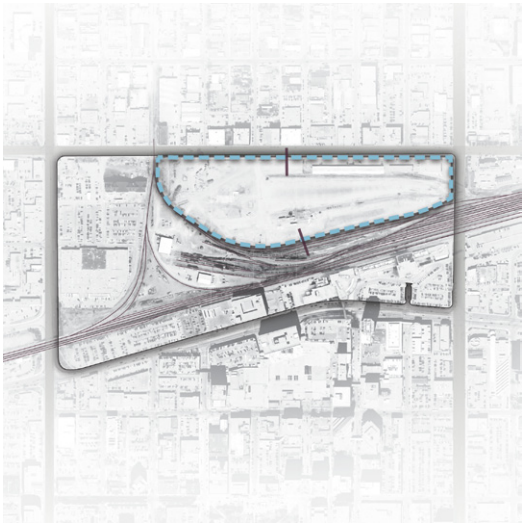
but it is necessary to apply such a relationship in order to redefine people's perception of these spaces and the role of public space within the district.

The programs can be chosen as the designer, investor, or private owner sees fit. Again, a list of criteria will be outlined to ensure cultural interaction and new activities form. To begin with, it must be occupiable and accessible to both the private and public user. Extending that idea, the intervention must also provide activity for all users to encourage interaction and promote other activities within the district and throughout the duration of the day. Finally, the program must play with a persons perceptions of space and how they occupy the public realm. Some abstract examples of this include: a gestural form pointing people in a direction and suggesting potential through framed views, a stage that provides space

Network map and locations of interventions within the warehouse district;
from north to south: Wrap, Blend, Puncture, Re-imagine

for open interpretive program in an uncommon location, and an assembly that makes people rethink the edge conditions that define public and private void space.

For the purpose of exploring the potential of these two sets of criteria at different scales and providing a range of ways to occupy voids, four sites have been chosen based on their size and historic relationship with the removed tracks. The first is the freight yards (the 17.5 acre site that the city purchased from the CP in 2012). This site used to have dozens of rail lines running across it. Trains would stop, unload, be redirected, and distributed elsewhere. With the spur tracks removed, the space currently lies vacant with the main line to the south and the warehouse district to the north. The conditions of the site are unique in that the strength of the edges are dependant on the activity that occupies them. The inherent danger of the unresolved thresholds between the edges is the primary reason that this site is inaccessible. The approach for inhabiting this particular site is to re-imagine the surface and edge conditions that have defined it throughout history and provide a new relationship between the active rail line and a new social dimension.

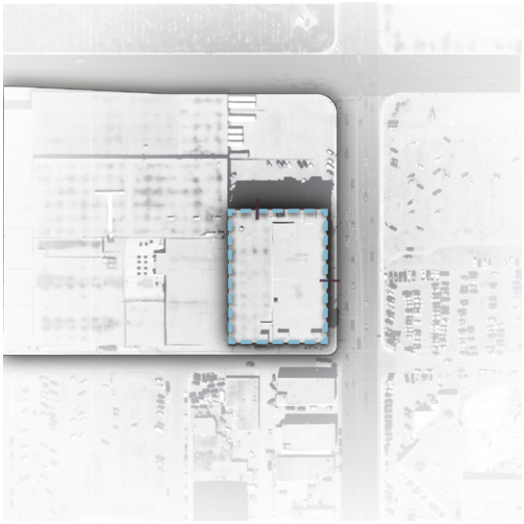


XL: Re-imagine
Size: 85,000m$^2$

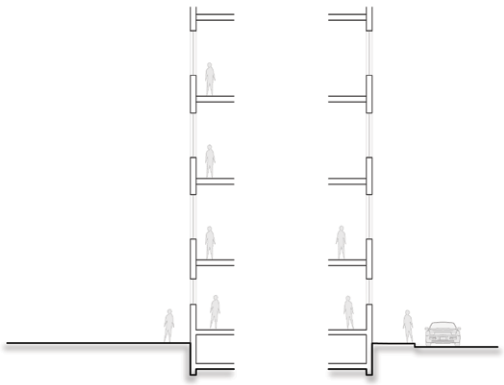
The edges surrounding this site are visually soft. The strength of them is dependant on the amount of traffic

Re-imagine existing conditions; base map from Regina Open Government Data Catalogue

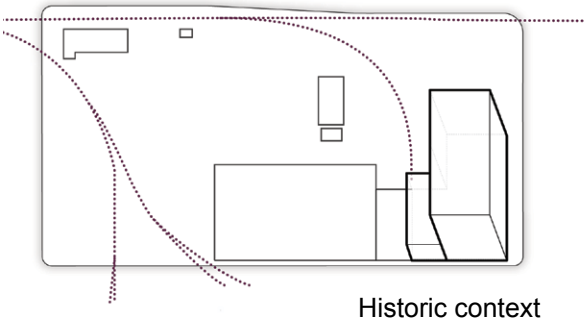
The second site was chosen based on a track that came to a dead end on at the north-west corner of the building, and was eventually built on top of to complete the building as it stands today. This eight story building (one of the tallest within the warehouse district) was built in 1915 as the mail-order facility of Robert Simpson Western ltd., eventually became Sears Wholesale, and is currently vacant. The height and permeability of the façade creates the most prevalent edge. These edges create a barrier between the potential of the vacant building and open voids adjacent. The opportunities at this site lie in the potential to soften these edge conditions by adding and subtracting from the original structure. The approach for occupying this void is to wrap new form and space throughout the interior and exterior of the building to provide new ways of inhabiting the site. This approach looks to extend the opportunity of social space and open collaborations through a horizontal and vertical void.



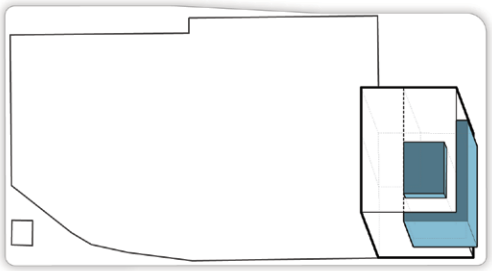
L: Wrap
Size: 4450 x 9 = 40,000 $m^2$



The dominant edges on this site are the tall solid walls of the building. They are contrasted by large horizontal voids to the north and east



Historic context

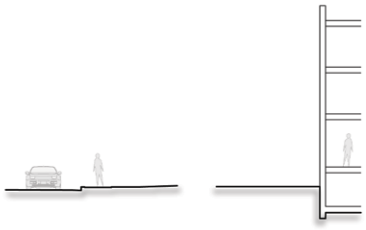


Current context and design approach

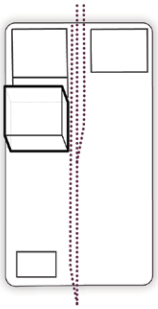
Wrap strategy and existing conditions; base map from Regina Open Government Data Catalogue

The third site is chosen where the track once ran north-south, parallel with a latent lot. The intervention inhabits this lot through an approach of blending the edge conditions and its programs. The site has two contrasting edge conditions, one soft and one hard. The hard edge is the building to the north (historically Tremaine Cartage and a Cold Storage, currently a hybrid of programs including a furniture shop and courier business) and is used to structure the space. The structural grid of this building is extended over the site, parallel to where the tracks once ran, to provide a familiar rhythm to the latent space, soften the hard edge, and provide a flexible system that can be adapted in accordance to the user. The term blend is also used to describe the hybridization of existing and the proposed programs.

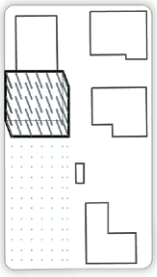
M: Blend
Size: 3080m$^2$



There are two contrasting edges at this site; one of a solid wall and the other, the soft edge of a light traffic street



Historic context

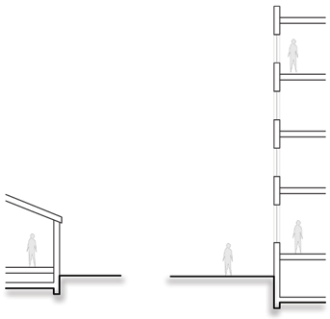


Current context and design approach

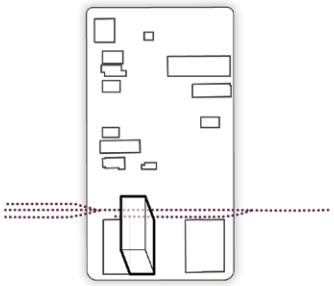
Blend strategy and existing conditions; base map from Regina Open Government Data Catalogue

The final site is the smallest of the four. Historically, this building was a leather goods manufacturer, and was one of the first to be converted into a residence within the warehouse district. The track historically ran east-west along the rear of the building. The remaining edge condition is typical to where tracks have been removed. The exterior void exists as a parking lot which supports the private activities within the building. The approach to occupy this space can be described as puncturing. The void will become activated by extending the program through the façade and redefining the permeability of the edge. This approach provides a new and informal way of occupying a space within the district and redefines the public and private function of the activities that take place within adjacent voids.

S: Puncture
Size: 1200 $m^2$



The edges on this site involve different scales of permeability. Although they are visually dominant, there is a sense of something beyond



Historic context

Current context and design approach

Puncture strategy and existing conditions; base map from Regina Open Government Data Catalogue

The overall strategy intends to provide opportunities and insight on the interstitial inhabitation of each site and the beneficial effects of innovative and collaborative design rather than producing a publicly disengaged master plan. Each approach has a element of malleability that allows the users the freedom to create their own space and provide the opportunity for those who occupy it to develop it in a localized and collaborative manner.

# CHAPTER 4: DESIGN

As briefly introduced in the strategy, each approach will be tested on a particular site located within the warehouse district of Regina. This district is of particular interest for this strategy because of its situation as a changing industrial landscape. In other words, the districts state of dissolve as a deindustrializing area at the core of Regina creates interstitial opportunities in time and space to occupy strategically with new social activity. The potential of the district lies heavily on two factors. The first area of potential lies within its in-between and void spaces that have not been developed on or have changing edge conditions. Secondly, the array of program that is scattered throughout the district provides an opportunity to combine or contrast new activity. Both of these conditions create complex relationships that can spark new creativity and ways of inhabiting voids to evoke the social potential of the district.

A void only exists when form is present. These voids become latent when the edge and the space do not communicate efficiently. When form and edge conditions change or are removed, tension arises, and it typically results in underutilized space. Specifically to Regina, this tension is found where spur tracks have been removed between buildings. To resolve these issues, four approaches – Re-imagine, Wrap, Blend, and Puncture – are used as new ways of inhabiting these spaces and complementing the immediate needs of the city with the potential to adapt with the redevelopment of the warehouse district.

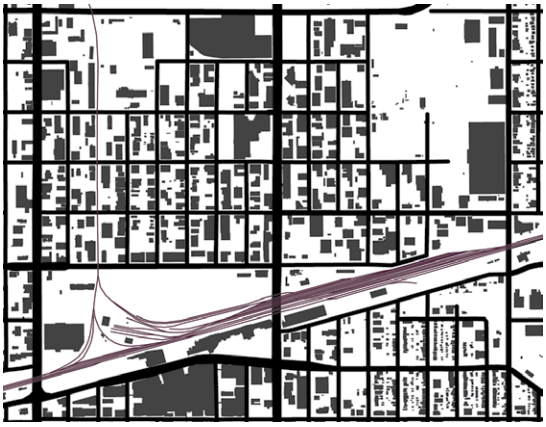
Along with the unique relationships with the historic spur lines and the scale of each of the voids, the chosen sites also occupy different void space. Re-imagine is located on an open field near the active rail line, Wrap inhabits a large vacant building, Blend spreads across a latent lot, and puncture attaches to a façade. This is to provide a framework that can be adapted to a variety of sites and a wide range of possibilities for new interventions to emerge from different clients and user groups. The benefit of providing a flexible strategy is to open the potential for different programs and provide a structure that generates a collaborative design process to a diverse range of users. The specific programs chosen to demonstrate the flexibility of the methods are a park for Re-imagine, an open office and event space for Wrap, an after-school courier hybrid for Blend, and a cinema for Puncture.

Each of these programs can be found spread across the city, but none are found within the district itself.

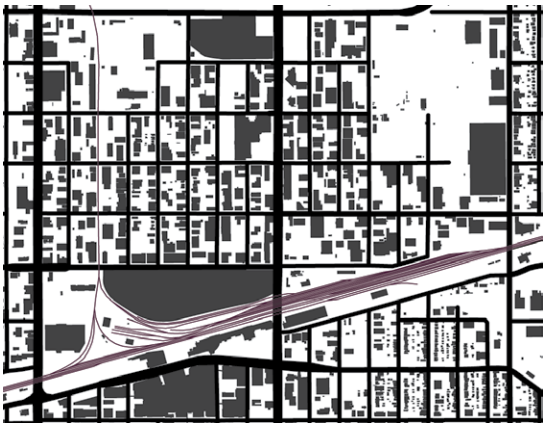
The final, and arguably the key opportunity within these voids is community engagement through a culture of social experience and collaborative design decisions. Each approach is designed to start at a modest scale that can manifest into new forms as the community engages with it or demands require further development. This stepped approach helps facilitate the culture of design at all levels among a wide range of demographics. It also provides insight and education into the process of design and the redevelopment of de-industrialized areas. Like the evolution of a city, these designs might never reach a state of completeness. The importance is the process in which the designs take to arrive at each given state and the networks (socially and physically) that branches off from each individual intervention. Each approach is an attempt to provide an open framework to develop in void space where new tensions arise, and social program demands a change in formal qualities. Every move within the individual approaches will have a ripple effect on the development of the design itself, as well as on the district. Ultimately, this will reduce the number of privatized, inexpensive infill projects, and result in constructive, community conscious design.


Map of existing activity and the potential for new activity within the warehouse district. The locations of the chosen sites are marked in blue

1950

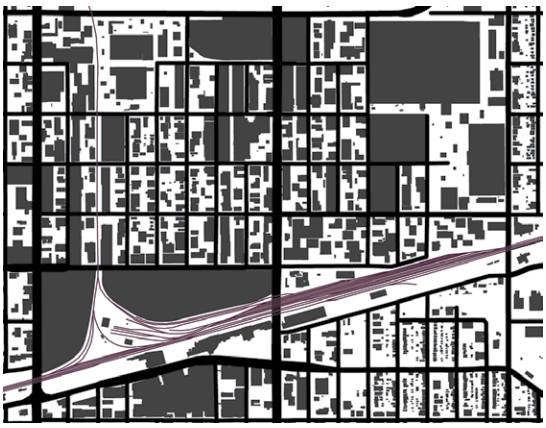


2015



2020

2025



2050

Diagrams of the active elements within the fabric of the warehouse district and the potential change over time


Map showing the location of the proposed programs located throughout the city; base map from Regina Open Government Data Catalogue


Diagram depicting related programs at the core of the city and the corridors that become activated by the proposed interventions

## Re-Imagine

The site of this approach is the historic freight yards. Situated at the core of the city since the town was founded, it holds a prime location for connection and cultural exchange. Train tracks once filled the large yard and it was heavily active with merchandise coming in and out of the city. As economic shifts took place, the yard became much less active and currently physically disjoints the city. Although the city purchased the land for future development, it currently lays latent. The main lines running east-west and a single line running north through the warehouse district are the only railway tracks that remain active within this area. The site of the freight yards currently exists as a large void at the centre of the city with immense social potential due to its location, scale, and accessibility.

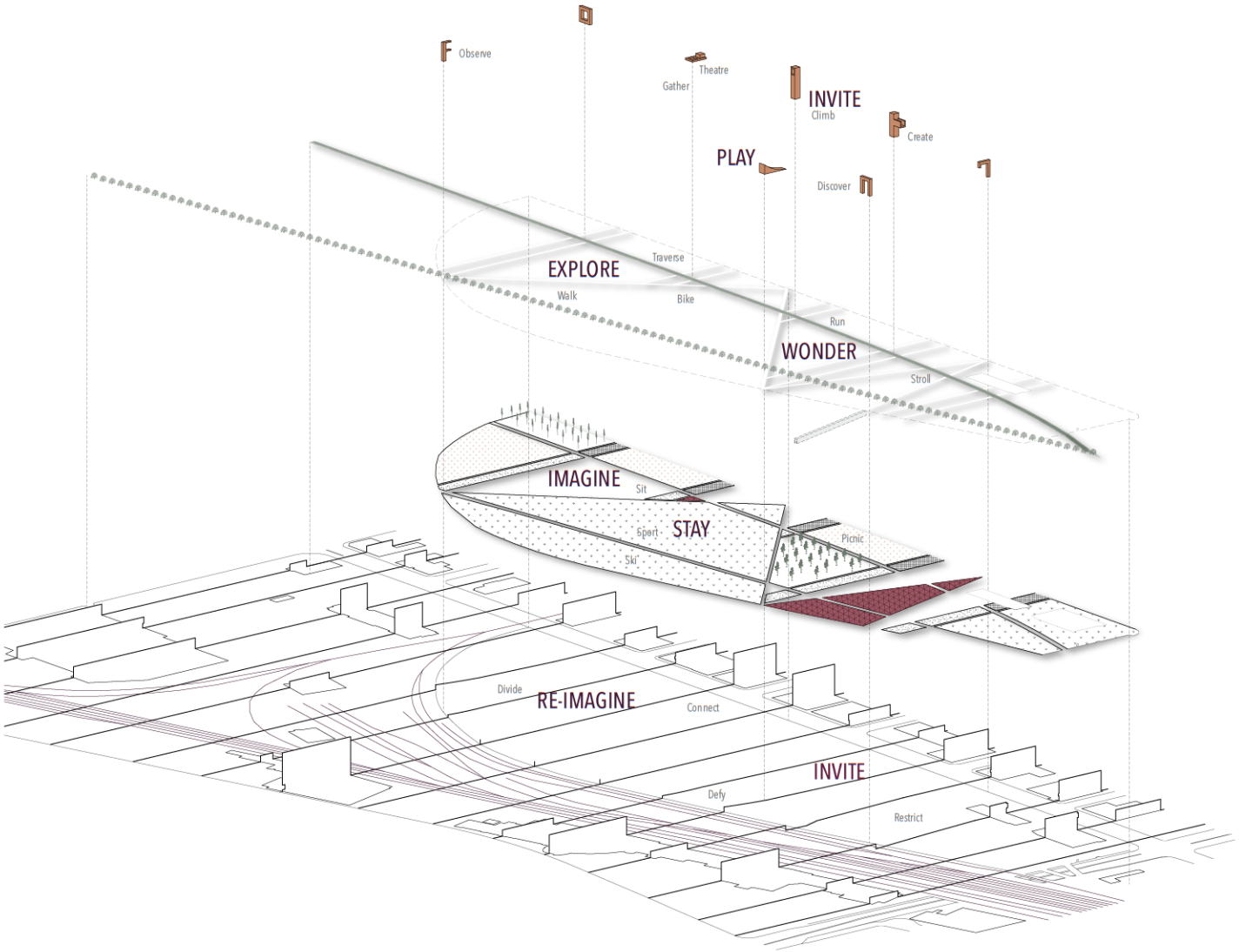
The proposed program for the site is a park. The organization of the park divides the field into spaces using edges, lines, fields, and nodes that provide opportunities for individuals and groups to re-imagine their relationship with the core of the city and near the active railway tracks. First, using cues from the surrounding social realm, a series of lines are extended over the site. From the north, the sidewalks are extended as pathways through the park. From the south, a tunnel from the old Union Station (currently a casino) is extended at an angle over the park, intersecting with the extended sidewalks. Lastly, from the east, two lines are extruded from old bridges that the last spur tracks removed from the site ran across. These lines reflect on the historic function, yet leave the new program open for interpretation for individuals to redefine their relationship with this large urban space.

Where the lines intersect there is a change in function and materiality of the space. The second defining element of the park is the series of fields that these intersections create. These fields provide different scales of opportunities for different functions and user groups to use as they see fit. The third elements of the park, the nodes, are located where these fields and lines intersect. They are located at instances on complexity, where different users are likely to collide and exchange is most likely to take place. These nodes provide unique forms in within the large void that allow the public to question their relationship with the urban park and the role of public spaces within the core of the city.

Image of the historic activity on the site; CORA-A-2131, City of Regina Archives

Image of the current activity on the site


Diagram depicting the existing greenspace and parks at the core of the city and the arteries that would be activated with the design of Re-Imagine




Exploded axo of the edges, fields, lines, and nodes that organize the park

## Wrap

The building chosen to test this approach is located at the northern point of the warehouse district. The east half of the eight-story building was originally built in 1915, and the west half was added to complete the building as it stands today. This layering and densifying of form to meet the changing function of the building creates an interesting relationship with its surroundings, which is primarily horizontal. The building was historically owned by a mail order company, but currently stands vacant. The approach used here proposes to layer and occupy this latent void with a hybrid of open offices and events space. Its height, location, and position at the intersection of two main roads creates the opportunity for this building to become a beacon and an anchor for the district. With the right design moves it can become an active social hub and an advertisement for the whole of the warehouse district.

The term wrap refers to the physical and programmatic presence of the design intervention. The first design move is simply to occupy the building by providing open office spaces free for user interpretation. A project the size of this one is likely to be publicly funded as a motive to harvest young entrepreneurs, and keep them within the province. The second move is to extend the horizontal voids surrounding the building through the site, creating an open and inviting plaza space for sheltered markets and other large public events. The coexistence of young entrepreneurs and open public space allows a comingling that creates opportunities for new ideas for form and businesses to expand. The third step is to inhabit the rest of the building with these public events. This involves providing new form that wraps around and through the building that will create new thresholds and voids for collaboration and encounters. These voids will allow users to occupy spaces in new and informal ways, ultimately softening the hard edge that once defined the exterior and interior voids. The gesture of the design also refers back to the building being a beacon for the district. On its own, it is an attraction and meeting place, but it also works as an advertisement for the district where new programs, like the one proposed, could eventually take form.

The potential and scale of this design lies in the physical opportunities it can create within the district. By phasing the design process and promoting the benefit of socially conscious and collaborative design, it not only reduces thoughtless infill projects within the district, but it also provides a model for a network of design conscious interstitial interventions to

appear. Finally, through its architectural presences and programming, it provides a platform that highlights past and present forms of social exchange and collaboration.

Historic image of the original warehouse; CORA-A-1223; City of Regina Archives

Current image of the warehouse

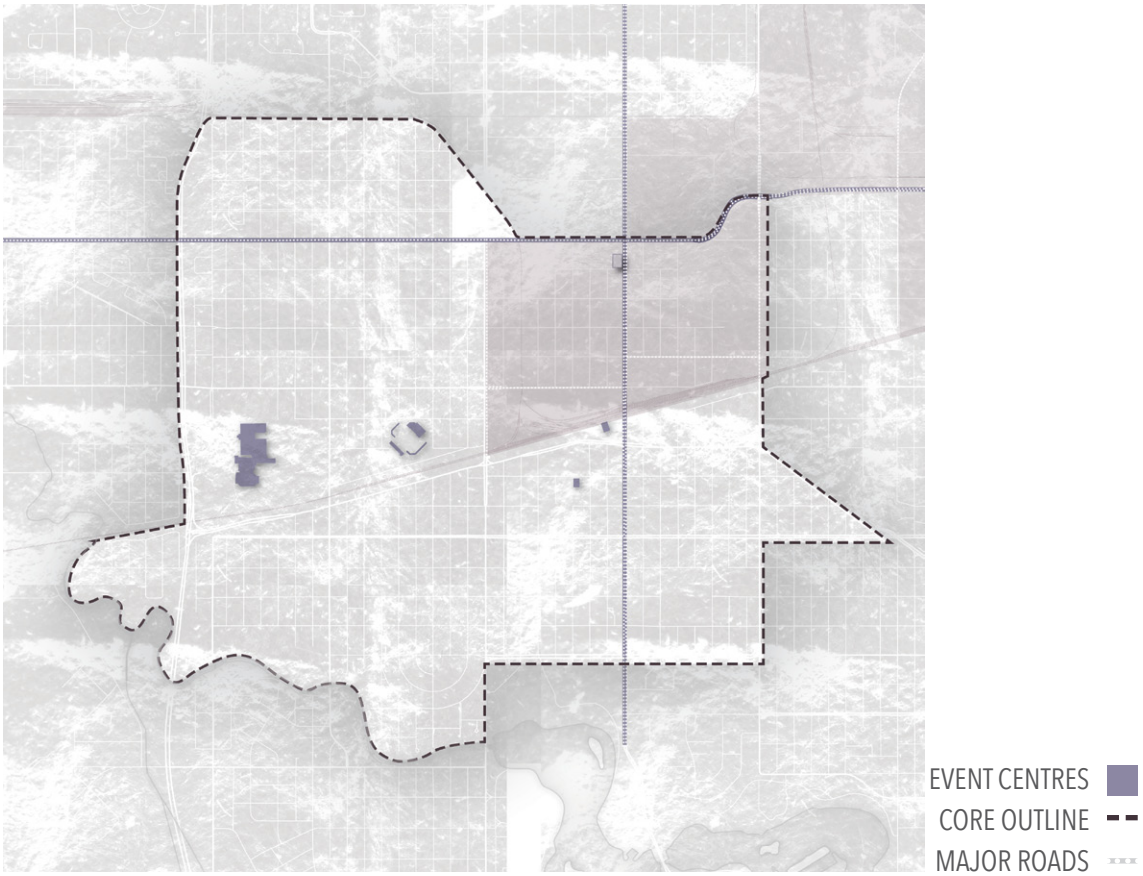
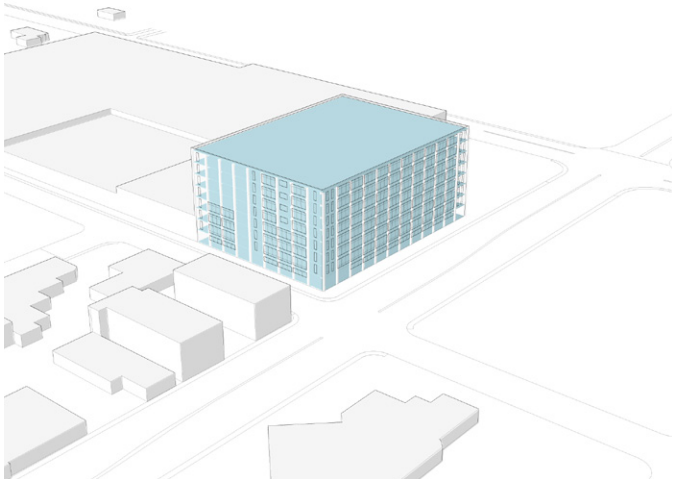
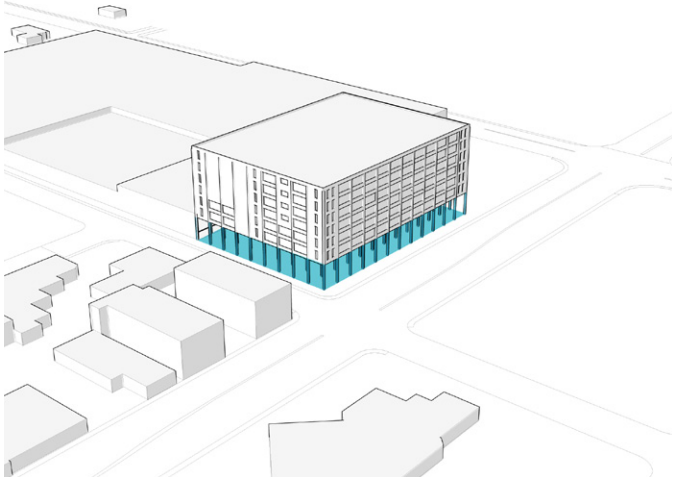


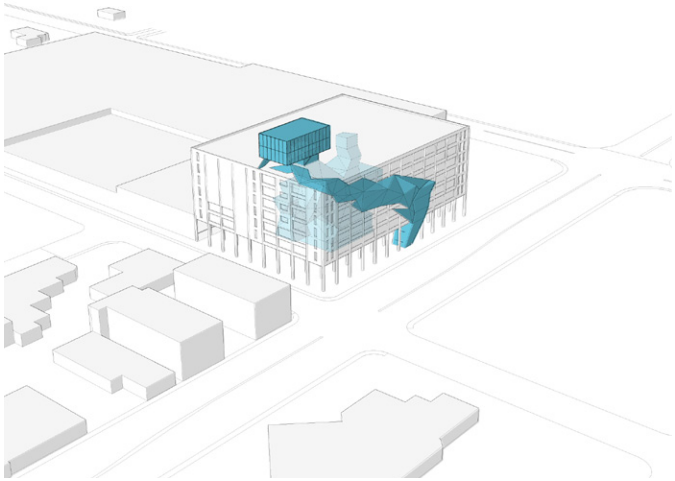

Diagram depicting the existing major event centres at the core of the city and the arteries that would be activated with the design of the Wrapper



Phase 1: Occupy the interior of the building with open office and event spaces

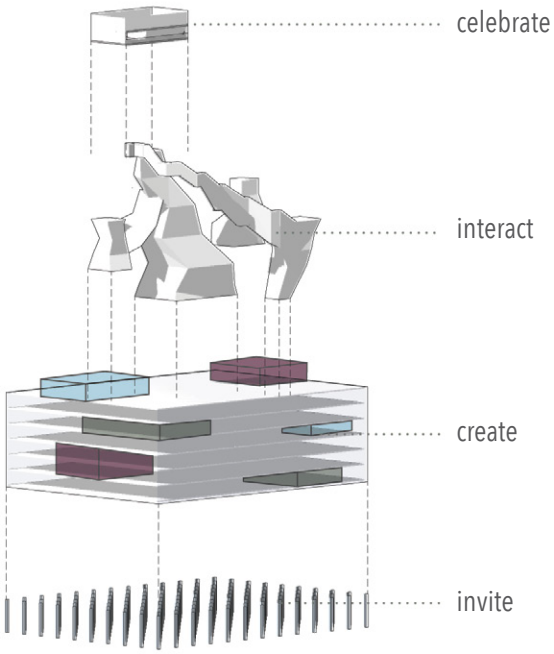


Phase 2: Extend the horizontal realm through the building to create an open and inviting plaza

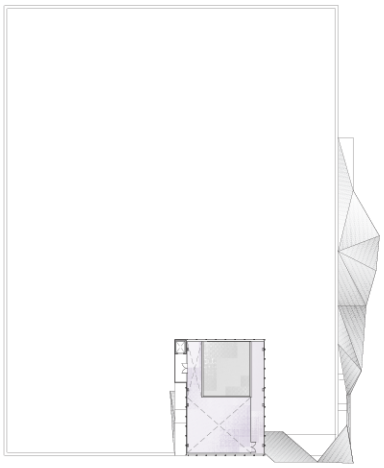


Phase 3: Wrap spaces for interaction and collaboration around and through the building

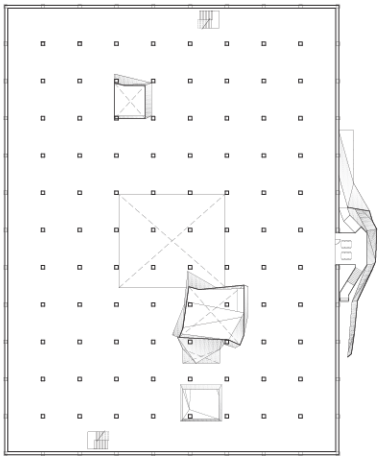
Phase 4: A network of similar interventions develop as a result of an adaptable approach



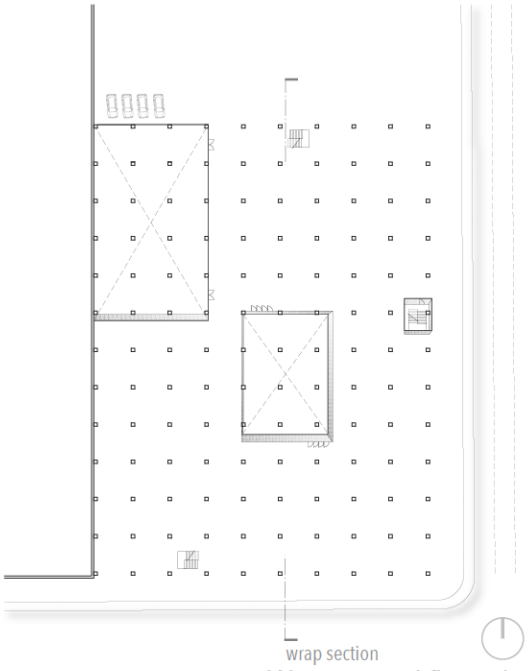

A diagram breaking apart the components of the design into activity and programmatic spaces



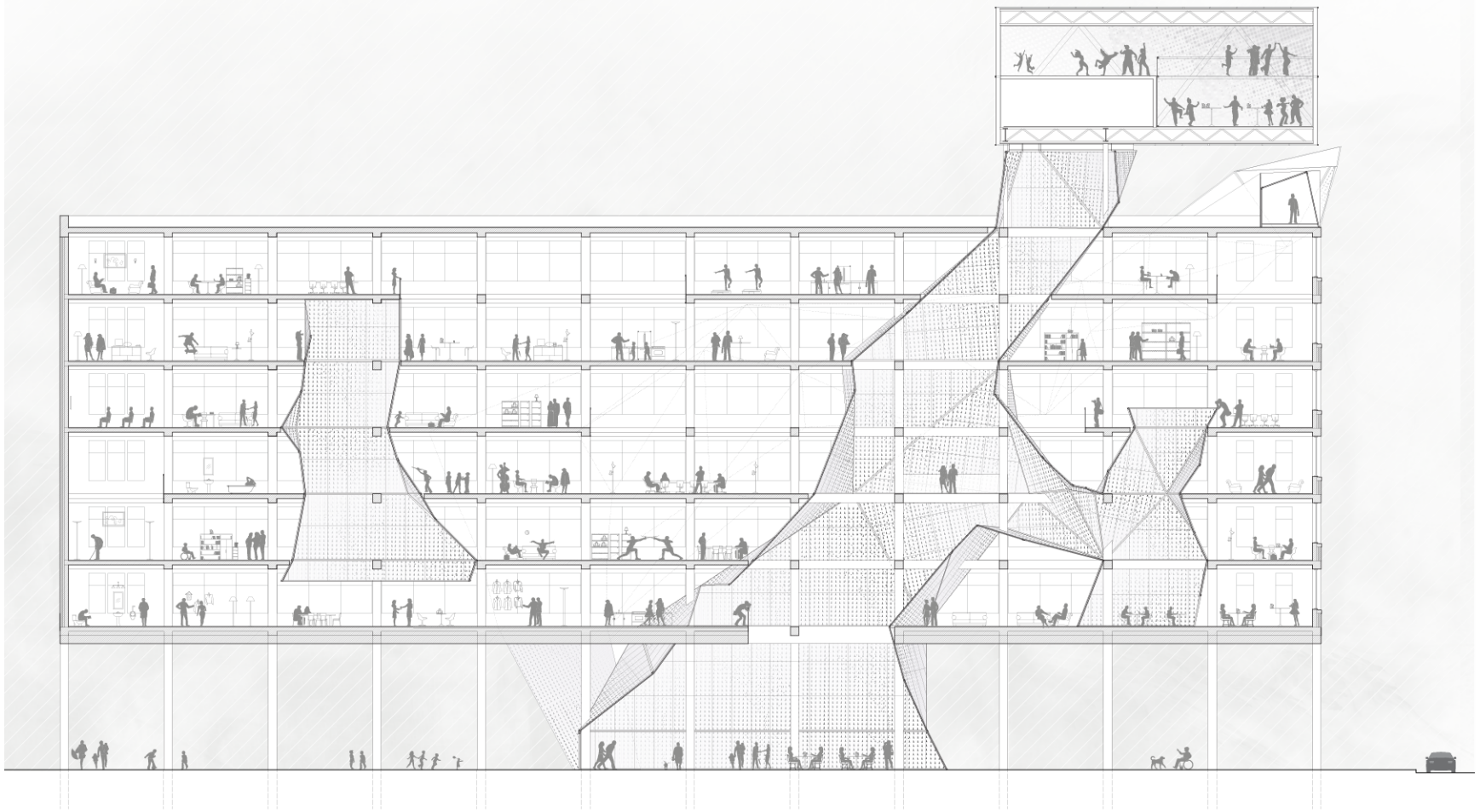
Wrap roof plan



Wrap level four plan

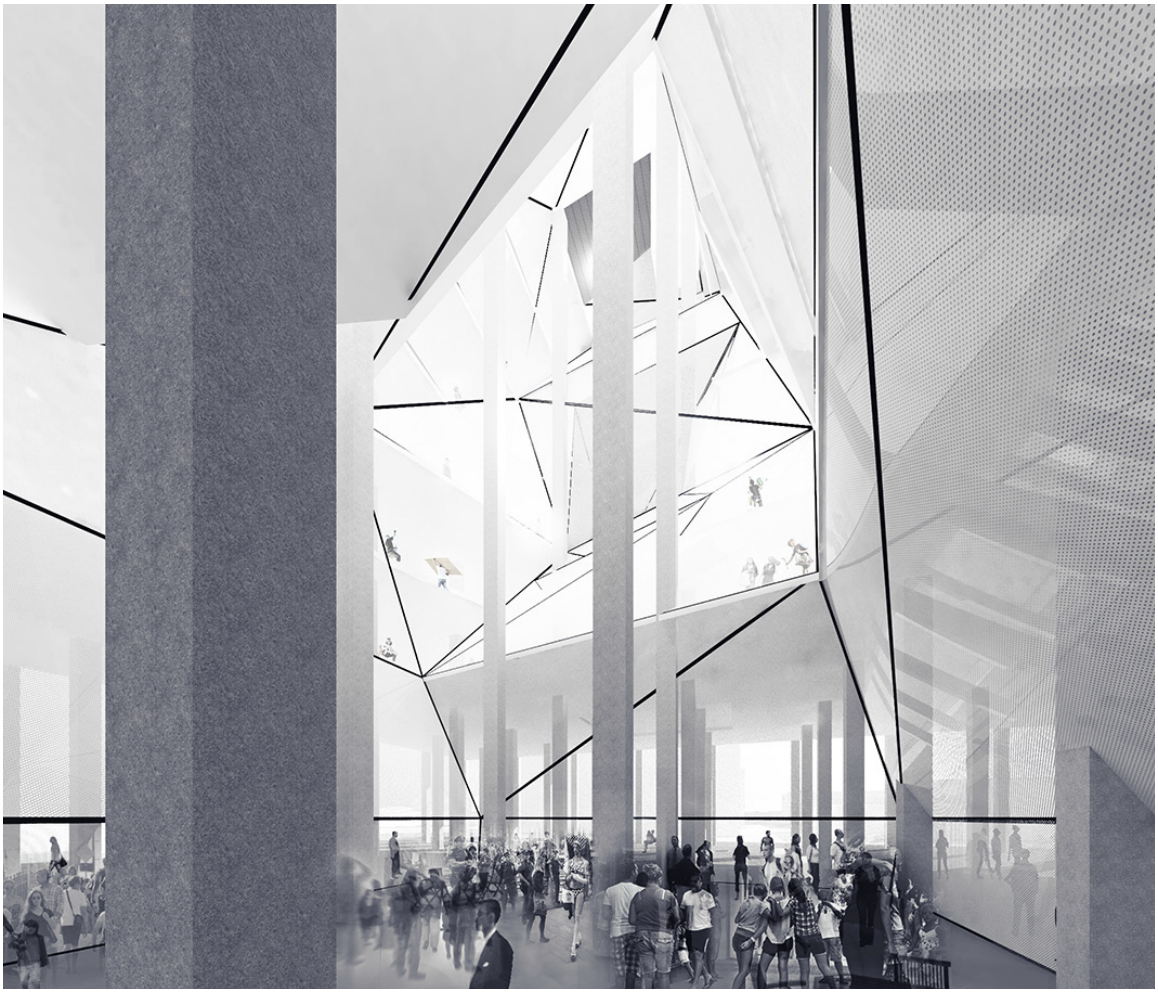



Wrap ground floor plan



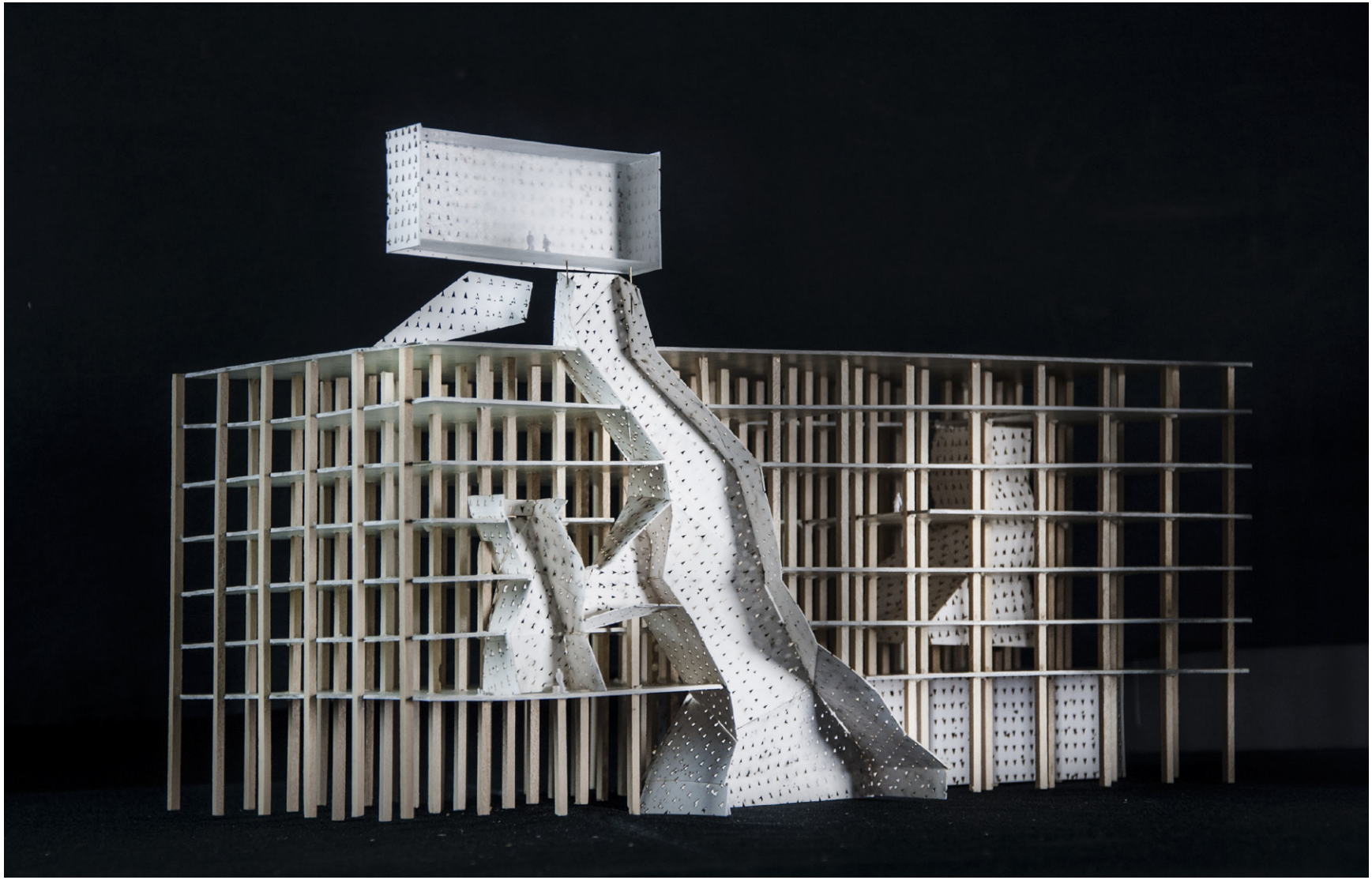
Wrap section looking east

View looking south-west toward Wrap with downtown in the distance

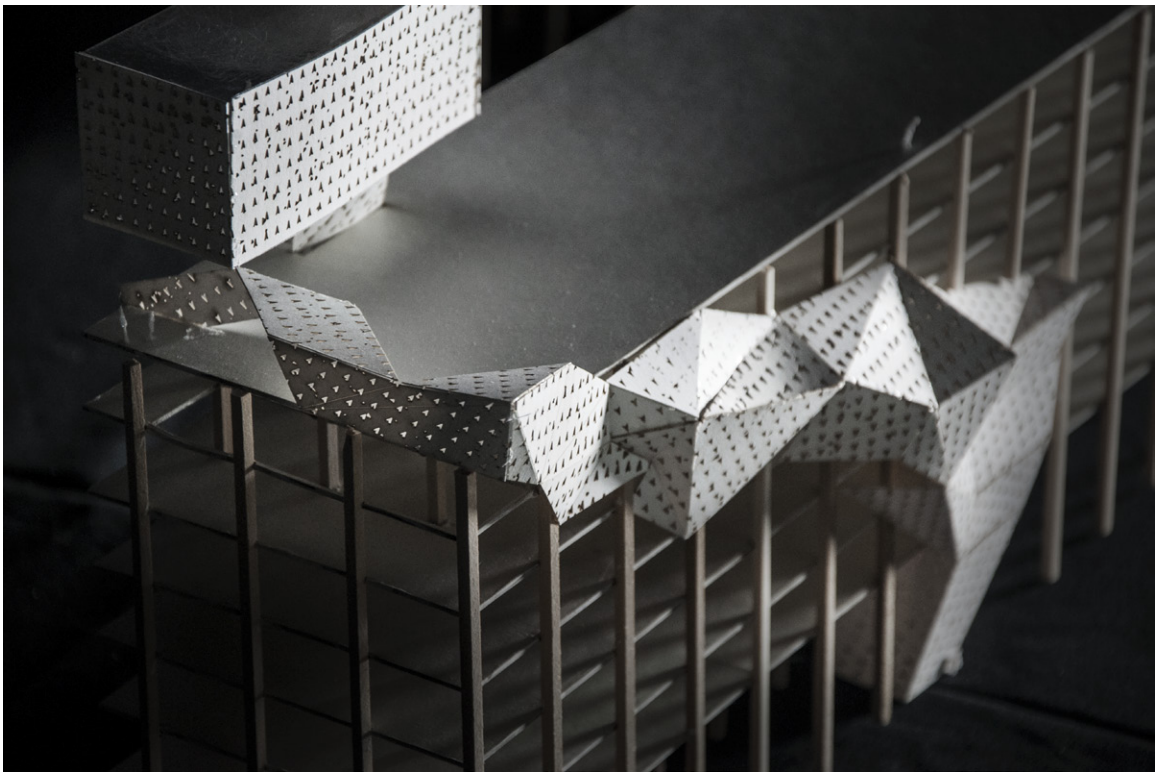


View from the ground level inside one of the atrium spaces highlighting the translucent materiality and transparency of the making, gathering, and event spaces

View from the event space on the roof overlooking the warehouse district and downtown in the distance. This view frames the potential of the district and the voids that are found throughout



Wrap model; section cut



Wrap model; detail of faceted façade

Wrap model; with interior lighting

## Blend

This approach provides a flexible system that can be adapted throughout the district at sites with similar conditions by extracting the structural grid of a familiar building and extending it parallel to where the tracks once ran. The particular site chosen takes a concrete and brick building and unrolls the structure and program over a large latent void to the south in order to soften the edge of the existing blank façade. The design proposes that the current program (a courier business) be hybridized with an after-school program. By hybridizing these contrasting functions, it allows the site to be occupied over a longer duration of the day.

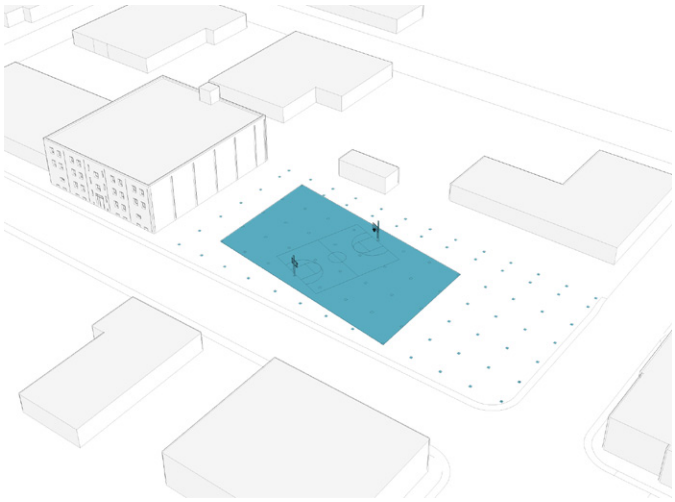
A program like this would likely be funded by a non-profit organization. The opportunity that this approach provides is the ability for the form to evolve as demand requires or as funding is available. The design could begin as an outdoor court, evolve into a structure partially attached to the existing building, then form new free-standing pieces that provide needed interior spaces for different activities and increasing numbers of children.

The form itself is based on the structure of the grid, but is not completely constrained by it. New edges and voids can appear throughout the site and the positioning of these new forms can be based on the active use of the site. The flexibility of this approach ultimately creates an easy blueprint to use on multiple sites. There is potential in the ability for it to adapt at the scale of the site as it occupies specific thresholds time, and seed the growth of similar development throughout the district.

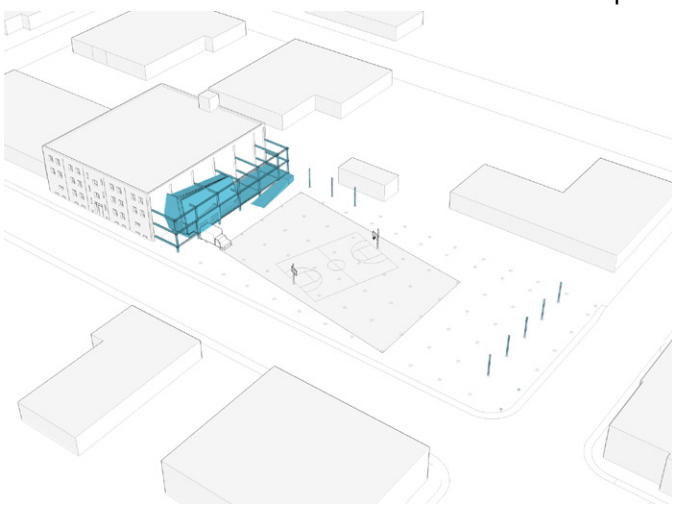
Historic image a typical alley condition; R-A10011; Saskatchewan Archives

Current view the south side of the warehouse

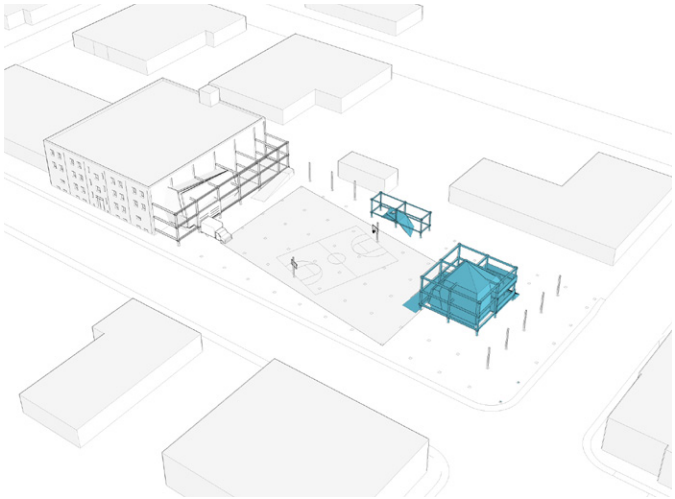

Diagram depicting the existing schools at the core of the city and the corridors that would be activated with the design of Blend



Phase 1: Extend the structure of the existing warehouse over the site and draw initial lines to define space

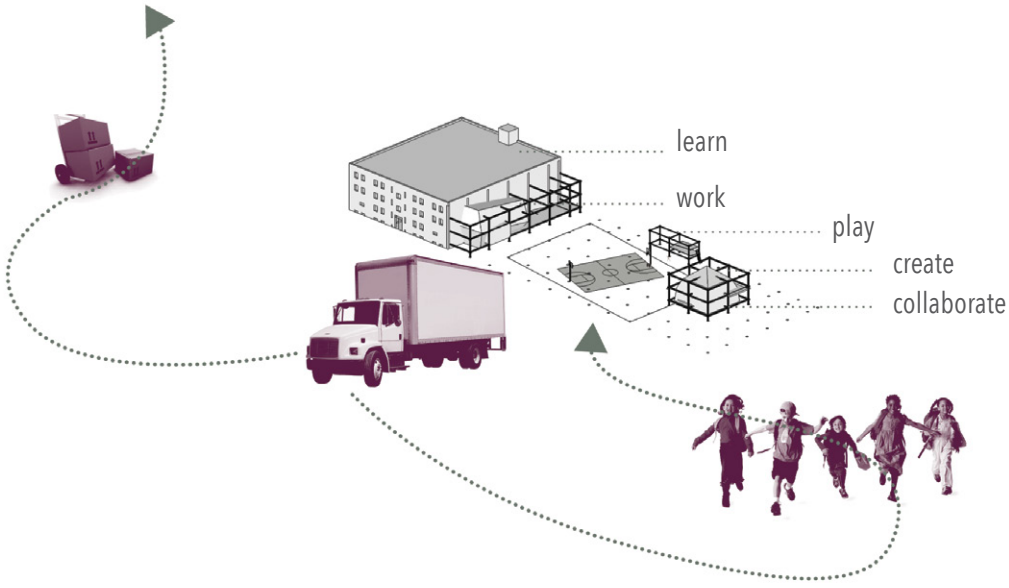


Phase 2: The development of a hybridized program and form attaching to the existing building based on the structural grid laid out

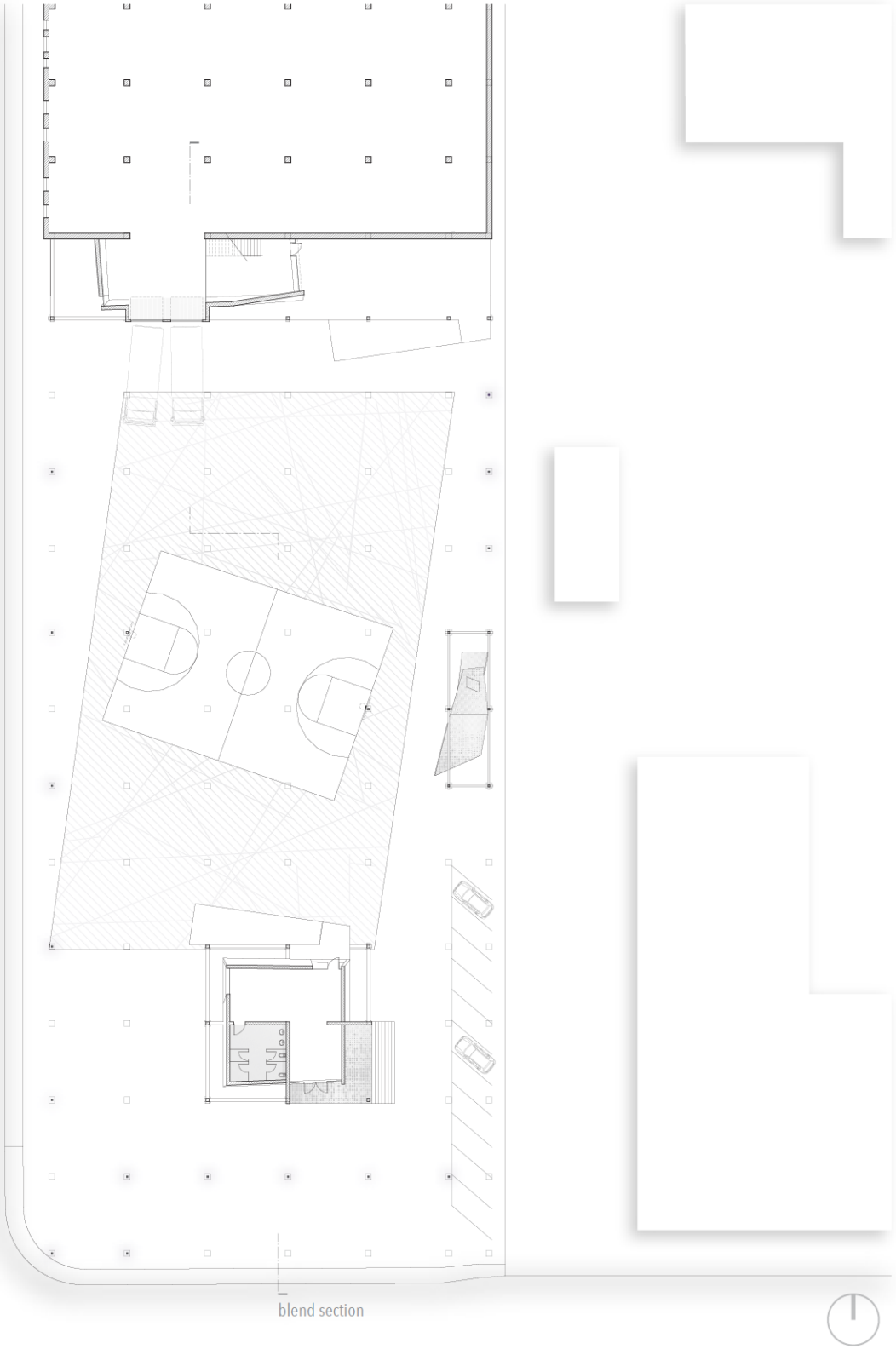


Phase 3: Free standing forms appear based on the demand of the program

Phase 4: A network of similar interventions develop as a result of an adaptable approach

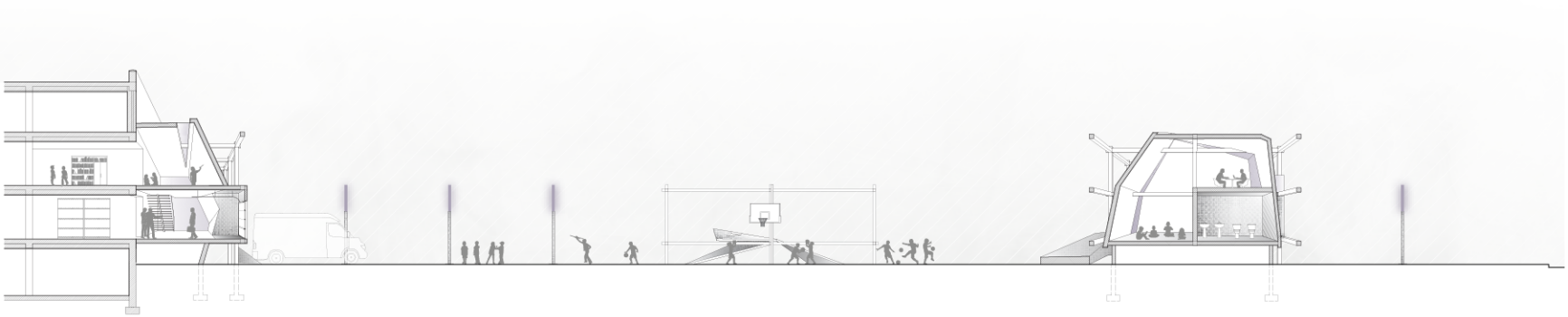



A diagram breaking apart the components of the design into activity and programmatic spaces

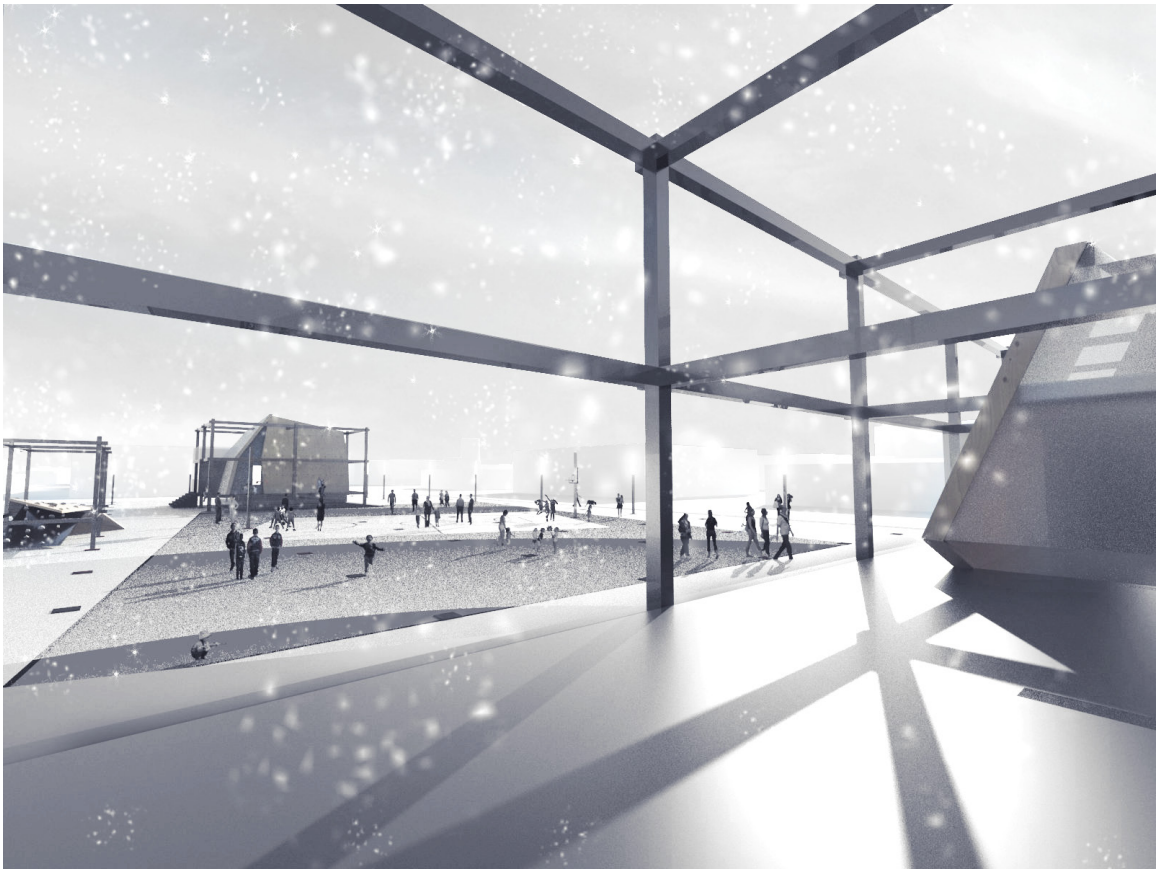



Blend ground floor plan

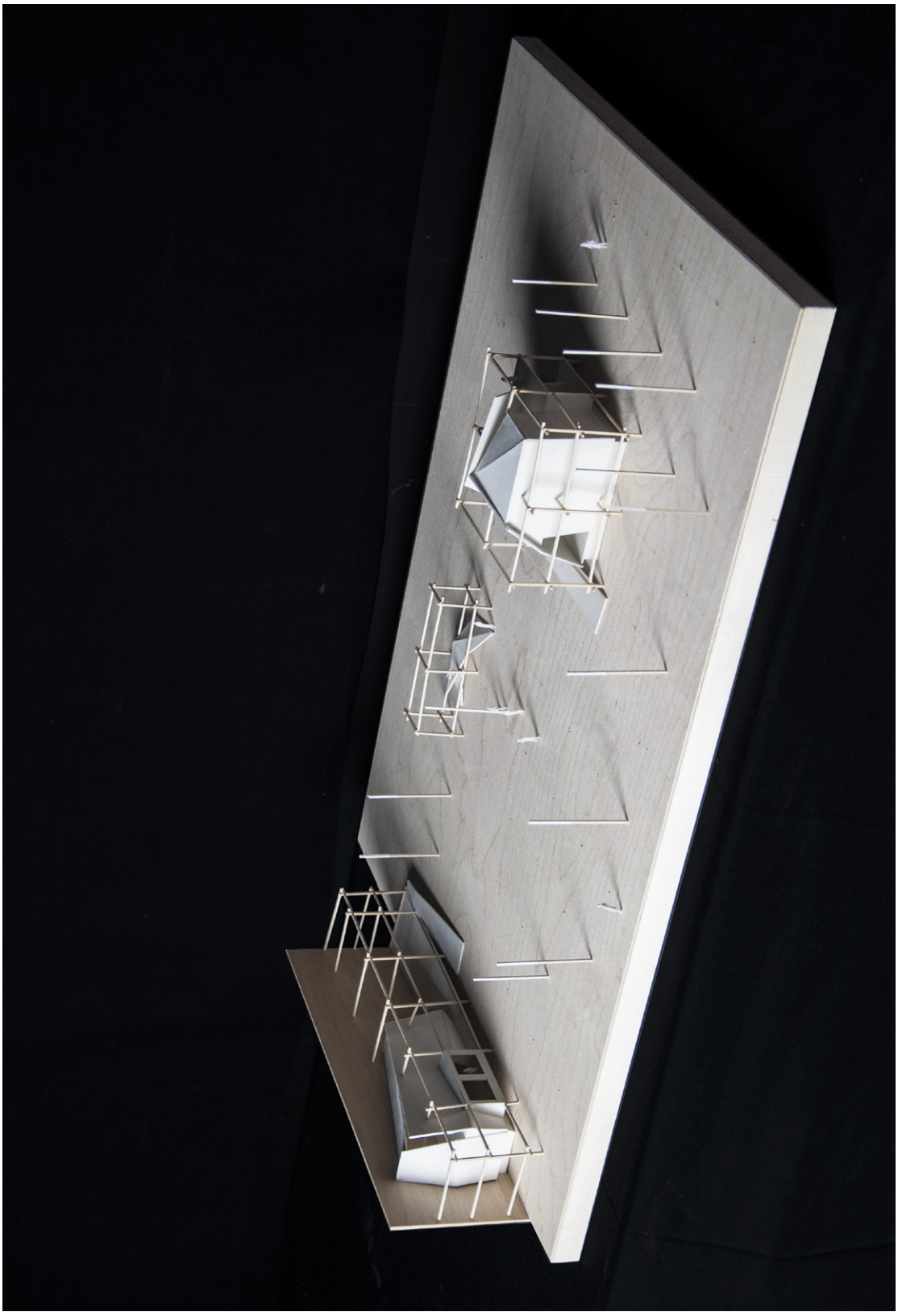
View from the street looking north-east into the open playground



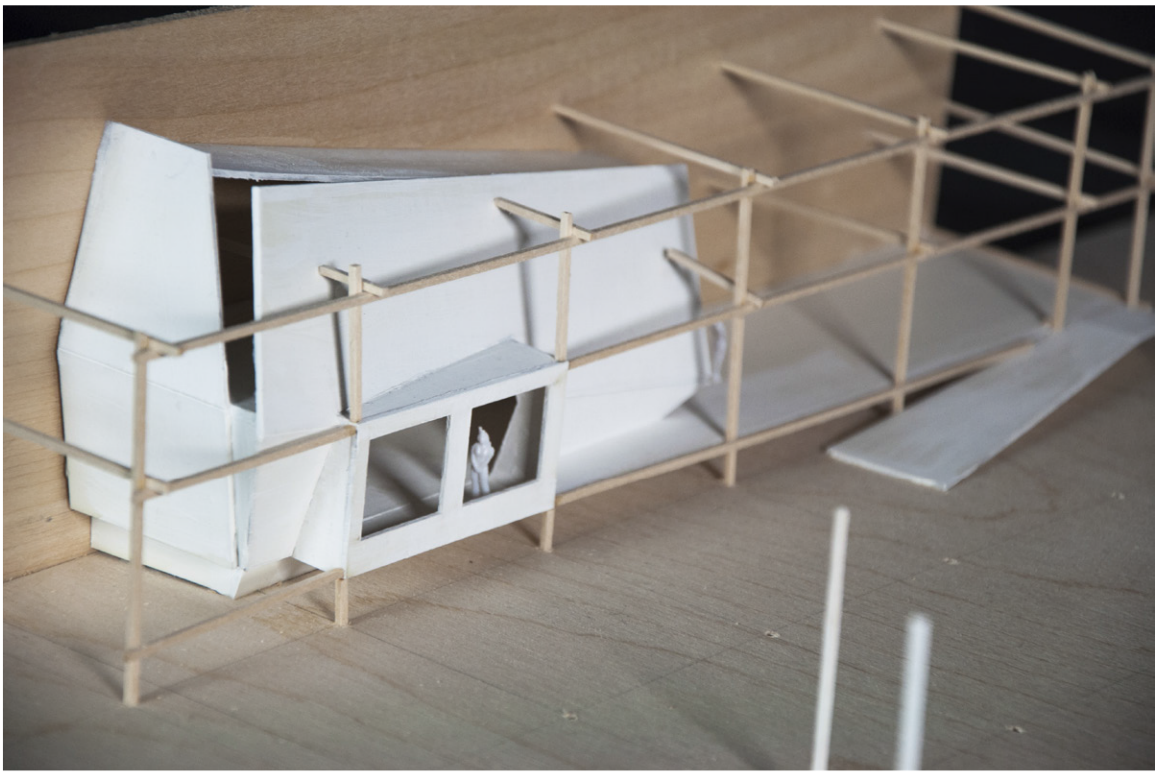
Blend section looking east



View looking south-west overlooking the open playground



Blend model



Blend model; phase 2 detail

Blend model; phase 3 detail

## Puncture

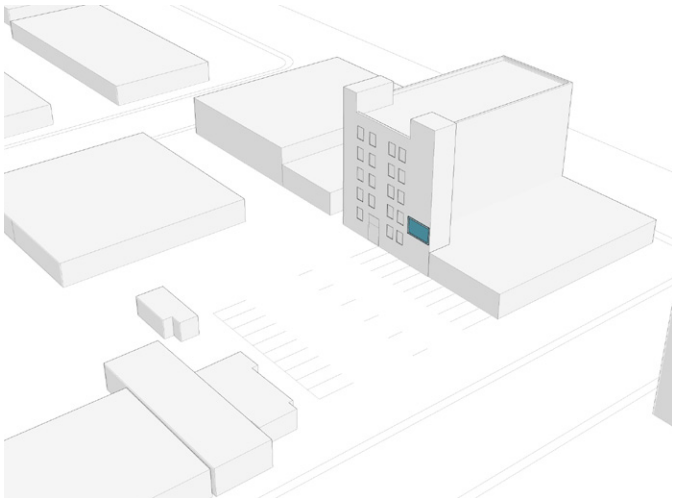
Puncture is the smallest intervention out of the four approaches. The physical intervention takes advantage of the porosity of an existing building as a way to activate latent voids perpendicular to the direction that the spur tracks once ran. The specific site chosen is one of the first warehouses converted into a residence, and the location of the removed spur tracks is now used as a parking lot. The proposed program for this particular site is a cinema. It is a program that both compliments and contradicts the existing programs associated with the site and will activate the void in unconventional ways.

It is likely that this intervention would start as a private venture with a projection screen. This first step would attract the initial audience. The second step might involve a publicly funded parking stall reserved and occupied with a plinth for artist seating. This would attract a new demographic of artists and those wanting to view art within the district. The third and fourth phase may happen co-currently. The third would be for a more permanent design to develop in conversation with the private and public investors. The design proposed is a cinema box that penetrates a window. This would extend the private domestic realm into the public and redefine the public's perception of private space and the function of public space within the district. The formal qualities would mimic the benefits of art and design and become an attraction when the cinema is not in use. The fourth phase is a network of these pods, or small-scale interventions that attach to the façades of existing buildings. They could range from cinemas, to office cubicles, and small homeless shelters. Each intervention within this network would play with the porosity of private space and bring up questions about public occupation within the warehouse district in Regina.

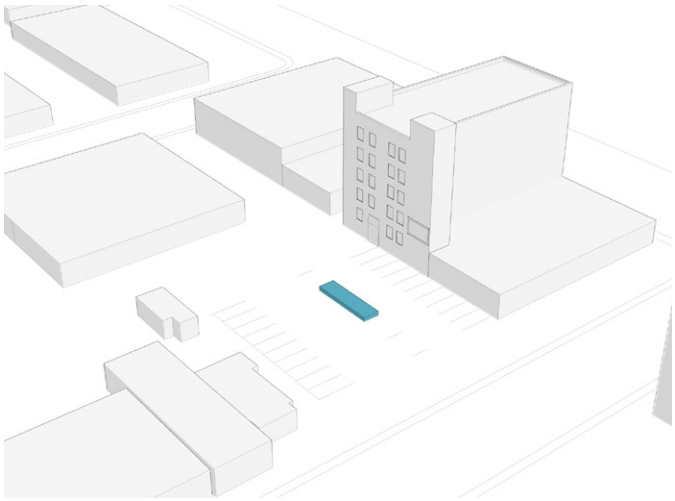
Historic image of the warehouse after the 1912 cyclone; R-A265 (1)-(29); Saskatchewan Archives


Current image of rear of the warehouse

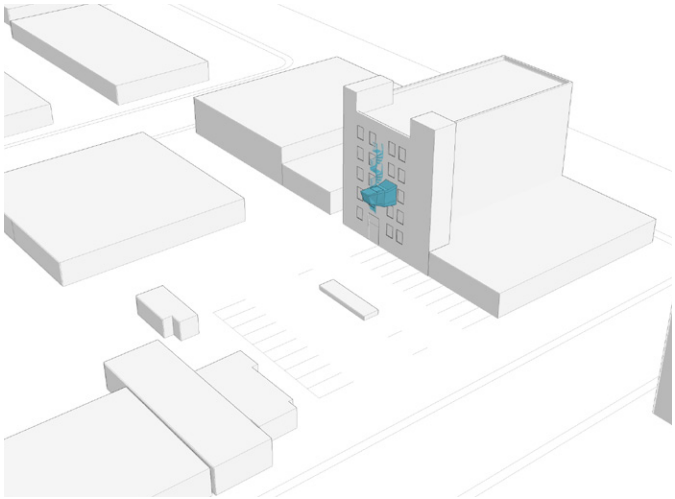

Diagram depicting the active evening programs at the core of the city and the fine grid of streets that would be activated with the design of Puncture



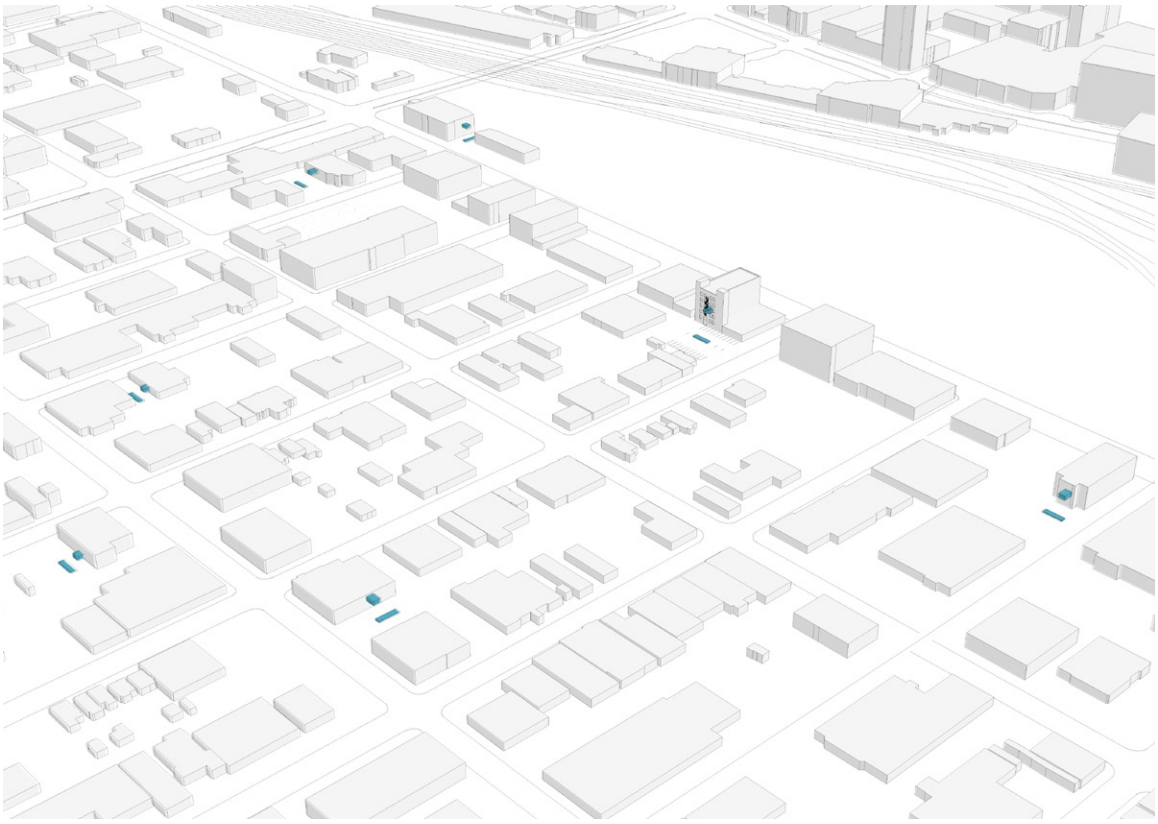
Phase 1: A projection screen is attached to the façade to attract the initial audience



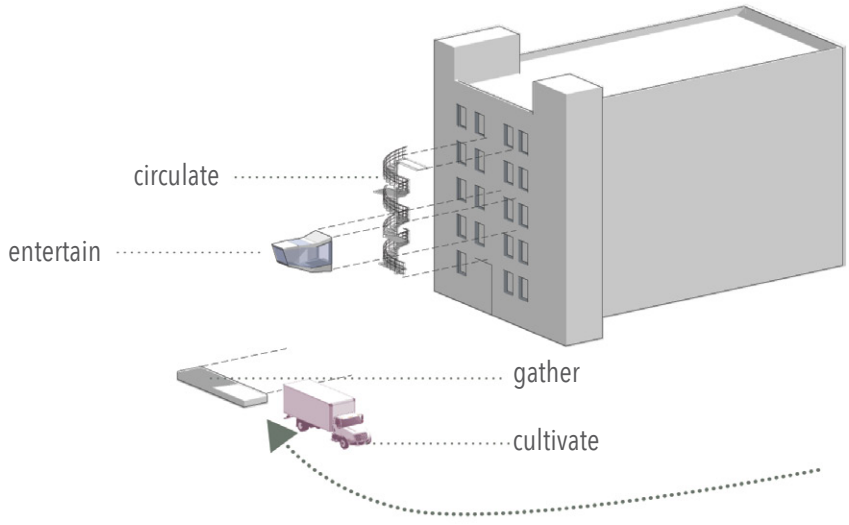
Phase 2: A parking space is occupied by a plinth for artists seating, attracting the second layer of audience



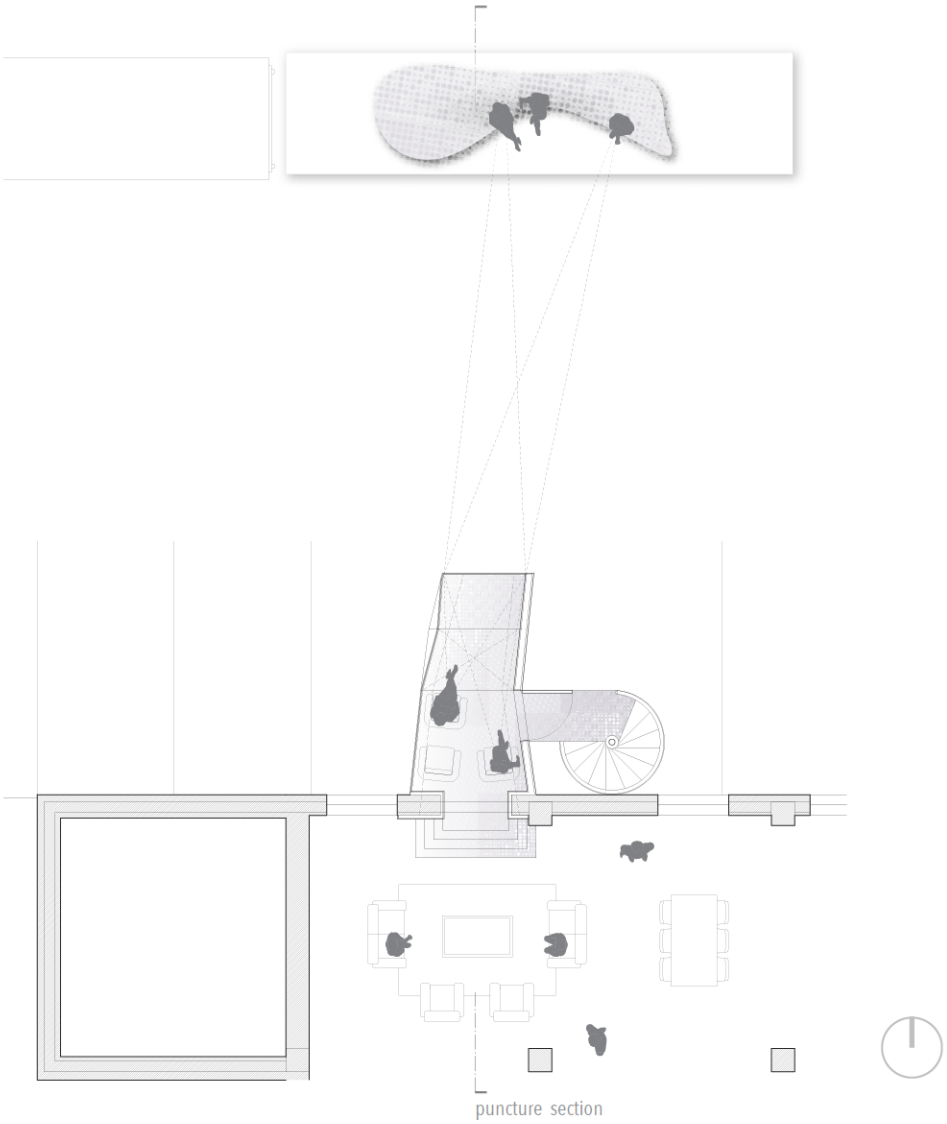
Phase 3: A pod is designed as a permanent facility to host new events



Phase 4: A network of similar interventions develop as a result of an adaptable approach




A diagram breaking apart the components of the design into activity and programmatic spaces




Puncture plan

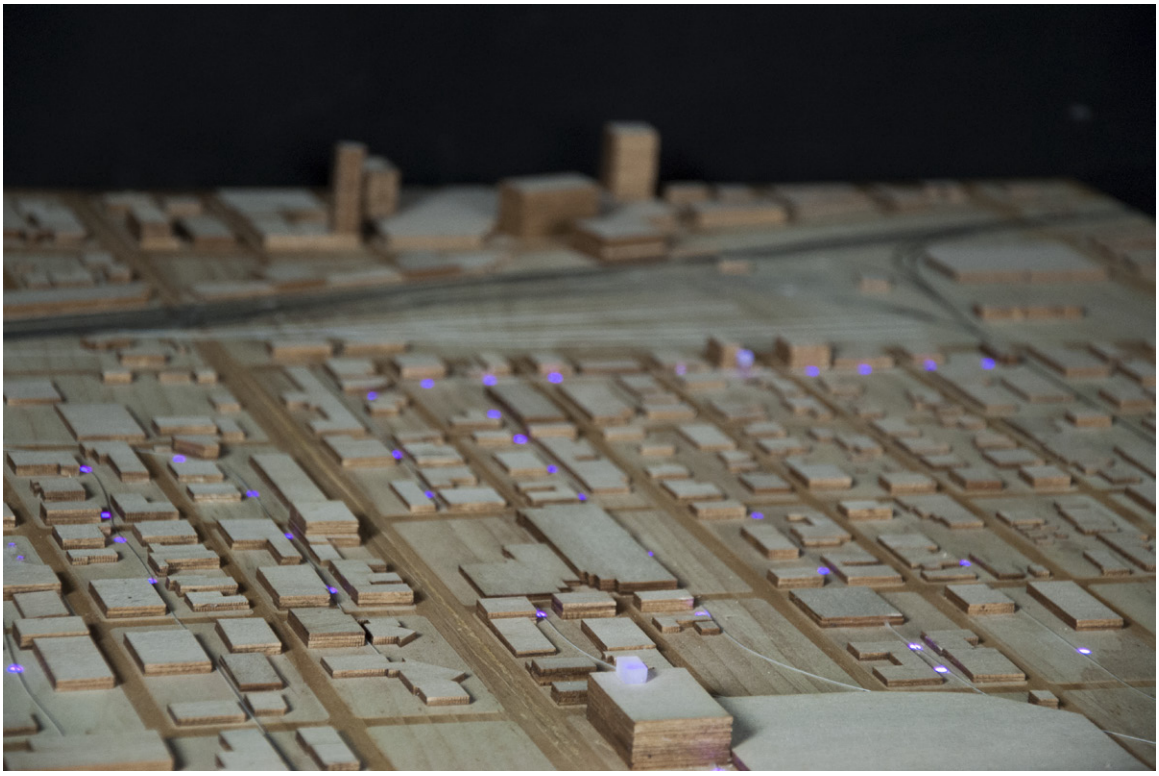
Puncture section looking east

View looking south-east toward the cinema and plinth

View from the domestic residence into the cinema, overlooking the district

Puncture model

Puncture model



Model showing the potential network; the locations of the points are based on the criteria outlined in the strategy

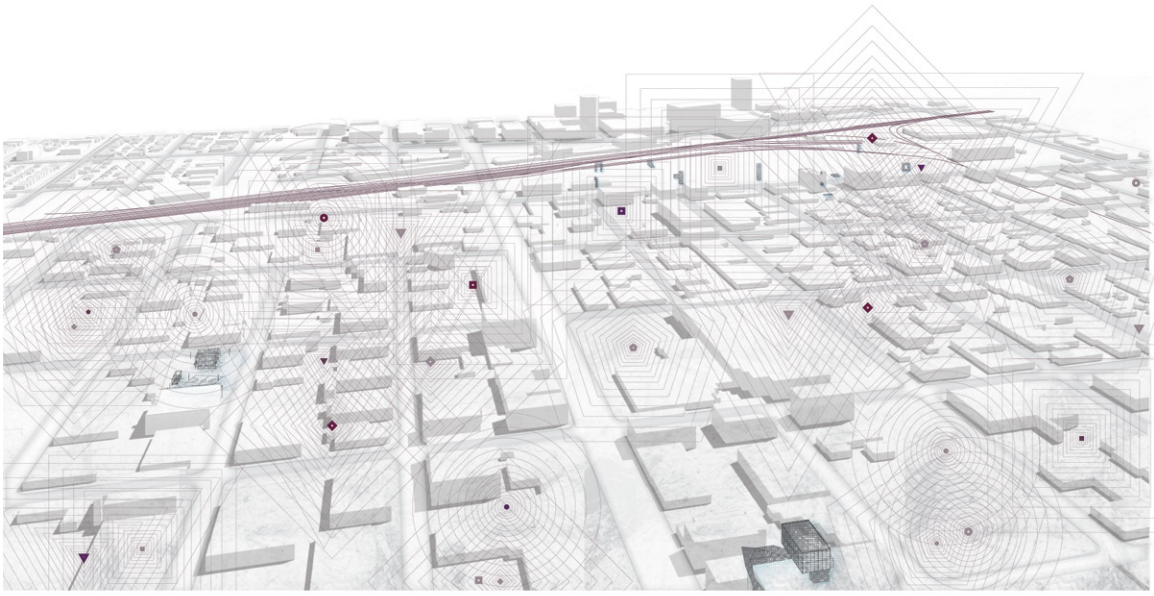


Diagram showing a potential network of interstitial design that will create a web of activity and become the framework for the redevelopment of the warehouse district; the locations of the points are based on a random selection of voids throughout the district

# CHAPTER 5: CONCLUSION

It is inevitable that changing economies will alter the shape of the cities we inhabit. In the case of Regina, the warehouse district, located at the core of the city, never reached a state close to completion. The removal of the spur tracks in combination with this incomplete state has left the district with undefined and underutilized latent voids that create a stark physical contrast with adjacent neighborhoods. Architecture can help resolve these issues in two major ways. The first is through its physical presence, as architecture is one of the dominant signs of development and provides opportunities for activity. The second way architecture can help activate latent spaces is by its potential to work as a new infrastructure within the district. Like the spur tracks once acted as the infrastructure that created the potential for development adjacent to them throughout the district, architectural interventions can do the same. Small interventions have the opportunity to redefine the relationship that we have with space and provide an aggregate for the redevelopment of a dissolving district. Throughout the city's history, it has been made clear that a master plan is not the solution for the revitalization of the area. In fact, there is no single definite recipe that can revitalize an area with the size and complexity similar to that of the warehouse district in Regina. Therefore, the answer to an area with these characteristics is a strategy similar to that of acupuncture. Generating activity within strategic locations and time can create a pull toward the area and generate new activity within the network of the district.

The benefit to a strategy like this is the opportunity for different users to become involved. This includes individual investors, non-profit organizations, public enterprises, etc. In order to engage with the current culture and act as a catalyst for urban renewal, the system must not heavily reflect on the city's past, but use it as a canvas to layer on. Each intervening approach must provide both the framework that facilitates the development of the individual project over time, and an approach that facilitates the culture of design within the city, at all scales. This strategy ultimately translates into a phased process that allows the collaboration with users and organizations. It also provides a constructive framework for both individual interventions and the flexibility for a network to evolve, ultimately providing interstitial design that connects community and promotes cultural exchange in a city core fragmented by deindustrialization.

# BIBLIOGRAPHY

"06 Four Urban Projects | Haus-Rucker-Co." WORK Gallery. Accessed February 18, 2016. http://www.workgallery.co.uk/shop/06-haus-rucker-co-four-urban-projects.

Agrest, Diana, and Mario Gandelsonas. "Semiotics and Architecture: Ideological Consumption or Theoretical Work." In *Theorizing a New Agenda for Architecture*: An Anthology of Architectural Theory 1965-1995. New York: Princeton Architectural Press, 1996.

Agrest, Diana. "Design versus Non-Design." In *Architecture Theory since 1968*. Cambridge, MA: MIT Press, 1998.

Allen, Rolande. The Regina Round House with rail cars in front. c. 1920. CORA-A-2131. City of Regina Photographs Collection. City of Regina Archives. Regina, Saskatchewan, Canada.

Allen, Stan. *Points and Lines: Diagrams and Projects for the City*. New York: Princeton Architectural Press, 1999.

Auricoste, Isabelle, Jean Jungmann, and Hubert Tonka. *Vaisseau De Pierres: Architectures*. Seyssel: Champ Vallon, 1987.

Berger, Alan. *Drosscape: Wasting Land in Urban America*. New York: Princeton Architectural Press, 2006.

Brennan, J. William. *Regina: An Illustrated History*. Toronto: J. Lorimer and Canadian Museum of Civilization in Collaboration with the Secretary of State, 1989.

Broadbent, Geoffrey. "A Plain Man's Guide to the Theory of Signs in Architecture." In *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995*. New York: Princeton Architectural Press, 1996.

Canadian Pacific. "CP Network Map." Map. Canadian Pacific. January 2016. Accessed March 1, 2016. http://www.cpr.ca/en/choose-rail-site/Documents/cp-network-map-2016.pdf. City of Regina. *Design Regina, Part B - Secondary Plans*. Report. 2013. Accessed March 23, 2016.

City of Regina City Planning Department. "Neighbourhood Profiles." City of Regina. March 2015. Accessed March 24, 2016. http://www.regina.ca/residents/city-planning/planning-your-neighbourhood/neighbourhood-profiles/.

Department of Natural Resources Canada, RADARSAT Team. *RADARSAT Ortho-rectified Mosaic of Canada, Lambert Conformal Conic, 250 Metres*. 1998-1999. Accessed December 1, 2015. https://en.wikipedia.org/wiki/RADARSAT#/media/File:Canada_mosaic_lcc_1000m_2.jpg.

Drake, Earl. *Regina, the Queen City*. Toronto: McClelland, 1955.

Estevan wholesale company ltd. warehouse. R-A10011. Provincial Archives of Saskatchewan. Regina, Saskatchewan, Canada.

Finkelpearl, Tom. “Four Experiments in Public Art as Architecture and Urban Planning.” In *Dialogues in Public Art*, 172-95. Cambridge, MA: MIT Press, 2000.

Flaman, Bernard. *Architecture of Saskatchewan a Visual Journey, 1930-2011*. Regina: CPRC Press, 2013.

Gehl, Jan. *How to Study Public Life*. Washington: Island Press, 2013.

Gehl, Jan. *Life Between Buildings: Using Public Space*. Washington: Island Press, 2011.

Gehl, Jan, and Lars E. *New City Spaces*. 3rd ed. Copenhagen: Danish Architectural Press, 2003.

Government of Canada. “Open Data.” Open Government. Accessed March 24, 2016. http://open.canada.ca/en/open-data.

Hedges, Phillip. *Presidents Medals: Art Becoming Architecture: Informing the Discussion*. 2013. Accessed March 02, 2016. http://www.presidentsmedals.com/Entry-14030.

Lynch, Kevin. *The Image of the City*. Cambridge, MA: MIT Press, 1960.

Maphill. Satellite Map of Saskatchewan. 2011. Accessed December 1, 2015. http://www.maphill.com/canada/saskatchewan/maps/satellite-map/free/.

Mariani, Manuela, and Patrick Barron. *Terrain Vague: Interstices at the Edge of Pale*. New York: Routledge, 2014.

Montgomery, Charles. *Happy City Transforming our Lives through Urban Design*. Toronto: Doubleday Canada, 2013.

Ortner & Ortner Baukuns. “Inner World / Innen Welt: The Projects of Haus-Rucker-Co., 1967-1992.” *We Make Money Not Art*. 2012. Accessed March 02, 2016. http://we-make-money-not-art.com/inner_world_innen_welt_the_pro/#.UiDs3LyMLTM.

Oswalt, Philipp, and Klaus Overmeyer. *Urban Catalyst: The Power of Temporary Use*. Berlin: Dom Pub, 2013.

Perec, Georges. *Species of Spaces and Other Pieces*. Translated and Edited by John Sturrock. Rev. ed. London, England: Penguin Books, 1999.

“Perfil: Santiago Cirugeda, El Arquitecto Rebelde.” Revista Código. September 08, 2014. Accessed March 02, 2016. http://www.revistacodigo.com/perfil-santiago-cirugeda-el-arquitecto-rebelde/.

Pope, Albert. “From Form to Space.” In *Fast-forward Urbanism Rethinking Architecture’s Engagement with the City*, edited by Dana Cuff and Roger Sherman, 143-175. New York: Princeton Architectural Press, 2011.

Pope, Albert. *Ladders*. Houston: Rice School of Architecture, 1996.

Railyard Renewal Project. Accessed March 04, 2016. http://www.reginarevitalization.ca/railyard-renewal-project/.

“Regina Open Government Data Catalogue.” Welcome - City of Regina Open Government. 2015. Accessed March 24, 2016. http://open.regina.ca/.

Riddell William A. *Regina, from Pile O’Bones to Queen City of the Plains an Illustrated History*. Burlington, Ont: Windsor Publications (Canada), 1981.

Sanchez Merina, Javier. “El Paisaje Urbano Según Santiago Cirugeda.” Veredes. November 18, 2013. Accessed February 18, 2016. http://veredes.es/blog/en/el-paisaje-urbano-segun-santiago-cirugeda-halldora-arnardottir-javier-sanchez-merina/.

Schmiedeknecht, Torsten. “Surface, Metaphor and Virtuality.” In *Zamp Kelp: Expanding Space.* (New York: John Wiley & Sons, 2000), 11.

Sherman, Roger. “Strange Attractors, or the Catalytic Agency of Form.” In *Fast-forward Urbanism Rethinking Architecture’s Engagement with the City*, edited by Dana Cuff and Roger Sherman, 242-263. New York: Princeton Architectural Press, 2011.v

Snapshots (and negatives) of various parts of Regina following the cyclone of June 30, 1912. 1912. R-A265 (1)-(29). Provincial Archives of Saskatchewan. Regina, Saskatchewan, Canada.

Stabler, Jack C.. *The Changing Role of Rural Communities in an Urbanizing world Saskatchewan, an Update to 1995*. Regina: Canadian Plains Research Center, University of Regina, 1996.

Stewart, Gladys. The Robert Simpson Co. Western Mail Order House - 4th Avenue and Broad Street. c. 1925. CORA-A-1223. City of Regina Photographs Collection. City of Regina Archives. Regina, Saskatchewan, Canada.

“Taking the Streets. Skips. Dumpsters.” RECETAS URBANAS. Accessed Februrary 18, 2016. http://www.recetasurbanas.net/index1.php?idioma=ENG.

Wilson, Ian E. and J. William Brennan. *Regina Before Yesterday: A Visual History, 1882 to 1945*. Regina: Historical Committee, 75th Anniversary Management Board, City of Regina, 1978.

Yaari, Monique. “The Urban Park of La Villette.” In *Rethinking the French City: Architecture, Dwelling, and Display after 1968*. Amsterdam: Rodopi, 2008.