Reactivating the Derelict:
Developing an Architectural Framework for Social Interaction
through the Analysis of Berlin's Diverse Physical History and
Cultural Character

by

David Tyl

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

at

Dalhousie University
Halifax, Nova Scotia
March 2012

DALHOUSIE UNIVERSITY

SCHOOL OF ARCHITECTURE

The undersigned hereby certify that they have read and recommend to the Faculty of Graduate Studies for acceptance a thesis entitled "Reactivating the Derelict: Developing an Architectural Framework for Social Interaction through the Analysis of Berlin's Diverse Physical History and Cultural Character" by David Tyl in partial fulfilment of the requirements for the degree of Master of Architecture.

Dated: March 20, 2012

Supervisor: _____

Reader: _____

Reader: _____

DALHOUSIE UNIVERSITY

Date: March 20, 2012

AUTHOR: David Tyl

TITLE: Reactivating the Derelict: Developing an Architectural Framework for Social Interaction Through the Analysis of Berlin's Diverse Physical History and Cultural Character

DEPARTMENT OR SCHOOL: School of Architecture

DEGREE: MArch   CONVOCATION: May   YEAR: 2012

Permission is herewith granted to Dalhousie University to circulate and to have copied for non-commercial purposes, at its discretion, the above title upon the request of individuals or institutions. I understand that my thesis will be electronically available to the public.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

The author attests that permission has been obtained for the use of any copyrighted material appearing in the thesis (other than brief excerpts requiring only proper acknowledgement in scholarly writing), and that all such use is clearly acknowledged.

Signature of Author

CONTENTS

ABSTRACT

The post-war development of reunified Germany has resulted in many physical, economic, social and cultural changes. Despite the end of many restrictions imposed upon its populace during the Cold War, change would become an unexpected challenge to the people of a new Germany. With their residual memories from an extinct authoritative system, the general populace hinder redevelopment, and ultimately leave neighboring communities in a state of continued separation.

The following thesis investigates the physical, social and cultural characteristics of site in attempts at generating, as an architectural methodology, infrastructural and programmatic strategies capable of informing the redevelopment of derelict post-industrial sites. In addressing the latent characteristics of site, historical, physical and programmatic, the resulting infrastructural and architectural framework assumes a programmatic classification that emphasizes its current dynamic uses and temporary programmes, enables changeability, and maintains memory of place by way of uninhibited openness for its users and surrounding communities.

ACKNOWLEDGEMENTS

CHAPTER 1: INTRODUCTION

The course of the former Berlin Wall had not only divided a country, but at the city scale it divided neighboring communities, effectively disengaging residents from a unified culture. After the Cold War had ended, and the Berlin Wall came down, residents of either side of the Wall were once again given the opportunity to reengage socially, but after 30 years apart this would prove to be a challenge in itself. In the span of that time, urban development continued in both the east and west to some degree, however consideration had not been given to the nature of these developments, nor to the differences that existed in either the east or west zones. With the dissolution of the Wall, this urban disconnect became very apparent. Neighboring communities remained just as segregated from one another just as they were before the Wall had come down, and in much the same way their cultural conventions did as well. With this inherent urban segregation arises a unique opportunity not only to resolve this physical and cultural disconnect, but also to create an urban strategy that celebrates history, enhances events present, and develops a new future. To investigate how this might be achieved, the following thesis uses a former industrial site in the Heidestrasse neighborhood just west of the central community of Mitte in Berlin in attempts at creating a methodology for which other areas of the city with similar conditions might draw on.

The research for this thesis begins with an examination of the larger scale city in an attempt to understand its engrained developmental patterns. Using these results, an analysis of the site at a smaller scale is employed in guiding an urban development strategy. By attempting to maintain existing programmatic activities of the site and emphasizing its important cultural characteristics, the thesis aims to generate a methodology that responds to the engrained nature of the site while creating a series of rules for its development. Employing these rules, the analysis then translates these strategies into an architectural intervention that counters the site's urban segregation characteristics, while at the same time maintaining its historical relevance and emphasizing its cultural character.

Thesis Question

How can an analysis of Berlin's diverse physical history and cultural character inform the development of a derelict post-industrial site while maintaining its rich diversity and emphasizing an open, interactive environment for east and west communities?

CHAPTER 2: HISTORICAL AND CULTURAL CONDITIONS

City Scale

The City of Berlin

The development of the city of Berlin, in terms of its social, cultural and architectural significance is one littered with the construction and reconstruction of post-war trauma and recovery. From the Thirty Years' War of the 17th century, to the World Wars of the 20th century and the period of the Cold War, the city and its inhabitants have endured enormous tension in all aspects of their day to day lives. For this reason, the development of the city is often "better characterized by its rupture and collision rather than [its] harmony and elegance."[1] But perhaps the best evidence of the city's nature can be expressed through its architectural structures and urban makeup. Consisting of buildings that date back as far as 1220, the city maintains collections of architectural models built during the Gothic, Romantic and Modernist periods, among others.[2] More recently, post-war redevelopment has provided the city with entirely rebuilt public plazas, such as Brandenburg Gate, Westernized developments such as Potsdamer Platz, countless museums and monuments in both the classical and modernist style, such as Chipperfield's Neues Mu-
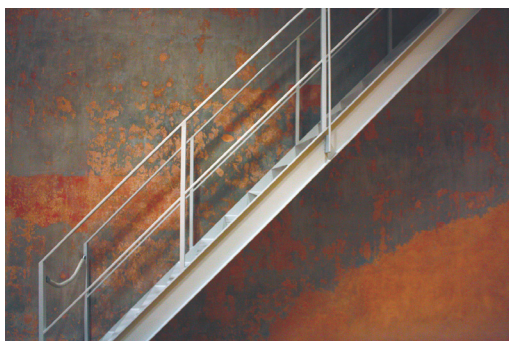
Neues Museum by David Chipperfield. Berlin 2011.

1   Alan Balfour, ed., *World Cities Berlin* (Berlin: Ernst & Sohn, 1995), 55.

2   T.H. Elkins, *Berlin: The Spatial Structure of a Divided City* (London, New York: Methuen, 1988), 26.
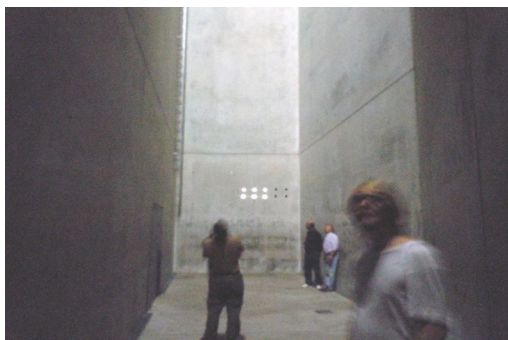
Jewish Museum by Daniel Libeskind. Berlin 2010.

seum and Libeskind's Jewish Museum, and row upon row of rebuilt and reinterpreted *Mietskasernen*, Berlin's characteristic five-storey apartment blocks, consisting of internal private courtyards, commercial occupation along the street levels, and aligned upon a monotonous rectangular street grid.[3] The last of these being the most accurate and widely held characterizations of the city's architecture.

The 'Berlin School'

Although today the city of Berlin consists of a plethora of architectural styles, it also consists of the same number of varied opinions about its cultural character. When the Berlin Wall came down in 1989, the question of how to rebuild the city during its reunification became one fueled by debate from conservatives and liberals alike. The former argued in favor of a reconstruction that could replicate the prewar urban fabric and return the city to its Prussian architectural tradition of low-rise buildings whose façade consisted primarily of stone with regularly alternating windows.[4] Termed 'Critical Reconstruction', this conservative ideology favored the erasure of built traces of the Communist regime for a return to classical principles rooted in a singular period.[5] In opposition to the liberals, who stood for

---

3   Ibid., 165.

4   Kathleen James-Chakraborty, *German Architecture for a Mass Audience* (London: Routledge, 2000), 116.

5   Ibid.

Mietskaserne, the typical residential housing units built during the 19th century. From Forging an Empire: Bismarchian Germany (1866-1890), "Rental Barracks on Kastanienallee in the Prenzlauer Berg Neighborhood of Berlin (1880s)."

an emphasis upon the expressive, anti-rational characteristics of the arts, the conservatives essentially made it their duty to rebuild the city on principles of the same authoritarian tenets set by the political powers during the cold war. Built upon these principles, the so-called 'Berlin School' is defined primarily within this period, and the source of much of the city's architectural guidelines.

Over the course of nearly a millennium, the city of Berlin has developed into what it is today, characterized by periods of authoritarianism and its present state as a democratic nation. Over the course of time, the nature of the city's architectural development has observed various styles, but none as prevalent as the Classical style that currently dominates its character. The norms guiding this development appear even today to still dominate the city's progress, and as such possess a stronghold on the city's natural state of evolution. The authorities that currently guide the state of the union in its time of transition appear to effectively prevent the city from progressing or acknowledging difference as it has in centuries past, maintaining a singular architectural ideology in its stead. In his article, *Deconstructing the Call to Order*, Daniel Libeskind argues heavily in opposition to the uniformity of what might be considered the 'Berlin School' of architectural design and planning.[6] The architecture of Berlin, as he puts it, "is now subject to

---

6   Balfour, ed., *World Cities Berlin*, 35.

a staggering degree of regimentation and control", the majority of which is derived from arbitrary limitations set by planning and design committees that function merely to seek a 'rhetoric of order'.[7] But to what purpose? The conservative measures of these old established ways seek to impose onto the city's inhabitants ideologies of a former governmental system, largely incompatible with the cultural and social necessities of present day. At its fundamental level, the policy predetermines architectural expression, which consequently limits the discipline in its ability to further develop place, and by extension, culture. It is, at its essence, a policy against culture itself, embodying the ideal of mass conformity in the name of a singular mentality.[8] Libeskind calls this a policy of anti-modernity, which treats all individuals as identical thinkers irrespective of their cultural, social and even intellectual background.[9] Remnants of a political system that used to exist, the policy of Critical Reconstruction is as much in need of updating as the political system currently guiding it, at least according to its liberal proponents.

Die Mauer im Kopf

The developmental blockades to the architectural progression of the city as a result of Critical Reconstruction exist as much within the mentalities of its citizens as it does in physical recon-

---

7   Ibid.

8   Ibid., 37.

9   Ibid.

struction. Even after over 20 years, inhabitants of both east and west Berlin continue to maintain major communication problems, despite the sudden disappearance of the Wall. Many people argue that this is due partly to the lack of opportunities for *Vergangenheitsbewältigung*, or 'coming to terms with the past' in east Berlin.[10] Fueled primarily by post-communist disappointment, political stereotyping, and economic insecurity, east Berliners often find themselves under attack from liberal west Berliners, who accuse easterners of being lazy, backward and stupid.[11] Conversely, this discrimination also exists in its reversal, with east Berliners accusing Westerners of being arrogant and selfish.[12] This resulting state of relations between east and west Berliners led the author Peter Schneider to coin the phrase 'Wall in the Head', or *Mauer im Kopf* in describing the discriminating mentalities of these neighboring inhabitants.[13] Predicting that they would last far longer than the physical wall ever would, Schneider's expression continues to be a defining force in the life of the city's inhabitants.

---

10   Kelly Hignett, "50 Years On – Commemorating the Construction of the Berlin Wall". *The View East*. n.p., August 11, 2011. Web. Accessed November 18, 2011. <http://thevieweast.wordpress.com/tag/mauer-im-kopf/>

11   Ibid.

12   Ibid.

13   Peter Wagstaff, ed., *Border Crossings: Mapping Identities in Modern Europe* (Oxford, New York: Peter Lang, 2004), 93.

Layers of a Historical City

As the products of architecture develop, they are also constantly replaced with updated variations suited to the most current way of life. In much the same way, the natural environment continues to evolve to suit its changing physical surroundings, in effect altering the ways in which architecture responds to the landscape. But this relationship can also be reversed when architecture has completely dominated the surrounding environment. Historically significant features of a city, including its architecture, pose certain challenges associated with the development and redevelopment of its communities into the future. The debate whether these should be replaced, reconstructed, or preserved are often decided on the basis of how a cultural community imagines themselves in term of their cultural and even aesthetic makeup.[14] The drivers associated with these are defined either in terms of a sort of scenic conservation, referring to conservancy of the natural environment, and/or historic preservation, both of which prescribe to an ideology of preservation.[15] Often it is this ideology which hinders progressive architectural developments that do not align with this classical notion of architecture or community. In Berlin, it is this

---

14   Pierre Nora, *Realms of Memory: Rethinking the French Past* (New York: Columbia University Press, 1996), ix.

15   Daniel Bluestone, *Buildings, Landscapes, and Memory: Case Studies in Historic Preservation* (New York: W.W. Norton & Co., 2011), 14.

debate that more often than not ends with the defeat of liberal movements, both in architectural and political discourse.

One approach to allow for forward developments in the architectural and political realms would be to align with both the conservative and liberal sides of the debate. To maintain a certain degree of preservation while at the same time allowing for a degree of innovative progress could potentially resolve this long-standing dispute. The notion of layering the historic with the present and potential is a concept that many thinkers have developed in order to maintain this balance. Kerstin Barndt, for instance, examines the postindustrial landscape of Duisburg North Landscape Park in attempts to describe the experiential effects of the juxtaposition between industrial architectural structures and the natural environment.[16] Her examination leads to the idea that this relationship between the synthetic and the natural effectively highlight both the importance of the open environment and the relevance of the history of the industrial site. Fundamentally conflicting constructs of space, the treatment of the natural and synthetic as mutually important components of experience results in the manifestation of a *layered* permanence in both the physical and metaphysical realm, which are nonetheless present and effectual

Duisburg North Landscape Park. From Wikimedia Commons, "Landschaftspark Duisburg-Nord".

---

16   Julia Hell and Andreas Schönle, eds., *Ruins Of Modernity* (Durham: Duke University Press Books, 2012), 270.

at the same time.[17] As a collection of physical constructs resulting in the development of place over time, these architectural developments function to both resignify the experience of place in terms of its historical significance while at the same time allowing for architectural progression. A product that itself eventually becomes an additional relevant layer in the character of the site and the nature of the community.

Site Scale

The Heidestrasse Site

The following thesis will examine the site at Heidestrasse, Berlin, located along the north-south axis of the Berlin Wall, just north of the central train station *hauptbahnhof*. Centrally located in Berlin Mitte, the site has close proximity to the Reichstag and its governmental buildings, as well as the surrounding communities of Tiergarten, Moabit and Wedding. Formerly used as a railway yard and canal shipping port, the site maintains strong north-south borders consisting of numerous railway lines, primary roadway, canal, and the adjacent site of the former Berlin Wall. Consisting primarily of derelict open industrial space, the west portion of the site maintains a vibrant community of art galleries, design studios, and commercial warehouses and businesses. Along the east portion of the site exists the contemporary art museum *Hamburger Bahnhof*, an historical passenger train
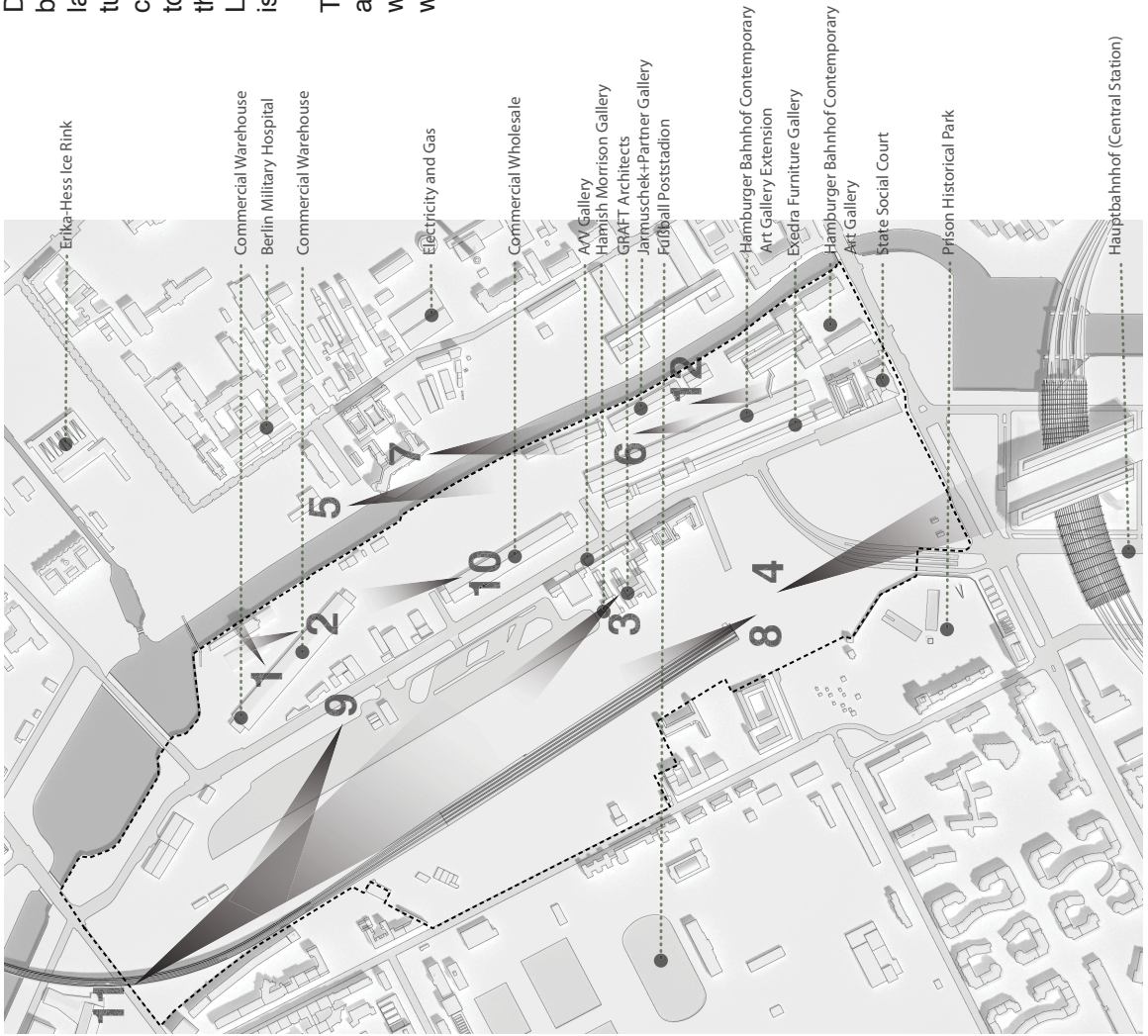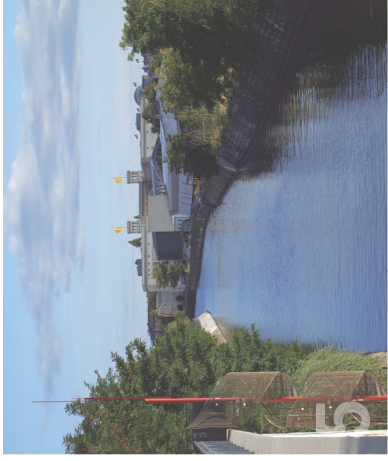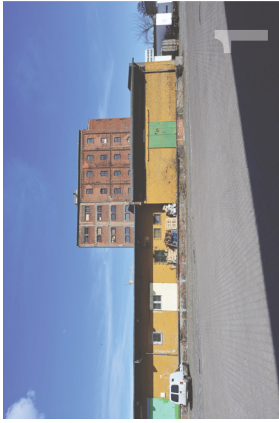
---

17   Ibid.

station, accompanied by additional art galleries and commercial spaces. Together, much of these elements retain a strong historical significance pertaining to the era during the Cold War.

Development in and around the site is a dynamic combination of mixed-use classical Prussian architecture and large-scale residential, institutional, commercial and cultural spaces. Not only is the location of the site very well connected to public transit via the hauptbahnhof, but also to hospitals, schools, museums, a major athletic park and the political centre of Berlin, located just south of the site. Located in Mitte, the central community of the city, the site is central to nearly all aspects of city life.

The numbers on the sitemap denote references to site images. The gradient shape signifies where these images were taken from, and the object that they are oriented toward. These images are referenced on the following pages.

Erika-Hess Ice Rink

Commercial Warehouse
Berlin Military Hospital
Commercial Warehouse

Electricity and Gas

Commercial Wholesale

A/V Gallery
Hamish Morrison Gallery
GRAFT Architects
Jarmuschek+Partner Gallery
Fußball Poststadion

Hamburger Bahnhof Contemporary
Art Gallery Extension
Exedra Furniture Gallery
Hamburger Bahnhof Contemporary
Art Gallery
State Social Court

Prison Historical Park

Hauptbahnhof (Central Station)

S i t e I m a g e s

The site photos are representative of the atmosphere of the site. Some are photographed inward toward existing infrastructure, and others outward along site edges. [1] From Berlin, "Brachland Heidestrasse", [2] From Berlin 2009, "Heidestrasse, Berlin 2009", [4] From Berlin 2009, "Niemandsland bald nicht mehr, Berlin 2009", [5] From Berlin, "Untitled", [6] From Berlin 2009, "Galerien Heidestrasse, Berlin 2009", [7] From Berlin, "Am Spandauer Schiffahrtskanal Apr 2008".
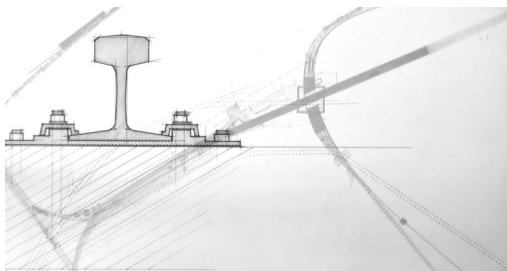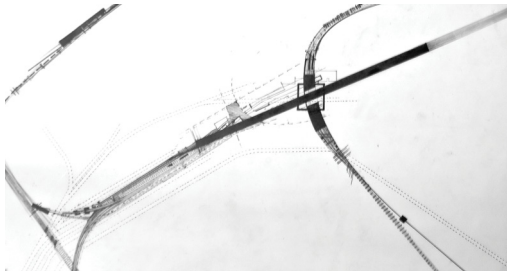
's i t e I m a g e s'

The site photos are representative of the atmosphere of the site. Some are photographed inward toward existing infrastructure, and others outward along site edges. [8] From Berlin, "Rampe zur Tunneleinfahrt [04/07]" [9] From Heidestrasse, " ", [10] From Berlin, "Mauerspechte am Postbahnhof", [11] From Berlin, "Ehem. Güterbahnhof nördlich des Hauptbahnhofes in Moabit", [12] From Walkways, "BE berlijn loopbrug uitbr museum hamburger bahnhof 01 (invalidenstr)".

History of Heidestrasse

In the 18th century, the area of Heidestrasse existed at the outskirts of the city's limits. By the mid-19th century, however, the city's expansion had began to engulf the area, and its planned development as a peripheral location for the city's central freight yard began to take shape. Following the design and construction of the Schifffahrtskanal by Peter Joseph Lenné between 1848 and 1859, the area became an essential docking point for barges carrying commercial goods from far regions of the country. The harbours of Humboldthafen to the south and Nordhafen to the north framed the east periphery of the site, maintaining large areas of water for loading and unloading of numerous container vessels at once.

At the same time, the railway boom had swept the continent of Europe, establishing a complex series of commercial and passenger lines into and out of the country. Constructed in 1846, the passenger railway station, Hamburger Bahnhof, was Berlin's main passenger terminal, and the starting point of the Berlin-Hamburg railway. As the central point of transport for the import and export of commercial goods, the Heidestrasse site had also established a central terminal for rail transport alongside its water transport infrastructure. Framing the west periphery of

An analysis of the railway tracks on site. Shown are those that we once used for the transportation of goods, now derelict, contrasted with those that are currently used for passenger transport.

the site, these railway lines would connect water to land transport, establishing the Heidestrasse site as an efficient goods and passenger processing.

Industrial Remnants

Following the railway boom, Hamburger Bahnhof became unused in 1884 when it was replaced by Lehrter Bahnhof to the southwest of it. The building, one of the oldest station buildings in Germany, was unused until 1906 when it became home to the new Royal Museum on Traffic and Construction. The surrounding network of railway tracks continued to maintain heavy traffic as Berlin continued to expand, along with the Schifffahrtskanal which connects from the Spree river to the south and the Havel River to the north.

With the advent of World War II, much of the site including many of its buildings and the surrounding area became dilapidated and in some cases destroyed by bombings. Hamburger Bahnhof closed during this time, and much of the infrastructure of the site became severely damaged by the War's events. During the national socialist era, the periphery of the canal became part of the so-called north-south axis, and much of the area fell out of use due to its lack of successful implementation. The location of the Berlin Wall along the east periphery of the canal essentially cut-off transport routes, and as a result prevented the movement of goods and passengers. The site
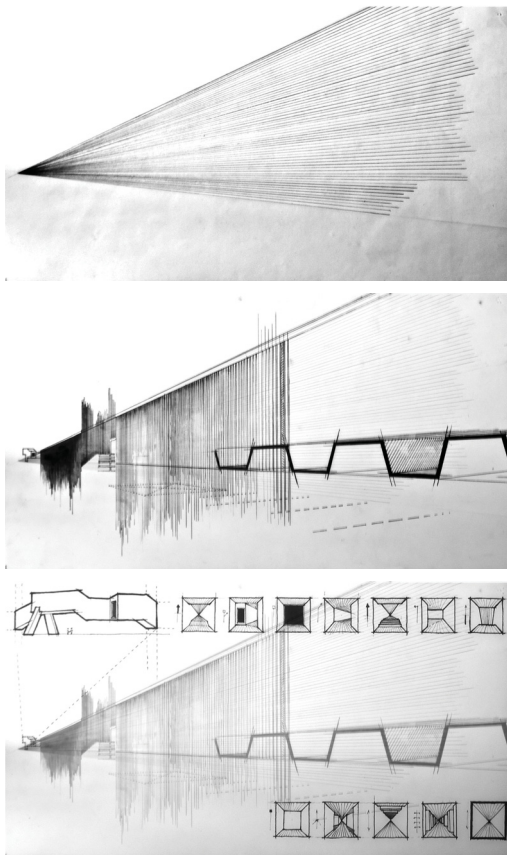
An analysis of the Hamburger Bahnhof extension - an existing building on site. Shown is an abstracted examination into the material conditions of the building through a duration of time. Also shown is an analysis of the interior atmospheric conditions of the space.

eventually developed into a container yard until the end of the Cold War, maintaining decreased traffic, and a slow degradation of the site's railway infrastructure. During the later years of the period, Hamburger Bahnhof would be used for occasional travelling exhibitions, while the rest of the site would continue its use as a storage facility for the west.

Post-Industrial Use of the Site

An analysis of the site as it exists today, contrasted with the potentials of the site for use as landscape park space.

Following the Cold War, Hamburger Bahnhof would be converted into a museum of modern and contemporary art, attracting various smaller galleries and exhibition spaces in and around the site. Many of the buildings left over from the period became newly converted spaces used for commercial and cultural programmes. Expanding further north, these activities would develop into what can best be described as Heidestrasse's developing arts community, attracting locals and tourists alike into spaces once used for residential living and commercial goods now turned galleries. Smaller open-air exhibitions would begin to take place in and among the interstitial space between these venues, creating niche outdoor spaces to the developing community. The derelict series of railway tracks to the west, with their expansive network of open and unused spaces, would cater to larger expositionary-type events, attracting much larger collections of people. With their large series of temporary structures, these travelling exhibitions, consisting of the an-

nual American-German Circus and Broadway shows accommodated well into the space provided by the site. Once consisting of the exclusive exchange of goods, the site had evolved into a more human exchange between people, socially, physically and experientially.

An Area for Exchange

In a preliminary analysis of the Heidestrasse site, certain important historical and cultural characteristics about the site emerge in guiding the proposed thesis. As I have shown, its nature as a post-industrial landscape is applicable to both the site's potential development and historical relevance. As a former transportation hub for the exchange of physical goods, it not only represents the city's progress during the industrial revolution, but also the importance of *exchange* for the community. It is in this same way that the site's current development as a flourishing arts community begins to inform its potential programming. The manner in which goods are exchanged is transposed as physical goods are replaced with artistic mediums used as manners of expression. Ideas are exchanged in place of physical constructs, and can themselves manifest into further physical constructs.

By 1889, Berlin had established a complex network of railways for both passenger and cargo transport. The Heidestrasse site became the point at which these passengers and cargo would enter and exit the city. Lehrter Bahnhof would manage most of the passenger transport, replacing Hamburger Bahnhof in 1884, while the rest of the site would commit to goods processing and storage. From UCLA International Institute, "Hypermedia Berlin".

Railway
Turntable

Athletic Park

Cargo Facility

Hamburger
Bahnhof

Prison

Lehrter Bahnhof
(Central Station)
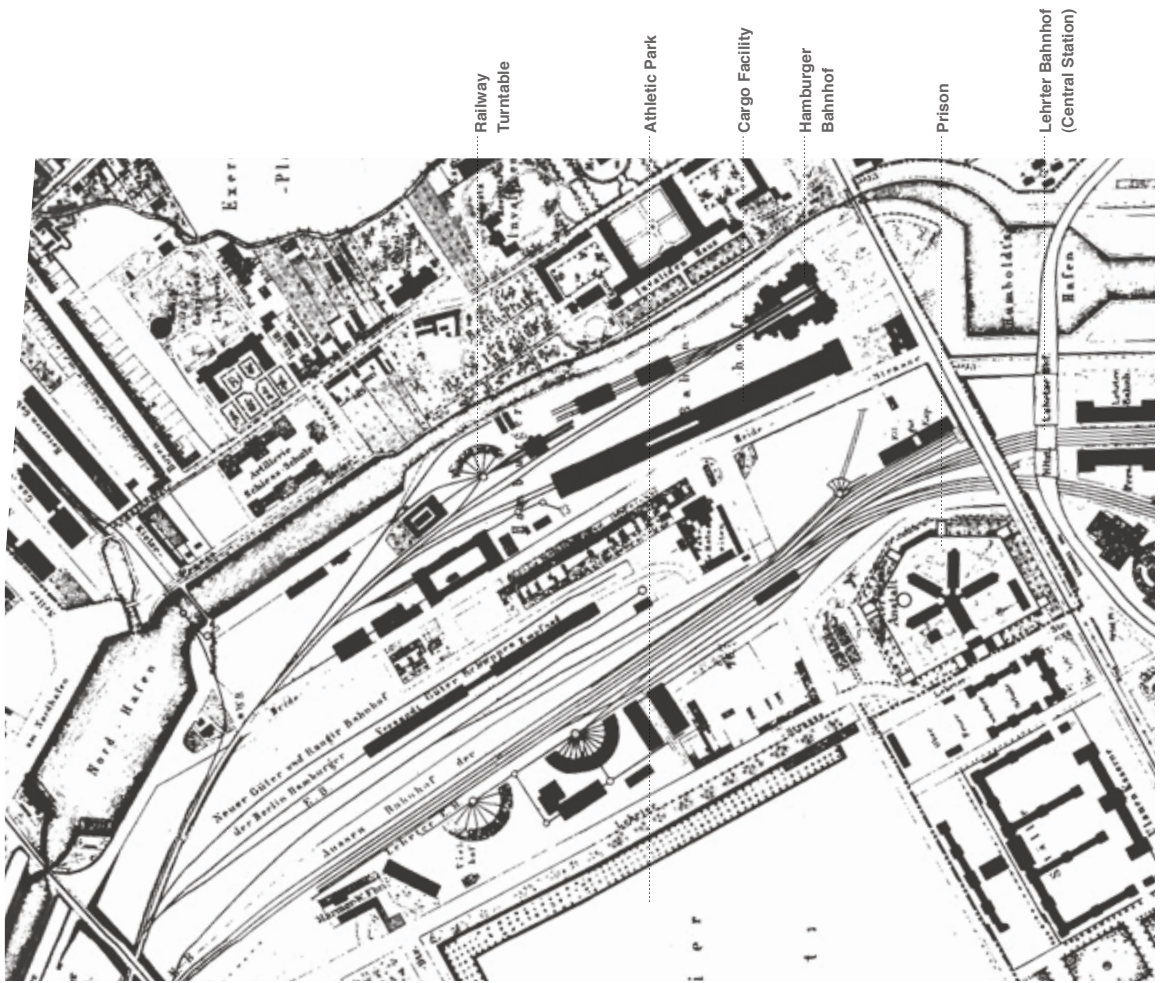
At the scale of the city, this shift from an exchange of the physical to the metaphysical addresses the progression of the city from an industrial center to a cultural and communication rich community. In a city that ranks very highly in 'cultural interaction', fourth next to London, New York and Paris,[18] and home to numerous renowned universities, research institutes and museums, it is rich in intellectual and scientific exchange as well as artistic. Home to the Reichstag, Berlin is also the political capital of the country, and the centre for German parliament, or *Bundestag*. Located throughout the city, these institutions, groups and organizations make up a significant part of the country's academics and decision-makers.

In terms of its physical accessibility, the Heidestrasse site consists of a diverse array of infrastructural elements, such as roads and railway, along with a varied collection of existing buildings. Formerly used for the movement and storage of physical goods, the site maintains an engrained character based on the notion of *exchange*. By developing a methodology using this defining characteristic, both the physical features and cultural history of the site have the potential to inform an architectural redefinition of the area based on its historical use. The potential for these physical site elements to remain active is thus wholly dependent on an appropri-

18   Institute for Urban Strategies at The Mori Memorial Foundation, *Global Power City Index 2009* (Tokyo: The Mori Memorial Foundation, 2009), 15.

ate redefinition of terms, resulting in a program-
matic development that stems directly from the
nature of the site itself. By redeveloping these
physical elements the site can metamorphose
from a wholly industrial site to one that is useable
by inhabitants of the surrounding communities.

Today, only few of the original railway lines from 1889 exist, and only one of these lines are still active. Replaced by more modern, high-speed lines, those that still run through the site transport passengers to and from hauptbahnhof, both locally and internationally.

Active Rail
Inactive (Derelict) Rail
Removed Rail
Removed Cargo Building
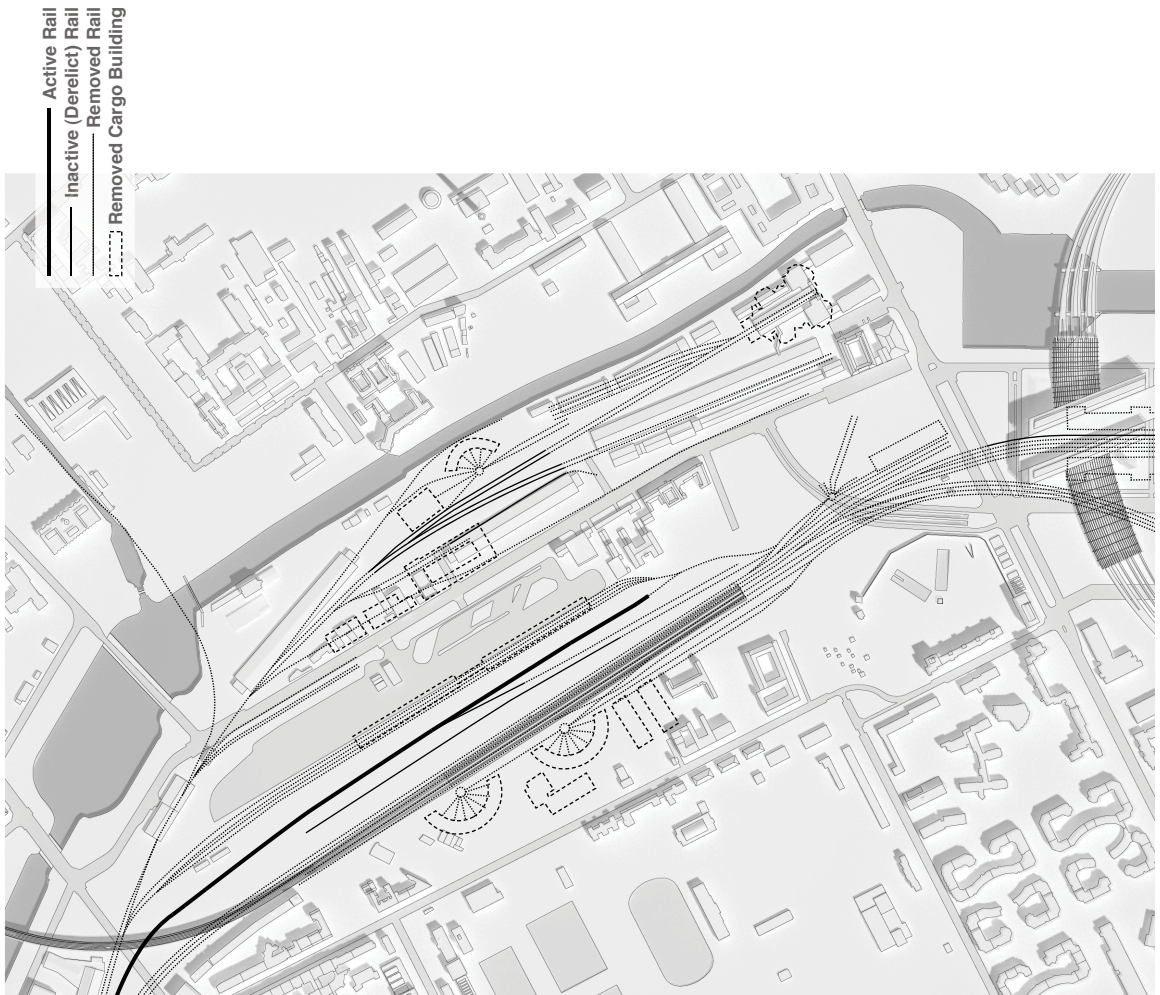
CHAPTER 3: PHYSICAL AND DEVELOPMENTAL CONDITIONS

Spheres of Influence (City Scale)

With such a diverse array of architectural styles, the city of Berlin constitutes a high degree of distinct architectural spaces and atmospheric experiences. During its course of evolution, the city became an amalgamation of surrounding towns and localities, and thus a combination of their social, cultural and architectural elements. In his book, *Streets in Berlin and Elsewhere*, Siegfried Kracauer writes about the city's progression as a collection of these:

> One can differentiate between two types of cityscape: those that are consciously formed, and those that arise without design. The latter… are not compositions, but rather accidental creations. Their elements emerge out of a range of diverse interests to produce a cityscape that is as little designed as nature itself, and which resembles a landscape in that it maintains itself unconsciously. Before my window, the city condenses into an image that is as wondrous as the spectacle of nature. This landscape is artless Berlin. Unintentionally she speaks out her contradictions – her toughness, her openness, her coexistence, her splendor.[19]

Far from being uniformly distributed, the developed nature of the city, including its architectural constructs, cultural institutions and developing municipalities each maintained their own distinct aura, and with them ideologies about a distinct urban development. Over time, as

19   Siegfried Kracauer, *Streets in Berlin and Elsewhere* (Oxford: Polity Press, 2006), 40.

these developments became towns and eventually boroughs in the city of Berlin, these individual identities would begin to influence one another, both in scale and intensity, and in the realm of duration. As distinct *Spheres of Influence*, these urban centers would eventually come together to define the character of the city today.

Influencing Factors (Spheres)

(X-1869) Developing Identities

The development of Berlin underwent numerous stages of growth over the course of its progression as the capital of the state. Over the course of hundreds of years, the city has experienced numerous defining eras that would mark major turning points in the city's history. Well before the 19th century, the city had developed from the culmination of numerous localities once existing as individual towns, into an agglomeration of their physical and cultural characteristics, emanating distinct qualities of their unique place and ideologies. Having once been completely undeveloped, the site at Heidestrasse today emits its own influence upon the city in the same manner as the towns before it.

The progression of urban development in the city of Berlin at 1869. The radiating spheres represent the intensity of cultural influence from collections of dense urban development. The community of Mitte, Berlin's central borough, maintains the most intense development of the period. Shown in orange is the proposed site at Heidestrasse.


X – I 1 8 6 9
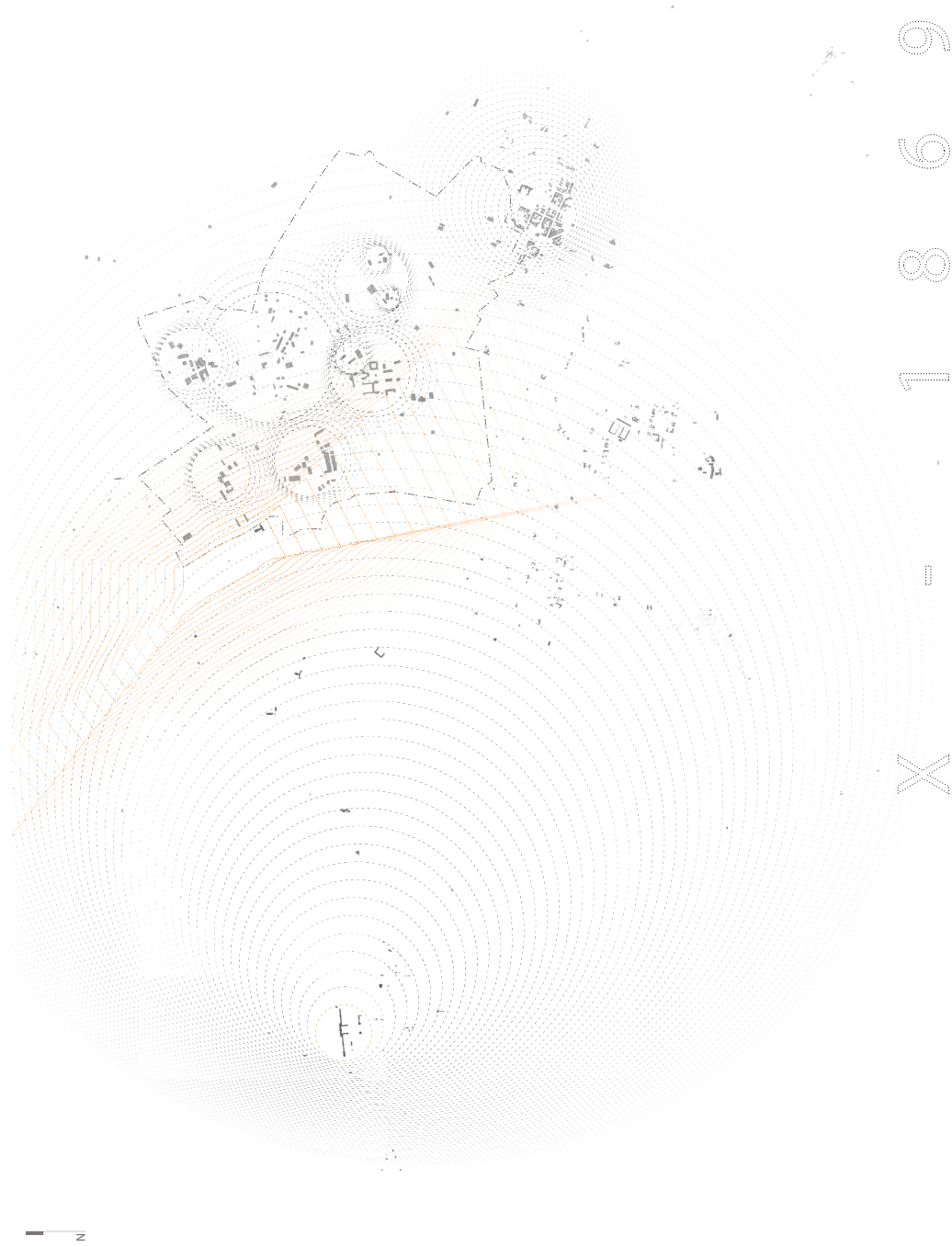
(1870-1899) City Flows

The development of the Heidestrasse site came about as the result of a need for a central railway yard in close proximity to the dense urban core of the city. Encompassing much of the railway lines used to move, transfer, store, on- and off-load physical goods and passengers to and from the city, the site maintained intense use during the period. Its development in the late 19th century was a response to the industrial revolution in Europe, which had caused the city's economy and population to increase exponentially. During this time, the original Reichstag had been built to house the country's legislative body, later falling out of use during the Second World War. After the fall of the Berlin Wall, the building was reconditioned by Norman Foster, and is currently used once again as the nation's parliament. Located just over one kilometre from the Reichstag, the site at Heidestrasse maintains close proximity to one of the most well known architectural projects in the world today. In this way alone, the potential to generate high traffic to the site hinges on its ability to maintain some degree of association with one of the city's strongest influencing features.

The progression of urban development in the city of Berlin at 1899. Shown is the development of railway transportation during the period. The radiating pattern represents the intensity of influence from the newly built Reichstag.
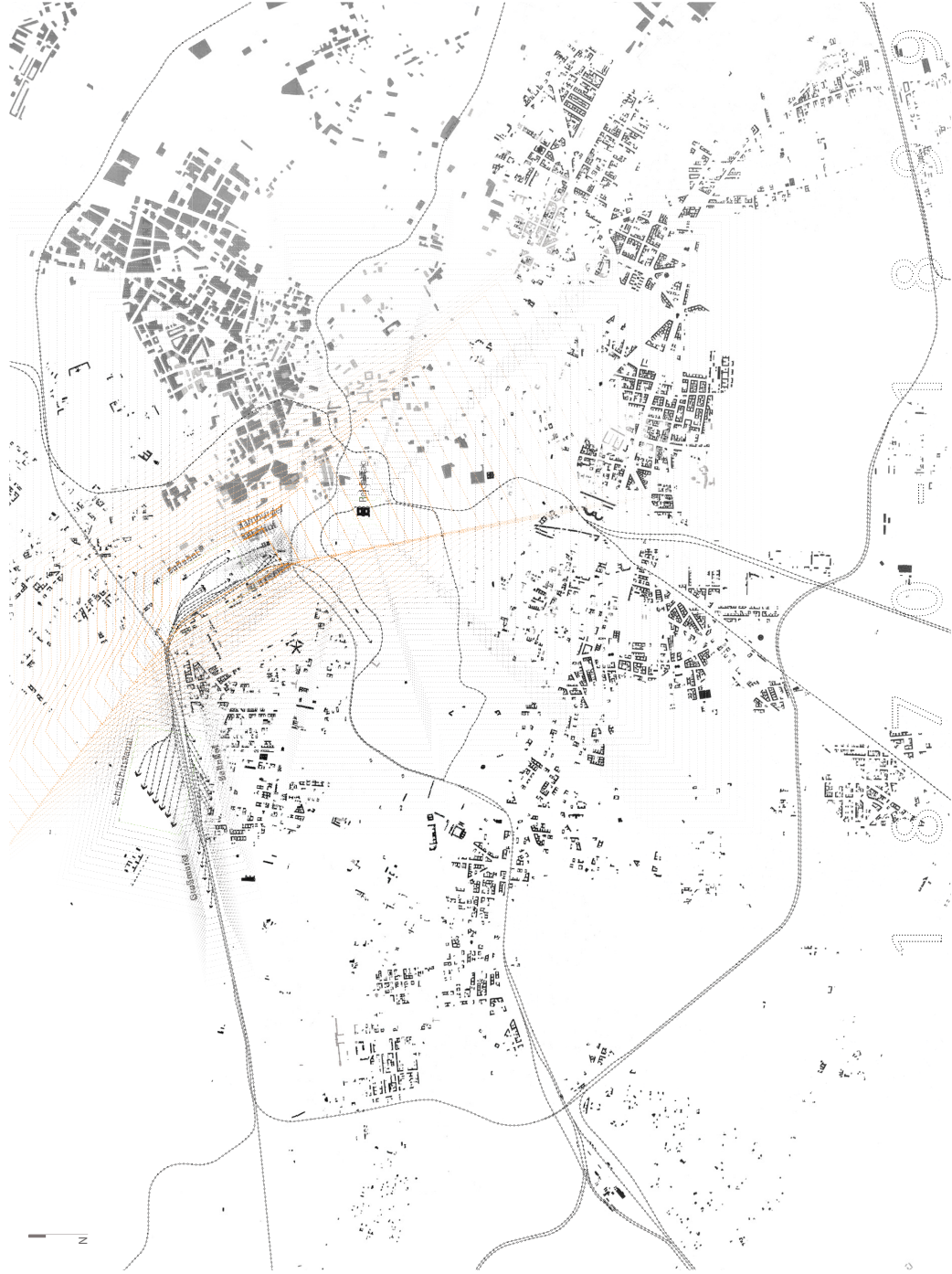
(1900-1918) Community Borders

Until the First World War, the city's urban growth continued to develop at a staggering rate. By 1900, many outlying suburbs became fully engulfed by the development of the city, eventually becoming incorporated into its political sphere. As these new communities themselves further developed, the influencing characteristics that they radiated would in-turn affect the way in which neighboring communities and their borders would develop. This created particular patterns of growth and densities, illustrating the relative cross-cultural and socio-economic interdependence between the communities. In many cases, much of the city's growth can be seen developing along these borders as opposed to only their centers.

The progression of urban development in the city of Berlin at 1918. The radiating patterns represent developing boroughs in the city during the period. The relationship of edge conditions between these borders illustrates a correlative relationship to areas of development within the city.
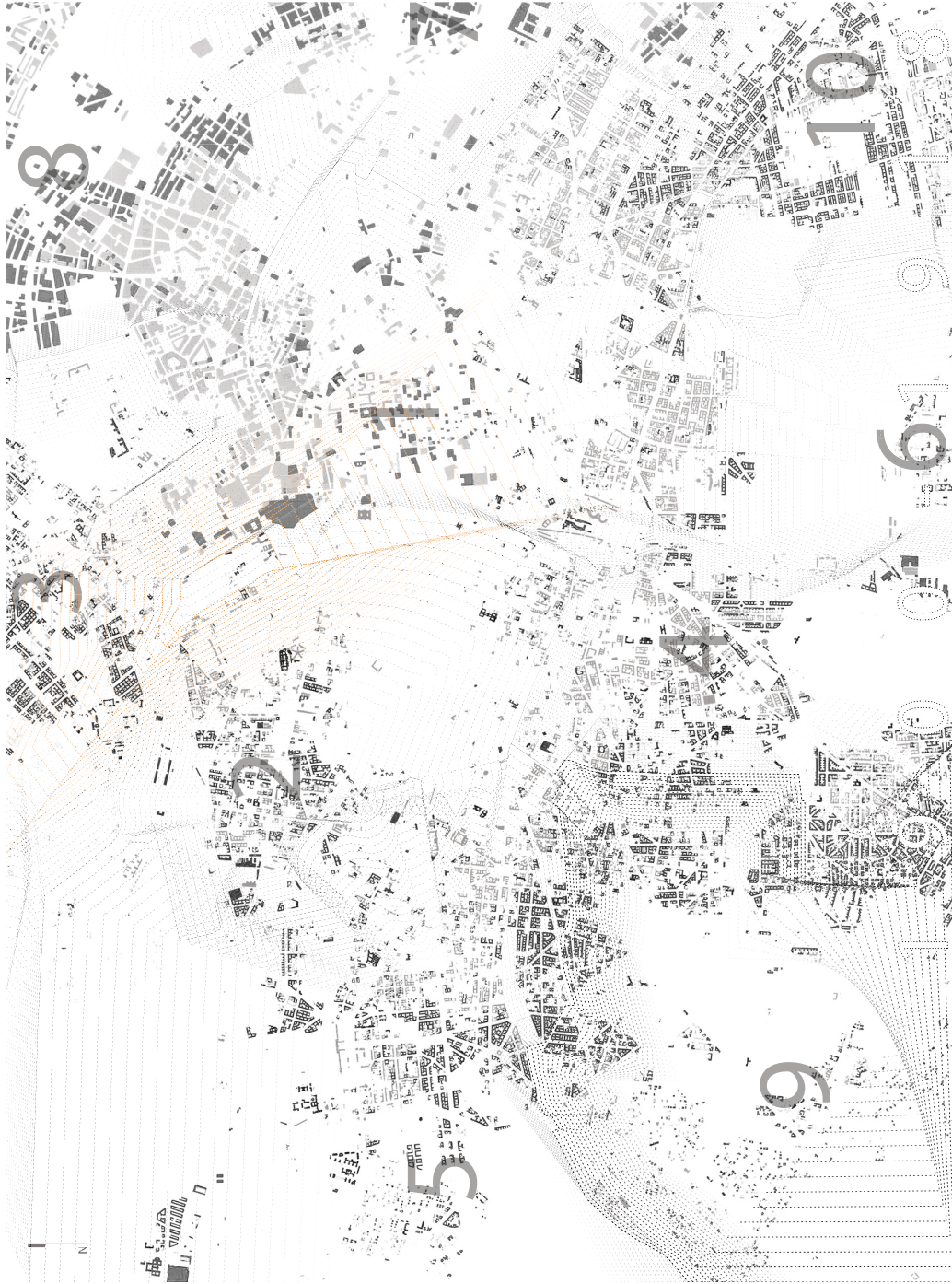
(1933-1945) Path of Erasure

By 1933, Adolf Hitler and the Nazi party would come to power in the German republic, and shortly thereafter, Jewish suppression would begin along with the start of World War II. By 1943, much of Berlin would be destroyed by British air raids, and in 1945 by the Battle of Berlin, giving the Soviets victory over the city. In their occupation of the Reichstag, the soviets devised a strategy to conquer the political capitol from the northwest, crossing directly over the site at Heidestrasse.[20] From this point, the site provided uninhibited access to the Moltke bridge, from which the Soviets gained direct entry to the parliamentary grounds.[21] It was from then on that the site became an area of west Berlin flanking the Soviet occupied region to the east.

Shortly before the circumstances leading up to the Second World War, Berlin had constructed an inner-city airport, which at the time was considered one of the world's largest buildings. Aptly named after the community within which it was constructed, Tempelhof airport catered to passenger flights throughout Europe. Later on, however, the airport would later fall under Soviet control in the closing days of the war, only to be handed over to American troops as part of the American occupation zone in Berlin. Following the war, Tempelhof would be used as

20   Antony Beevor, *Berlin: The Downfall* (London: Penguin, 2003), 347.

21   Ibid.

the source of the Berlin Airlift, an operation by the allies to supply western Berlin's 2.5 million inhabitants with food, clothing, and other necessities. Assuming the role of goods transport, Tempelhof airport would be the first juncture that would eventually see to the retirement of the Heidestrasse site as a main transportation hub. Today, the airport is defunct, awaiting future development.

The progression of urban development in the city of Berlin at 1945. The activities of the Cold War froze the majority of urban development during the period. Instead, mass destruction of much of the city caused urban ruins.
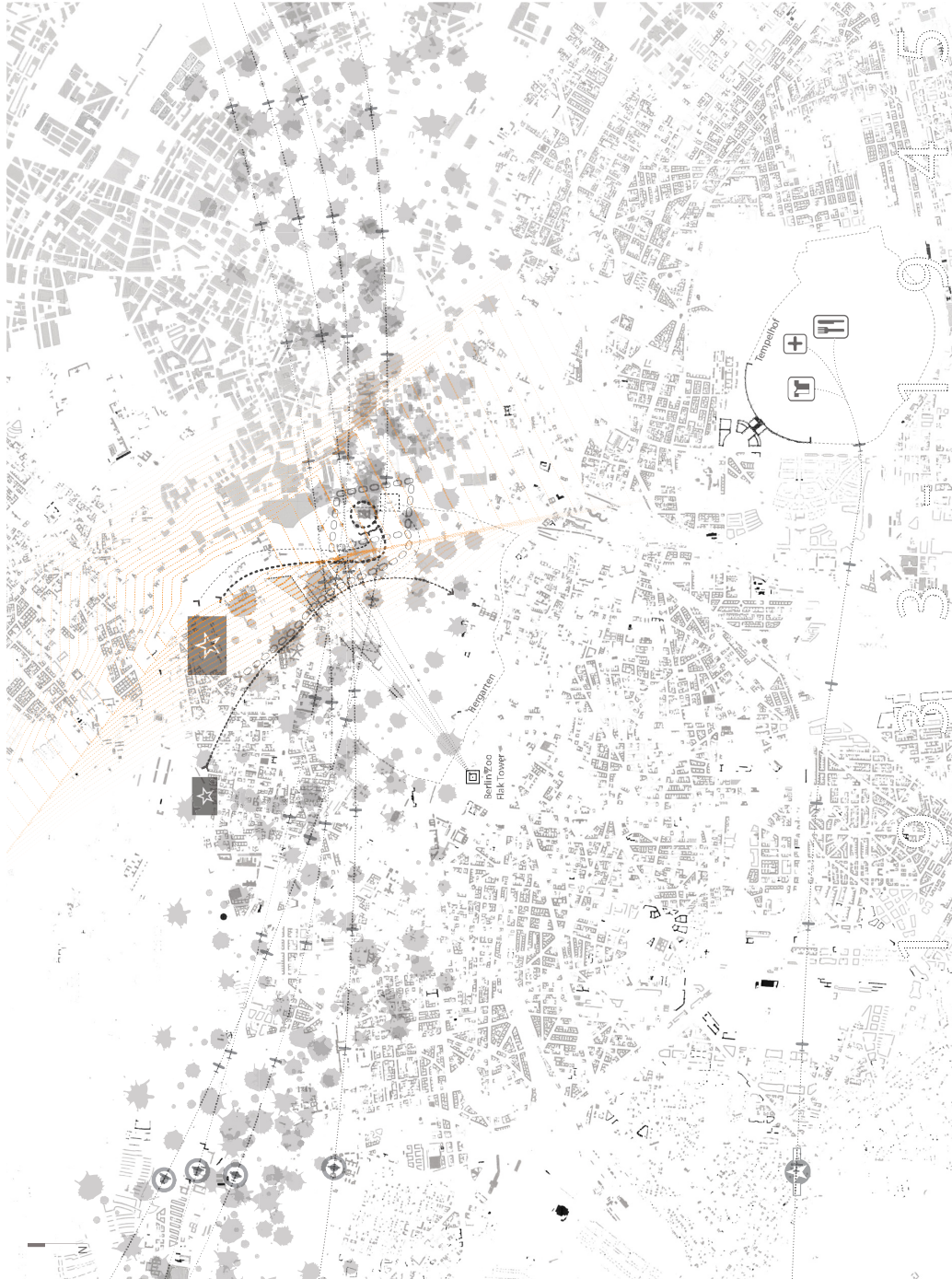
(1946-1961) Boundaries

After the Second World War, Berlin was divided into four sectors occupied by the victorious powers. The Allies shared the zone to the west, while the Soviets solely controlled the east, imposing blockades to and from the ally controlled territory. Tensions between the east and west blocks increased as the Cold War developed, eventually leading to the construction of the Berlin Wall. Flanking the Wall along the west side, the site at Heidestrasse maintained a tense position of its own only bounds away from the death strip.

The political influences by the reigning powers would guide the cultural and socio-economic conditions of both east and west Berlin. In turn, this would direct not only the types of institutions available to the citizens within each block, but also the architectural statements to follow. In the west, the International Building Exhibition 'Interbau' would redevelop much of the Hansaviertel district, with numerous contributing world-renowned architects the likes of Alvar Aalto, Le Corbusier, Walter Gropius, Oscar Niemeyer, Hans Scharoun and Max Taut, among others. In the east, the development of Karl-Marx-Allee, a monumental socialist residential boulevard that would consist of tightly packed apartments, shops, restaurants, hotels and theatres, among other programmatic elements. The boulevard would later be used for east Germany's annual May Day parade, showcasing the brute power

and influence of the communist government. The disparity between these two forms of developments became a defining characteristic of the qualities of both east and west Berlin. As models representing the progress of dissimilar cultures, these were the attempts by governing factors in developing a new architectural language for the city.

The progression of urban development in the city of Berlin at 1961. The divided city becomes an open canvas for reigning authorities of each quadrant. The radiating spheres represent the intensity of cultural and political influence, alongside the developments of left and right wing ideologies.
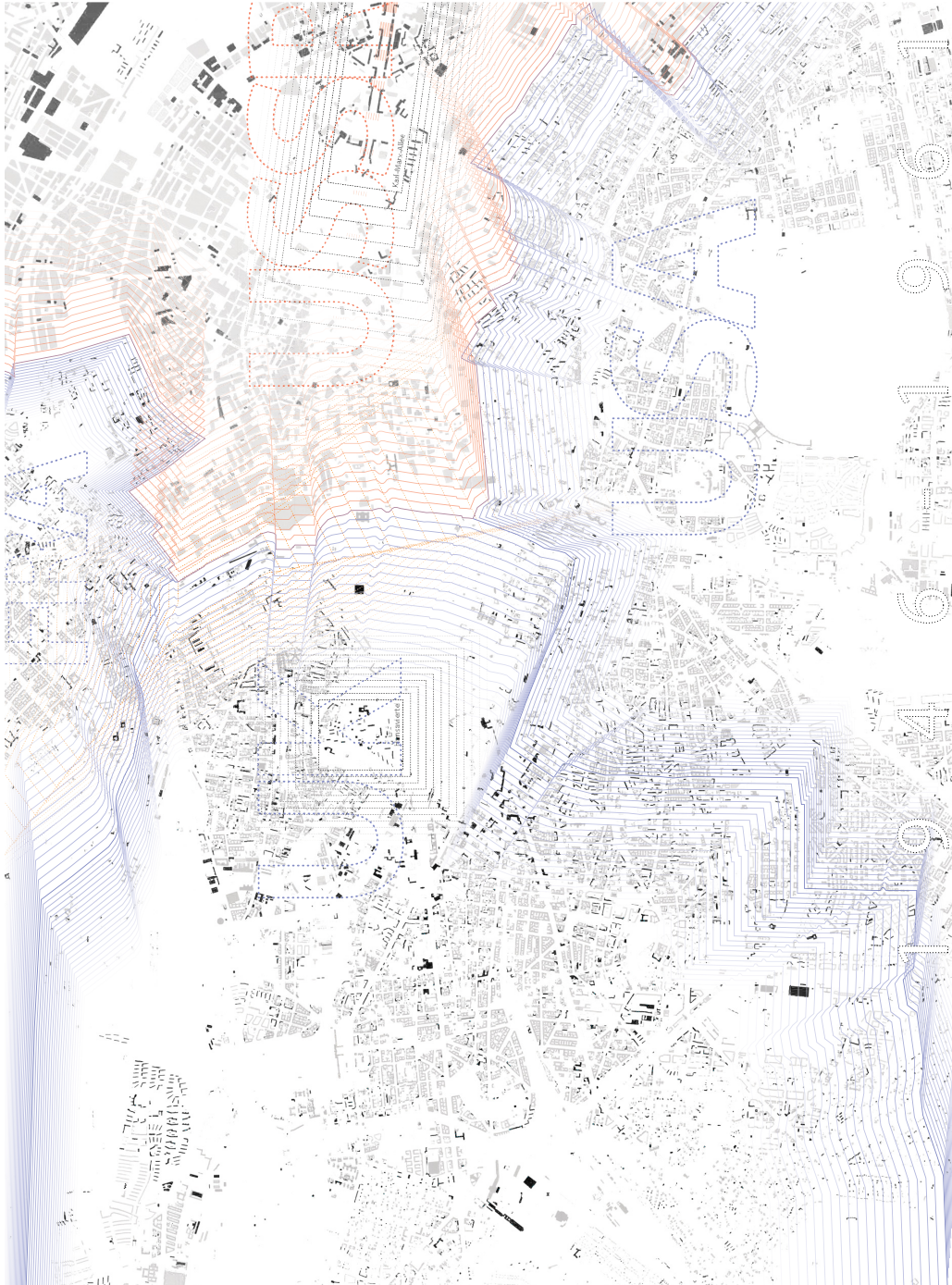
(1962-1974) Division

The period of the Berlin Wall marked an era that not only divided the city politically, but physically as well. For east Germans, this meant a complete inability to cross into west Berlin, and thus complete isolation from developing democratic philosophy. The so-called 'no man's land' to the east of the Wall marked the area that became a shoot to kill zone, essentially eternalizing the dark history of the period.

Today, numerous memorials line parts of the wall and contribute to the commemorative landscape. Marking significant events during the period of the wall, these memorials commemorate not only those individuals who died in attempts at fleeing from the east to the west, but also the many after-effects that the Wall had on the community and culture. Large sections of no-man's land have in much the same way become places of public interest and social interaction. Today, many of these are used as open spaces for the eternalization and education of the city's history, many of which maintain historical relics of the period.

The progression of urban development in the city of Berlin at 1974. The Berlin Wall maintains strict separation between east and west Berlin. The Death strip creates an intense physical divide between the neighboring sides of the city. Watchtowers look over inhabitants of the east, maintaining a very broad visual range. Border crossings are the only points of entry into and out of each city. Much of the places and events during the period become monumentalized along these regions of the Wall.
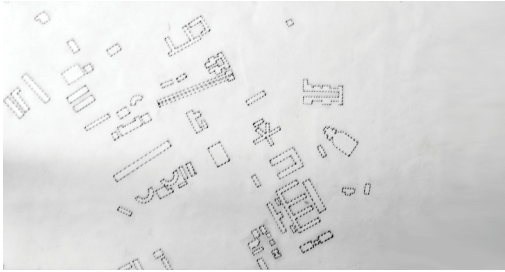
(1975-X) Influential Nodes

Long after tensions of the Cold War had settled, divided Berlin began redeveloping once again in both the east and west regions of the city. Within these, many cultural institutions had developed in hopes of re-educating the population, while appealing to the rest of the world once again. The Internationales Congress Centrum, opening in 1979, was one of Europe's largest, and is a landmark of post-war German architecture. The Wohnhof Schlangenbader, a colossal residential development built over the autobahn is yet another example of Germany's attempt at large-scale redevelopment.

Today, Berlin consists of one of the greatest varieties of cultural and educational institutions in Europe and the rest of the world. Its accumulation of museums and art collections is unrivaled to that of other great cities. Likewise, its heterogeneous population consists of skilled professionals from all disciplines, both locally and internationally established. Located throughout the city, these institutions make-up much of the country's best collection of intellectuals and architecture. At the heart of its underground artistic community, and consisting of numerous private galleries, the site at Heidestrasse continues its progress as a developing community of expressionists, thinkers and experimentalists.

The progression of urban development in the city of Berlin at present-day. The city is a collection of countless institutions that serve to educate, exhibit, and maintain the historical significance of the city. The radiating spheres represent the intensity of cultural influences from these places, illustrating their relative physical densities and political relationships to one another.

Location and Proximal Infrastructure (Site Scale)
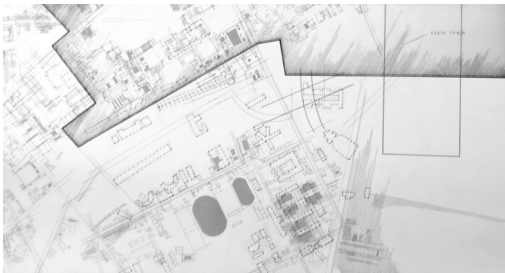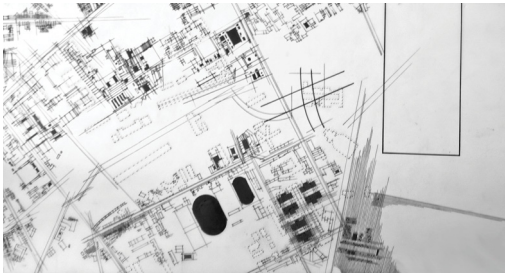
An analysis of the surrounding community by way of abstracted edge conditions (building walls) over a duration of historical events. Shown is a plan view of the site at Heidestrasse and surrounding communities in 1869, present-day, and the former site of the Berlin Wall.

Once maintaining a peripheral location to the city of Berlin, the Heidestrasse area has since become a very central district adjacent to the central borough of Mitte. It's proximity to various major points within the city enable the site increased developmental potentials, as well as heightened importance as a developed area within the city's cultural fabric. Located just to the north of *Hauptbahnhof*, Berlin's central passenger station, the site is connected to one of the city's most important public transit hubs, used by approximately 300,000 people per day.[22] Just south of Hauptbahnhof is the Bundestag, the nation's parliamentary complex consisting of numerous governmental headquarters and the *Reichstag*, Germany's central parliamentary meeting place. To the west of the site is one of the city's oldest public athletic parks, *Poststadion*, and bordering the southwest corner is the site of the city's former central prison-turned-historical public park, *Geschichtspark Moabit*. Lining the periphery of the site to the east is the *Charité*, Berlin's University Hospital and one of the largest university hospitals in Europe.[23]

22   "Daten und Fakten," *bahnhof.de*, n.p., May 30, 2011, February 16, 2012 <http://www.bahnhof.de/site/bahnhoefe/de/ost/berlin__hauptbahnhof/daten__und__fakten/daten__und__fakten.html>.

23   "History," *charite.de*, n.p., 2012, February 14, 2012 <http://www.charite.de/en/charite/organization/history/>.
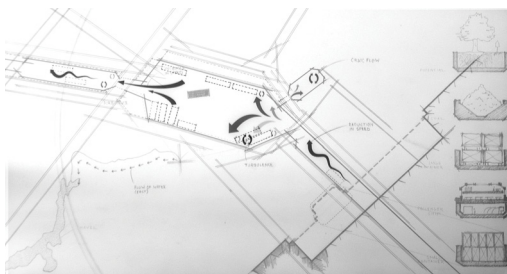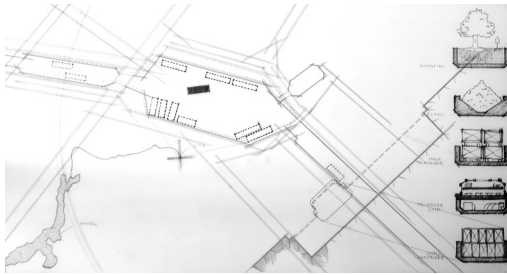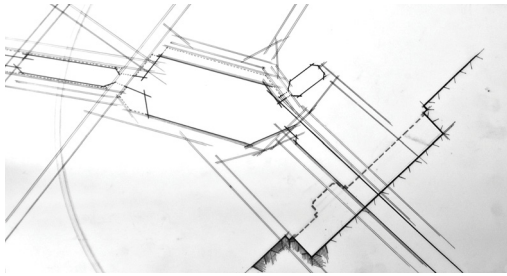
An analysis of the Spandauer Schiff-fahrtskanal, a former water route for the transportation of goods.

The North-South Axis

With its collection of roads, railways and canal system, along with the surrounding built environment in terms of buildings and community borders and location of the historic Berlin Wall, the Heidestrasse site maintains very strong north-south directionality. The combination of these elements, all of which run north-south parallel to the canal, essentially creates both a physical and phenomenal separation between east and west communities. Correlated to this is the tension that results from the relationship of these elements, directing the population to experience activities as they enter the site along this same axis. With no direct connections along the east-west axes, except at the north and south peripheries of the site, the area of Heidestrasse maintains a uni-dimensional experience, severely limiting it's vast potentials and effectively segregating neighboring communities. It does however create a strong narrative about the historical nature of the site, and its effective insertion into the city at large.
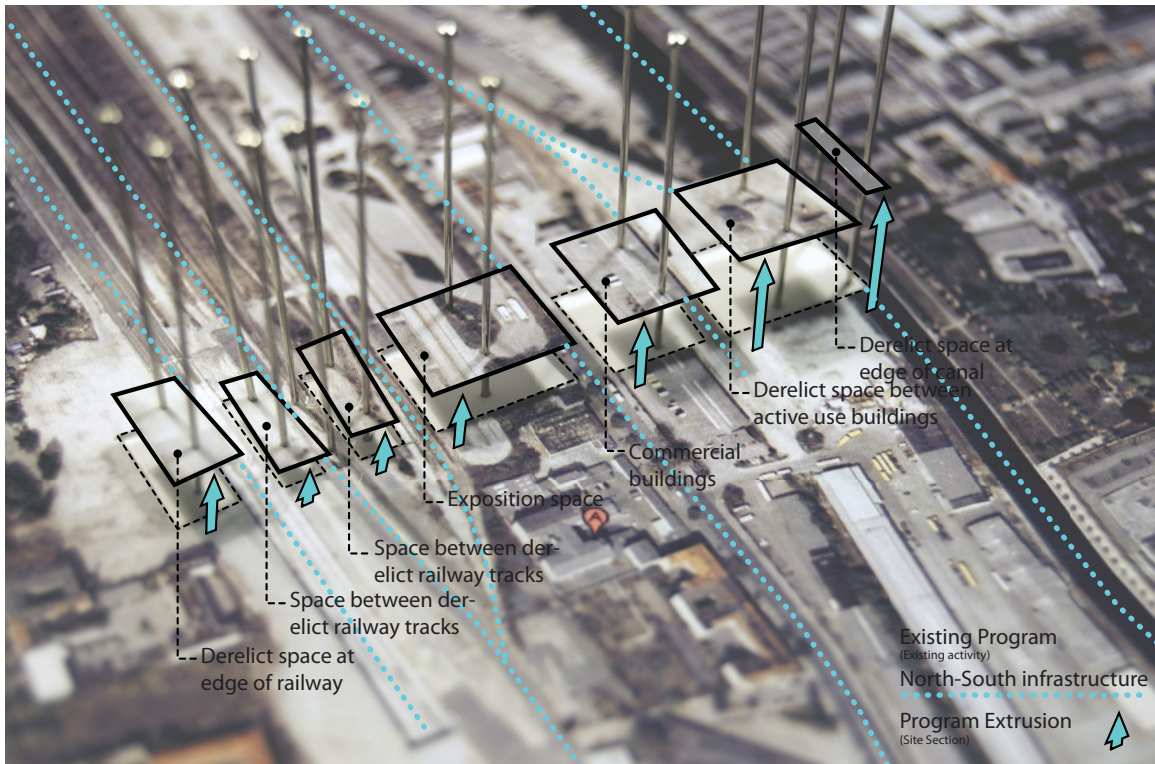
Paper studies of site infrastructure along the various north-south axes illustrate the existing programmatic makeup of the site.
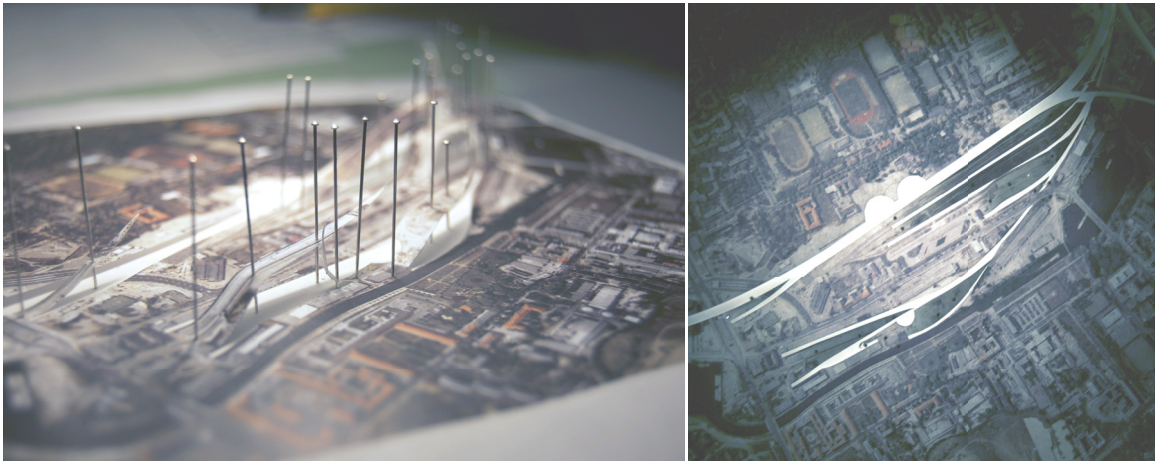
Paper studies of site infrastructure depict the historic railway systems.

Existing Programming

The Heidestrasse site has developed greatly since its initial use as a freight yard. Once the central point of exchange in terms of goods, it has now become a creative commons, the root of which is the exchange of ideas, artistic expression and social interaction. The eastern north-south section of the site is rapidly developing into what might best be characterized as a local arts campus. Distinct from the city's 'Museum Island', which maintains a complex of five internationally significant museums that make up the Berlin State Museum Collective, the Heidestrasse collection of galleries exemplifies local works in an informal atmosphere often for no charge. In this way, the segregating nature of the site has enabled the local arts community to develop such devices to effectively reinsert the community into a site that never has been part of the social/cultural experience. Once an insertion of commercial and industrial nature itself, the site takes on its new role as an arts campus readily.

Along the central north-south section of the site exists a small collection of multi-use buildings programmed as commercial, residential and cultural spaces. As though randomly interspersed, these spaces maintain close relationships between business, home and entertainment, emphasizing the variable nature of the Heidestrasse site. Just north of this cluster lies a large parking lot once used as the central plot for container

View of the American-German Circus in the central section of the Heidestrasse site. Berlin 2011.
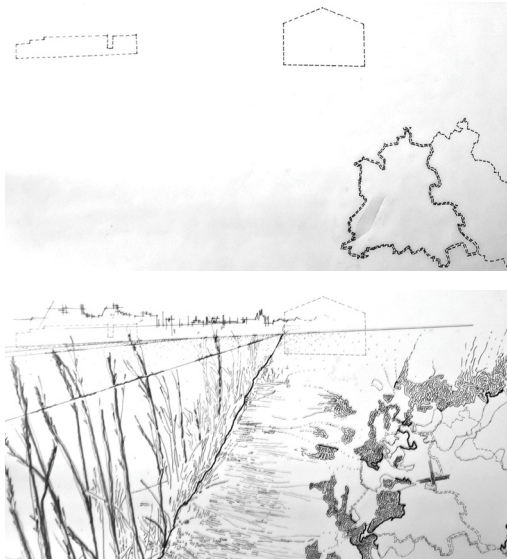
An analysis of developmental changes to the central section of the site over time. Shown are areas of vegetation vs. areas of urban development.

storage. Unused for numerous years, this area has become a very dynamic space regularly occupied by expositions and outdoor events requiring central open outdoor space. For months at a time at any given time of the year, the space finds itself heavily used at one moment, and entirely vacant the next. In a way that is very important to the character of the site. Flanked by communities to the east and west, it has become a shared resource by people of the surrounding areas. To the city, it has become a dynamic space capable of retaining public interactivity, open circulation and greenspace that can sustain heavy use and occupiability.

The western north-south section of the site maintains a dense series of active railway lines that run above ground for the majority of its length until they slice underground at the southern edge on their path to the lower levels of the Berlin *Hauptbahnhof*. Flanked by Residential Buildings all along the western periphery of the site, this area is most closely connected to the citizens of the neighboring community. Ironically, it is here that users of the site are most promptly disconnected from using the site due to the nature of the above ground train lines, which come well above grade at the north end of the site in preparation for crossing various roads and waterways. It is here that the site also maintains the greatest levels of noise pollution from moving trains.

Potential Programming

It often follows that architecture generates patterns through its development. Larger geometric complexes typically represent the most important buildings, and likely consist of collective programs as they become deeper in volume, generally for the benefit of the entire city.[24] In the space between exist the residual programs that nevertheless find a place in and about the city.[25] Although the areas in which these residual elements exist maintain what might be considered the *leftover* space within a city, they also connect the so-called 'important' elements through physical bridging. As if growing out of these spaces almost naturally, these elements maintain an important role within the progress of a city, illustrating unimposed programmatic development stemming from the natural requirements of the community.

24   Rem Koolhaas, "Urban Operations," *D: Columbia Documents of Architecture and Theory* 3 (1993): 25-57.

25   Ibid.

By way of infrastructure, i.e., canal, roads and rail, the site is split up into three main programmatic nodes: the Art Campus, located along the eastern Periphery, the Exposition Grounds, along the centre north/south axis of the site, and Residential along the western edge.

Residential
Exhibition Grounds
Art Campus
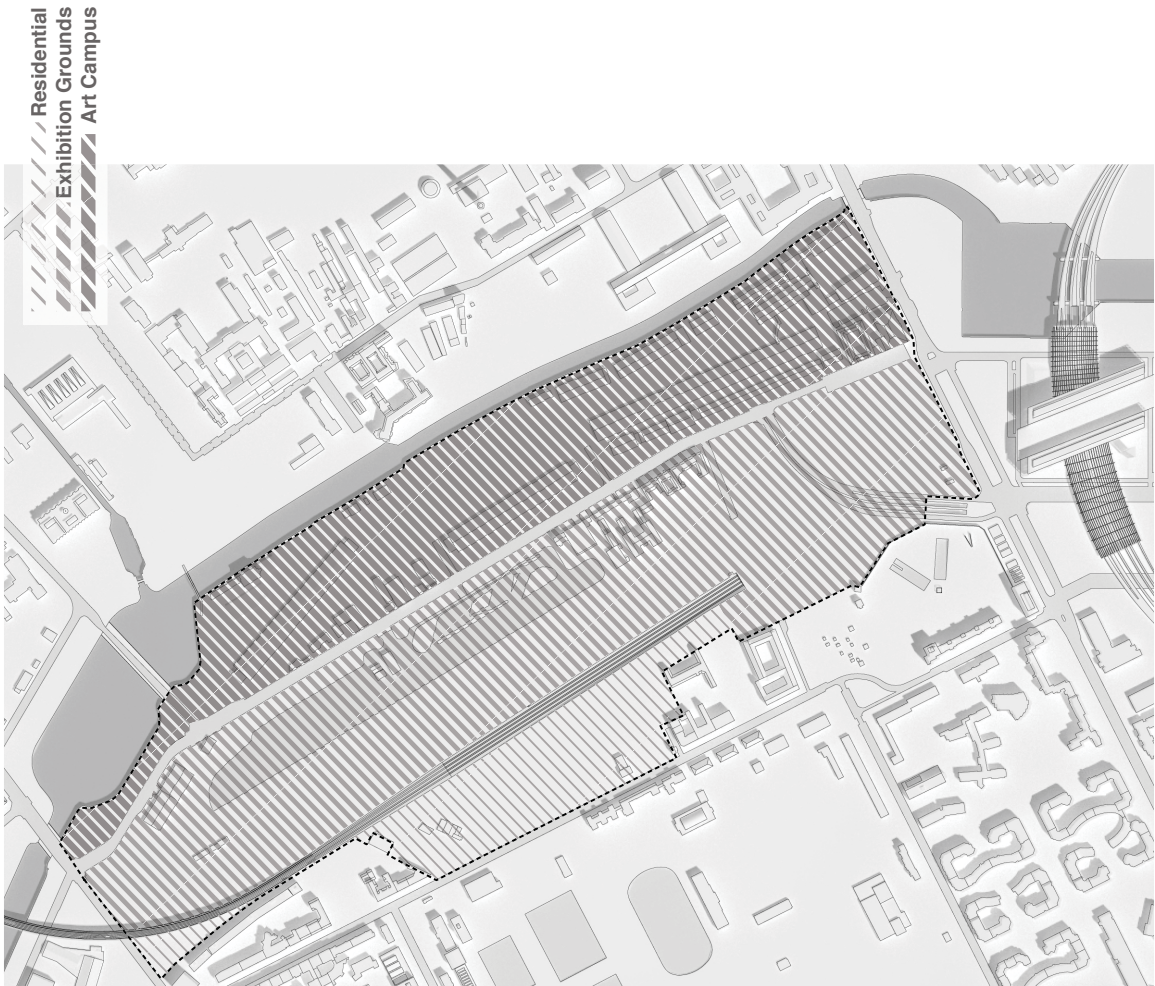
In developing an architectural solution that resolves the residual east-west segregation, it should be of key importance to develop an architectural methodology that stems from the necessities of its heterogeneous inhabitants. In defining methodological constructs from the inverse of these requirements, I can effectively create a *deductive* system of logic from both the inhabitants and users of the site, as well as the physical environment itself.[26] By refraining the need to actively *project* a predefined notion of program onto the site and into the architectural solution, the methodology avoids imposing unnecessary forces upon a readily developing programme.[27] As a developing arts community, the proposed thesis site can maintain its natural evolutionary course from historically industrial to artistically expressive. At the same time, it can create a resolution between proponents of historically eastern thinking versus its liberal western counterpart.
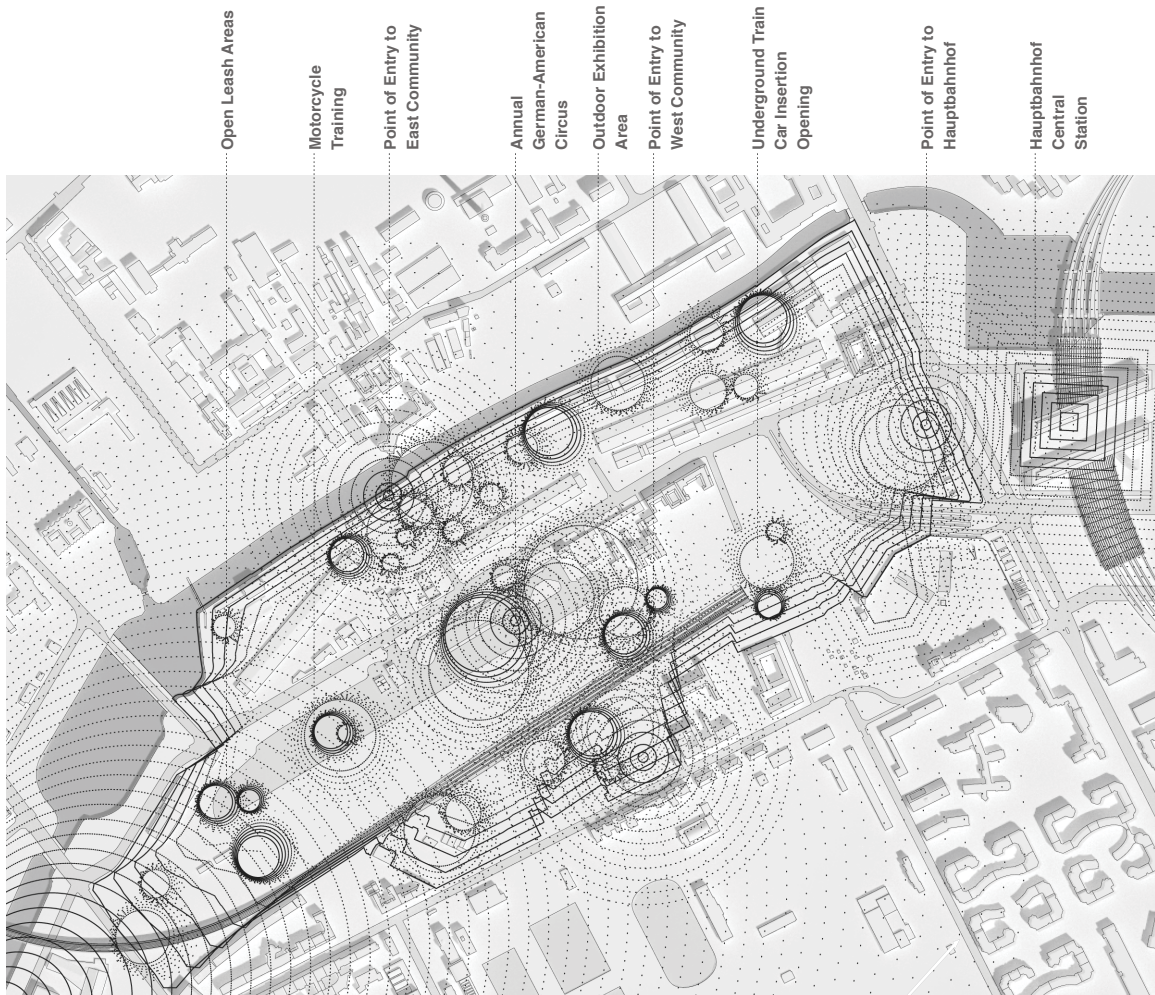
26   Ibid.

27   Ibid.

The buildings and complexes, as well as the programmatic functions that derive the character of the site emit a certain impression to the surrounding community. As a collection of these conditions, the community retains a particular definition of character defined by these elements.

Shown are the influential natures of these elements. In some cases, these elements are permanent aspects of the community - built structures that contain significance programmatic typologies. In other cases, these elements may exist for some period of time, and leave open, unused spaces during the time that they are gone.

Open Leash Areas

Motorcycle Training

Point of Entry to East Community

Annual German-American Circus

Outdoor Exhibition Area

Point of Entry to West Community

Underground Train Car Insertion Opening

Point of Entry to Hauptbahnhof

Hauptbahnhof Central Station

In creating an inventory of a series of negative positions that hypothetically emphasize the limiting characteristics of the site, the methodology uses reverse logic in its creation of a set of limitations by which the architectural solution is defined.[28] If, for instance, it should be important to preserve an historical element of the site, then the concept certainly should address its physical and cultural significance. In the same way, if access to the bordering canal is to be maintained, then the concept should not disconnect circulation to it. Using this approach, the project can essentially provide a progressive conceptual *framework* that becomes defined by its users and the community, rather than preconceived notions of classical architectural models and ideologies, such as the 'Berlin School' and Critical Reconstruction.

---

28   Ibid.

In maintaining the dynamic character of these influential site elements, the development of the Heidestrasse site must be a response to their underlying nature, as opposed to a comprehensive revision. In this way, the local character of the site can be maintained, while developing at an equivalent pace to that of the rest of the city. In mapping these elements we can observe their relative arrangement and intensities, which can help us to define appropriate actions for development.

Looking at the interstitial spaces between these elements we can begin to determine a developmental methodology. Much like 'connecting the dots', we can create spaces that not only respond to the developing nature of the physical environment, but also emphasize their importance through the architecture of an associated programme.

Potential Developmental Pathway(s)

Existing Site Influences
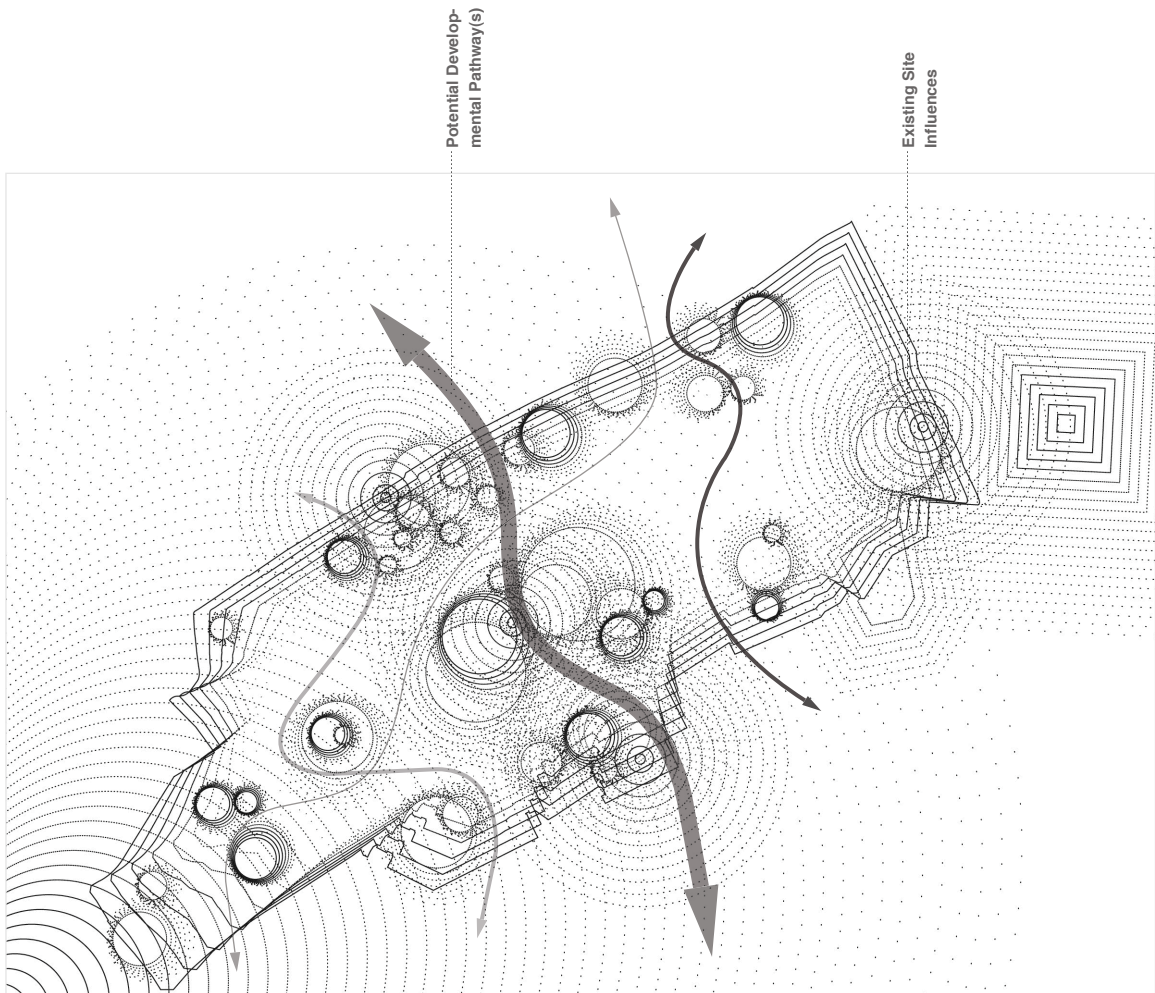
CHAPTER 4: DESIGN TRANSLATION

Architecture as a Product of Society

An ideal architecture should create a narrative of place, describing the importance of history and culture as a measure of time past, present and future. On this topic, Peter Eisenman writes,

> The traditional role of architecture has been not only to realize a sheltering function, but to represent and symbolize it as well. It is proposed in this project that while a museum must shelter art, it does not necessarily follow that it must symbolize its activity. Instead, it could represent the relationship of art to society, raise questions about the museum as a social institution, or it could propose a new representation of that institution.[29]

The importance of architecture in providing an infrastructural framework for the ideals of community and societal interaction relies in its ability to respond to the various necessities, potentials and collections of oddities of place. In allowing freedom of circulation and visual and phenomenological transparency, exchange is enabled, emphasizing existing programs as well as juxtaposed new cross-programming that references the existing. An ideal architecture should above all reflect its immediate context and the surrounding community, while enabling the potential for benefit at the city-scale. To this extent, the fewer prescribed limitations on space set by physical constraints and programmatic definitions will ef-

---

29   Jean-Francois Bédard, ed., *Cities of Artificial Excavation* (Montréal: Canadian Centre for Architecture, 1994), 61.

fectively allow for a higher degree of interaction, spectrum of experience, programmatic possibility and physical accessibility.

For the city of Berlin, overcoming 'The wall in the head' is perhaps the current most challenging task of architecture. Even though over two decades have passed since the nation's reunification, much of the city's inhabitants still prescribe to former ideologies aligned with the philosophies of authoritarianism. Classical notions of community, and thus architecture, are maintained both individually and societally, effectively denying the population of a progressive movement towards a blended reunification. The "banal formalism"[30] of the 'Berlin School' still very much characterizes the city, but only to the extent that it has continuously produced architecture of an age that no longer exists. In progressing forward into the future, it should be important to both express the current ideals of society together with their potentials. In doing so, not only can the physical potentials of site be fully realized, but its users can maintain individual as well as universal accessibility.

Architectural Concepts

Enclosure

The notion of enclosure is central to architecture in terms of physical shelter, atmospheric condition and personal interactions, but it has

---

30   Ibid.

an entirely different meaning at the scale of an entire site or an entire city. In conceptually deconstructing the components of a building – the walls, roof and floor – one can generate allegories to humanity and human disposition.[31] The roof serves to shelter its inhabitants, but also to represent a place of gathering and togetherness. The floor serves as a place of rest, representing an element of comfort and relief. The walls serve to protect its inhabitants from the outside world, and symbolize unity. Together, these elements not only create physical enclosure, but mental harmony and personal identity. They represent solidarity and the social ideals of community.

In contrast, the Berlin Wall was designed to prevent the movement of human beings. Built of the very same standard materials of domestic construction, the very materials used to bring society together, its function was to tear society apart.[32] The wall essentially denied society, the domestic, communication and interface, and intellectual exchange. It was, at its roots, anti-architecture, a denial of the social value of the art of building.[33] The imposed separation of community by the Wall condemned any element of unity, resulting in a predisposition toward neglect and disregard.

---

31   Neil Leach, ed., *Architecture And Revolution, Contemporary Perspectives On Central And Eastern Europe* (New York: Routledge, 1999), 210.

32   Ibid., 213.

33   Ibid., 216.

Transparency

The notion of transparency becomes particularly relevant when contrasted with enclosure on the basis that it is at its roots antithetical to the construct of the Berlin Wall. But transparency is not exclusive only to the physical nature of being transparent. In distinguishing between a literal transparency and a phenomenological one, we can alter our preconceptions of space-time relativity in attempts at creating transparent spaces in terms of their programmatic makeup.[34] While the literal conception of transparency is limited to physical materials, such as glass, the phenomenological conception refers rather to our perception of space and spatial organization. György Képes defines the latter conception by the following:

> If one sees two or more figures overlapping one another, and each of them claims for itself the common overlapped part, then one is confronted with a contradiction of spatial dimensions. To resolve this contradiction one must assume the presence of a new optical quality. The figures are endowed with transparency; that is they are able to interpenetrate without an optical destruction of each other. Transparency however implies more than an optical characteristic, it implies a broader spatial order Transparency means a simultaneous perception of different spatial locations. Space not only recedes but fluctuates in a continuous activity. The position of the transparent figures has equivocal meaning as one sees each figure now as the closer now as the further one.[35]

---

34   Colin Rowe and Robert Slutzky, *Transparency* (Basel: Birkhäuser, 1997), 45.

35   György Képes, *Language of Vision* (New York: Dover, 1995), 77.

The current nature of the Heidestrasse site portrays qualities of phenomenological transparency on the basis that it maintains a changeable spatial programme throughout its area. Along the eastern north-south section the site experiences open air-exhibitions at a smaller scale, while the central section hosts expositions at a much larger scale. Together these sections allow for an open, interactive framework for a variability of activities, all of which maintain a high degree of social interaction and public participation from the local community. The challenge, thus, for architecture is how to maintain these characteristics without spoiling the underlying nature of the site, while maintaining a degree of both phenomenological and physical transparency that explicitly deal with the site, and contrast the negative effects of the Berlin Wall.

Directionality

The strong uni-directional north-south nature of the site is a defining characteristic of its development. Appearing as though physically inserted between east and west communities, the site, along with its various infrastructural elements, maintained its location well before the surrounding areas fully developed. Upon its expansion, the city of Berlin eventually engulfed the area causing the resulting segregation. Composed of a series of parallel segregating devices between east and west Berlin communities, the numerous north-south elements vary in intensity, both

in terms of physical width, depth/height, and ma-
terial makeup. Emphasizing distinct areas of the
site, they effectively create a physical disconnect
between communities while at the same time in-
dividually framing the varying programmatic ac-
tivities currently existing on site.

The industrial remains of what once existed can still be seen in the physical landscape as well as the development of the area. As north/south vectors that literally 'cut-up' the site, these lines have predetermined development to the extent that they separate east and west communities and their programmatic spaces. In so doing, combined with other existing infrastructural elements on the site, they effectively disconnect any form of east/west circulation and blended development.

Antithetical Directionality to the Existing North-South axes
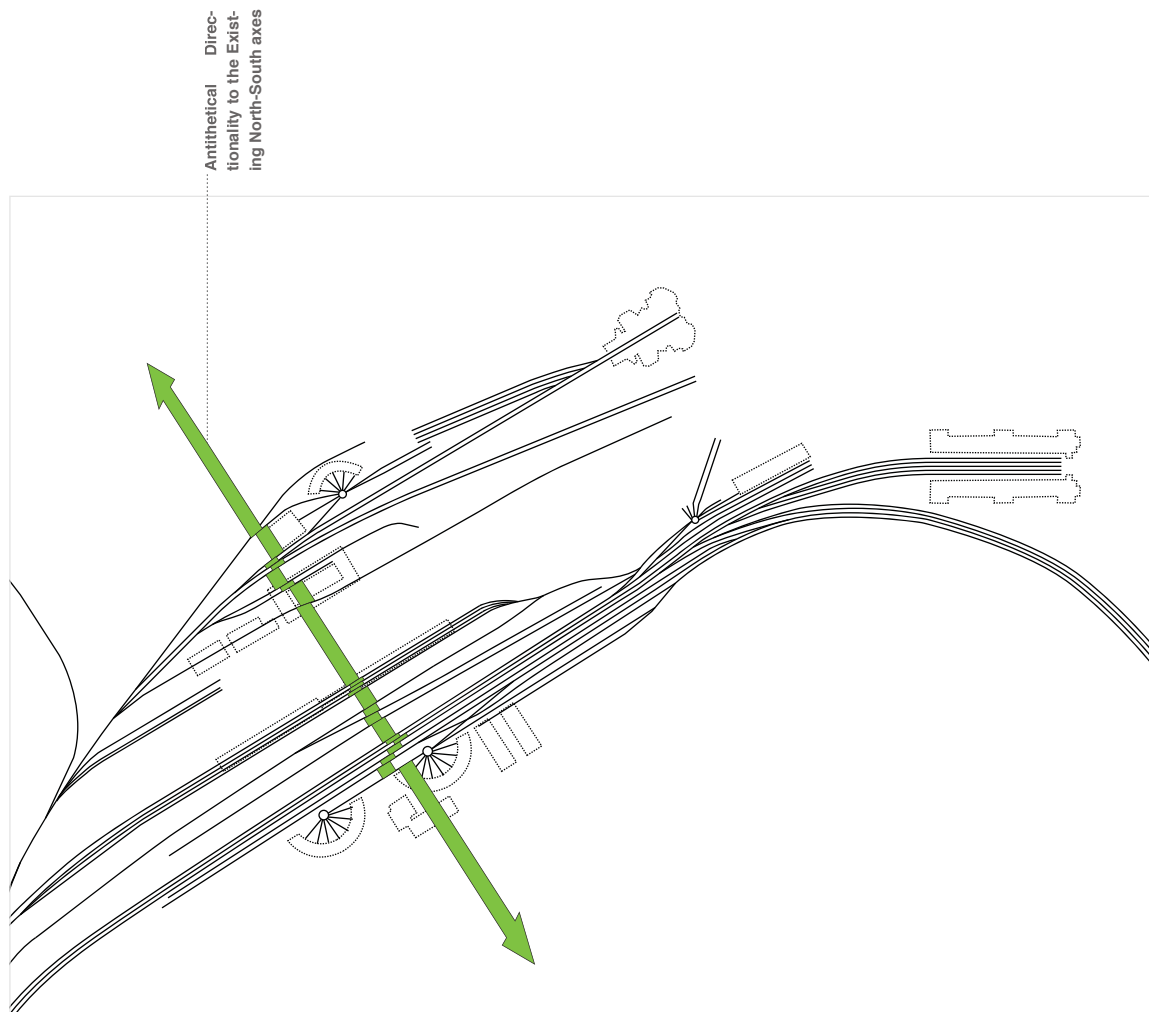
Layers

The north-south divisions of the site create distinct separations between east and west communities, but in the same way they also create a series of parallel layers that together frame a transparency from east to west, or vice versa, defining a narrative of axes and interstitial space. Through this reading, it is possible to observe the diverse functions of the site as they happen simultaneously. As devices that divide the site into separate, distinct elements, they then too have the underlying potential to serve as individual frames within an architectural intervention that can activate each of the individual layers.
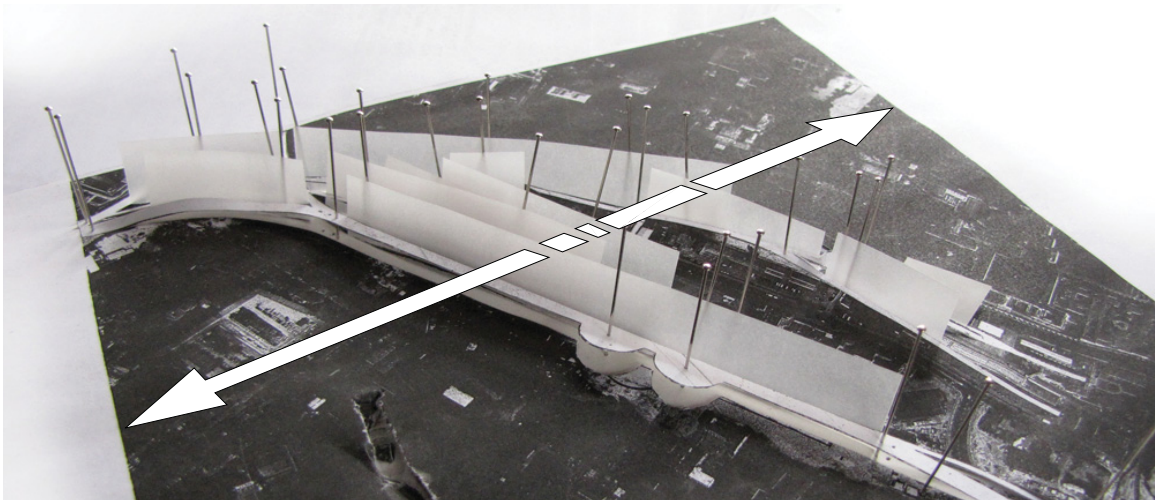
Paper model illustrating parallel layers as a series of translucent frames and the resulting visual nature from east to west.

Programmatic Translation

Overview

In using the preceding methodology, the proposed program development is generated from the existing site conditions and surrounding cultural community. In examining first the physical constraints of the site, this method can define the extents within which the program will develop. By analyzing each component individually, this development can define a series of rules that will guide the formal solution.

Railway

The railway corridor along the western edge of the site cuts underground, leading to its destination at *hauptbahnhof* at the southern edge of the site.

The first of these components, and perhaps the most influential to the site, are the collection of railroad tracks positioned along the eastern border. Consisting of both active and derelict lines, these tracks maintain a very strong north/south axis, and guide the surrounding infrastructure and existing architecture. In maintaining the historical relevance to the site, along with its current formal makeup, the proposed thesis intervention has the opportunity either to align itself with this structural framework or react in opposition to it. In reference to the former, by maintaining the existing formal aspects of the site, the solution can analogize the site's former function, and thus emphasize the notion of exchange important to the site. In aligning with the existing infrastructure, the programmatic result would be divided along the various sections separated by

the physical site divisions. In this way, evolution of the site would continually develop using the existing framework, and potentially segregate the site further through a densification of the dividing north-south axes.

On the other hand, the development of a perpendicular axis running east to west could have the potential to more efficiently connect east and west communities. As an effective 'bridging' element, this antithetical axis could redefine the site in terms of programmatic makeup, circulation and developmental potential. By intersecting existing situated elements, the site could effectively multiply its infrastructural possibilities while at the same creating a new stratum of connectivity between these disconnected areas.

Western Site Periphery - Cultural Centre

Among the railroad tracks and parallel to their orientation is an expansive network of undeveloped and overgrown land. Surrounding the extents of the site are densely developed residential communities, commercial spaces, civic and institutional buildings, the majority of which adhere to the 'Berlin School' of architectural language, and smaller scale schrebergartens owned and operated by local tenants. To this extent, maintaining a certain degree of formal normalcy to the surrounding buildings could allow for a seamless transition of programmatic spaces into the neighborhood. In aligning with the standards of these constructs, at least in terms of building

The western site periphery consists mainly of residential dwellings and private gardens.

height, the proposed intervention can blend into the community without creating an unnecessary over-encompassing presence. Programmatically, its use as a local cultural centre could give the community an opportunity in involving itself in larger city events, while at the same time giving local organizations the space and capacity to meet and create intimate dialogue. Functioning not unlike a local community centre, the potential for such spaces could blend seamlessly with the programmatic nature of spaces along the central section of the site right into the arts campus along the eastern periphery of the site. Resulting in a definitive programmatic transparency, the resulting spaces could allow residents of the local community access to spaces into the east, and vice versa, users of the arts campus along the eastern periphery to access spaces in the west.

Eastern Site Periphery - Arts Campus

The progression of this area as a developing arts campus is a strong characteristic of the site's potentials in creating a community of free expression. As an allegory to the physical and cultural disconnect of the Berlin Wall, the arts campus is a direct reflection of the site's historical significance. In developing a programmatic strategy that responds to this historical character, it should be important to first address these characteristics upon later attempts at emphasizing them. As one of the primary drivers in creating

The eastern site periphery, running parallel to the canal, encompasses the developing arts campus.

an area where users can freely interact, the proposed architectural strategy shall articulate these existing spaces in attempts at creating additional spaces, further integrating the arts as a means of exchange and communication between east and west. Through the addition of programs for the education of history and culture, along with free expression of the arts, these could consist of classrooms, open exhibition spaces indoors and outdoors, and pathways along the canal. As a corridor to the western periphery of the site, the arts campus could have the potential to expand westward in helping to decrease the physical separation between east and west communities.

In contrast to aligning with the structural framework of the site, the proposed model could more effectively connect all divided sections of the site by way of a perpendicular bridging device spanning along a newly conceived east-west axis. The result could effectively create a spatial continuity that would render the experience of the site phenomenologically transparent, and experientially rich. In spanning along this axis, all divided sections of the site could become hypothetically connected and equally valuable in the experiential nature of the site. The result could also create a physical connection between neighboring east and west communities.

Canal

The canal along the eastern edge of the site denotes the border between east and west.

The canal system, also oriented in the north/south direction, maintains similar qualities to

that of the railway system. Positioned along the western border, adjacent to the former Berlin Wall, this area composes the other half of the extents of the site. In contrast to the western half, much of the area maintains existing buildings still in use, comprising commercial warehouses intermingled with private and national galleries, shops and restaurants. Here, much of the public activity is driven by an attraction to *Hamburger Bahnhof* and the walk of the Berlin Wall. Its attraction appeals to users outside of the surrounding communities, but also to local residents and artists, maintaining a strong cultural and historical significance. In response to these characteristics, the model solution should, at its roots, function to maintain and emphasize these important cultural and historic elements of the sites character, along with its predefined physical nature.

Central Site

The central area of the site encompasses the majority of derelict post-industrial land, and is the location for numerous outdoor expositions.

Composing approximately half of the extents of the site, and physically containing the local public transportation railway system, and high traffic roadway, its suitability as the initial point of contact with users is ideal. To this extent, much of the public activities can maintain a strong connection to circulation into and out of the site, and thus a densely activated user-driven program. With high levels of interaction among its users, *exchange* results at the city scale and should thus compose itself with the greatest variation

of spaces and activities, as well as the largest programmatic potentials. As a progression of the historical nature of the site, these could consist of large expansive halls for the exchange of ideas (metaphysical goods), public amusement areas (expositions), marketplace (existing warehouses) and cultural connection (railways).

Architectural Translation

Overview

As a response to the physical and cultural conditions of the site, the architectural intervention is informed by the existing patterns of development alongside the site's historical background. In firstly identifying the inhibiting characteristics of site that restrict its potential for increased modes of exchange, the intervention can begin to determine 'rules' by which the formal and programmatic strategies can develop. The site can begin to cultivate an intervention that not only allows for the further expansion of existing activities, but also connects across the site's segregating character by creating an additional inhabitable layer for the inhabitants of the city to occupy.

Bridge

The concept of bridging initially came out of the necessity to intersect the dominant north/south axes of the site, which literally divide it into impassible parallel sections. In creating a perpendicular intersecting circulatory route through the site, users would have the option to pass from east to west without having to access crossing points at its extremities. Although the potential to intersect could increase the site's potential useability, preference was given to a bridging device which would not only allow for the site's existing use, but also develop an additional layer above the site for disparate development in the future.
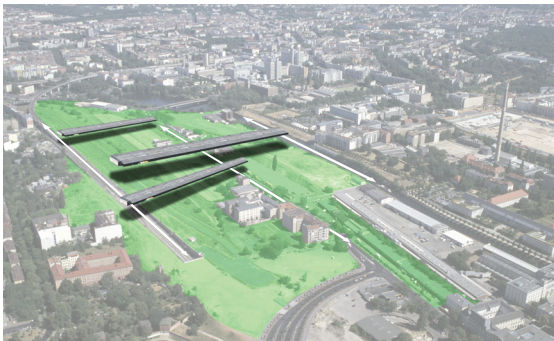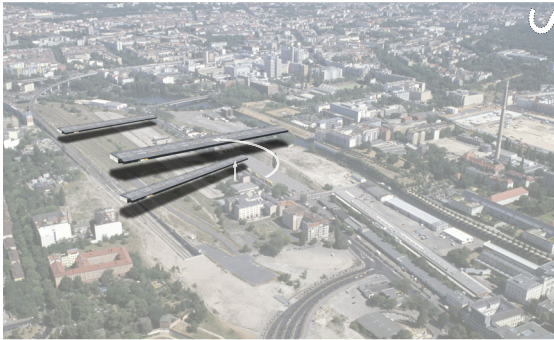
Using the existing architectural language of the site, the following sequence illustrates an experiment that isolates individual storage buildings in creating an architectural intervention that bridges the site while retaining inhabitation. In hypothetically raising and rotating the buildings, the segregating nature of the site is transformed to one that creates multidirectional connectivity, retains existing circulation, and creates open and useable outdoor space underneath.
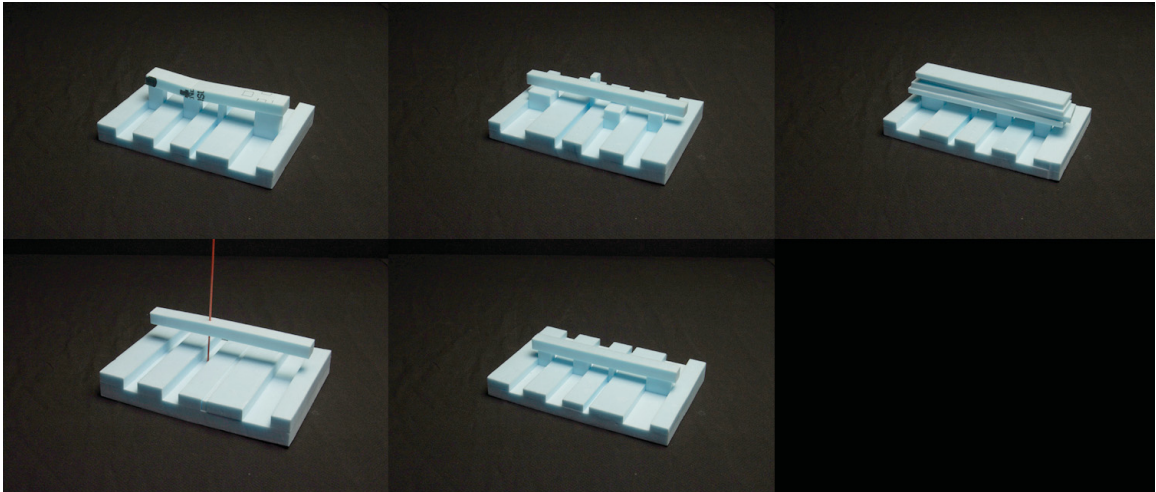
Sketch model studies analyzing the bridging concept and its relation to the site.
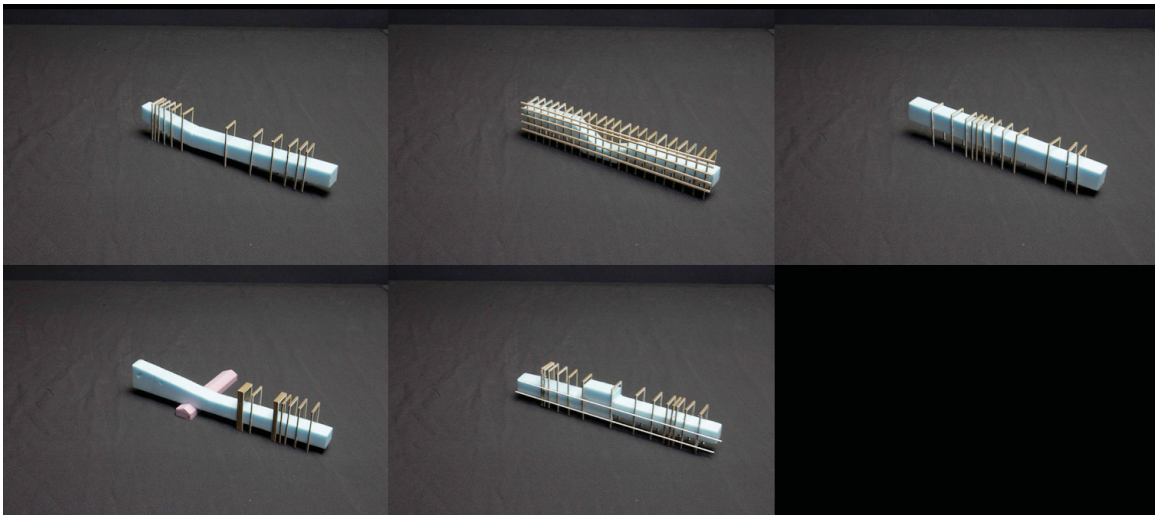
Sketch model studies analyzing the formal nature of the intervention and its connection to the site.
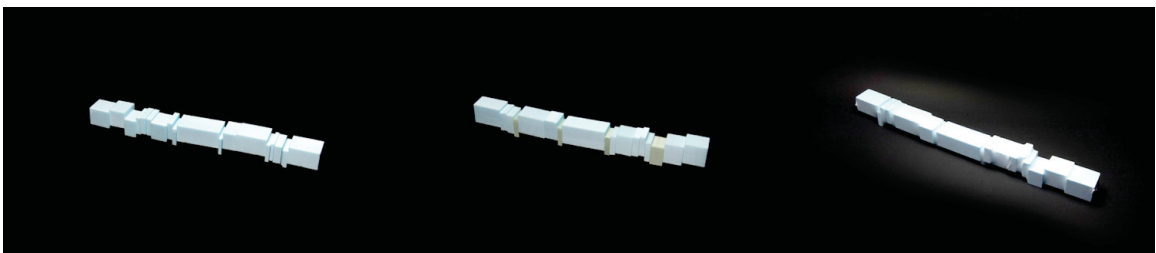
Sketch model studies analyzing the bridging concept as a sequence of individual 'frames'.
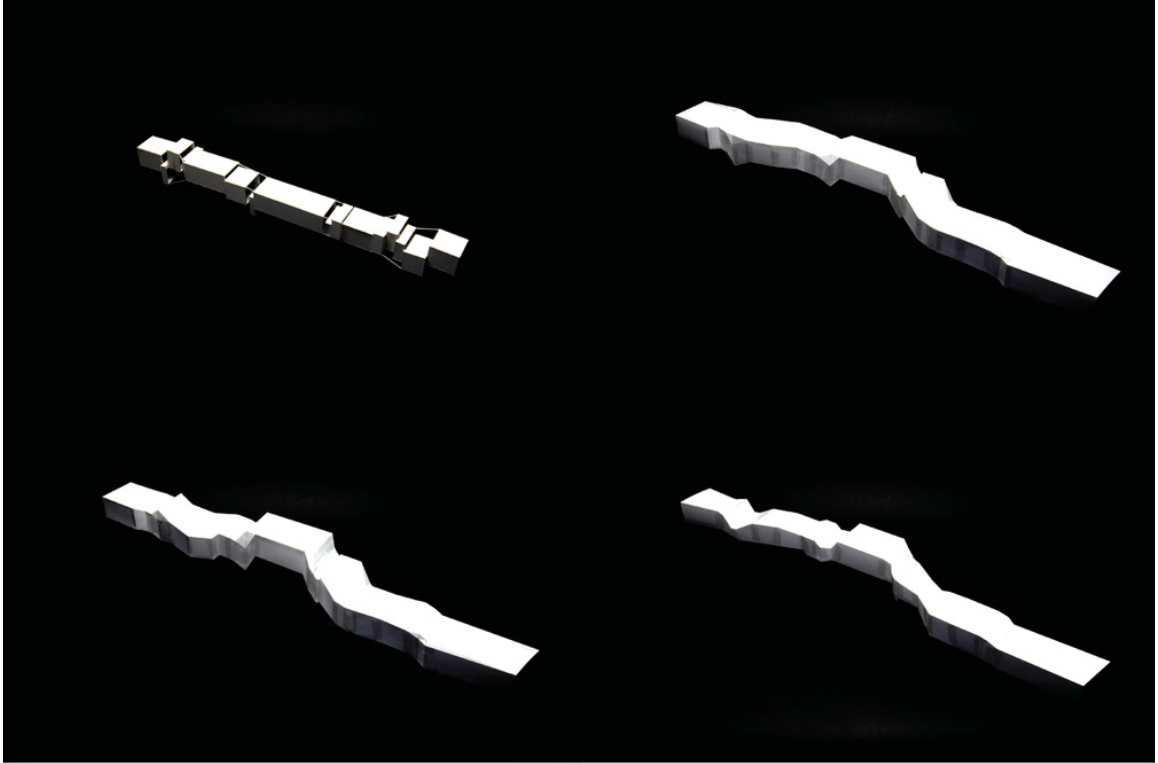
Folded paper sketch model studies analyzing the faceted nature of the sequenced frames.

Layer (Z-Axis)

Architecturally using a bridging device across the east/west axis of the site inherently occupies the space *over* the terrain of the site. To this extent, the site remains virtually unchanged as the architectural intervention occupies the unused area located along the upper Z-axis of space, defining an additional architectural language for the city. As a regenerating device of sorts, this architectonic layering redefines the architectural language of the 'Berlin School', while allowing the site to retain its importance to the city's culture and associated history. These new spaces have the potential to open up new forms of programmatic functionality, atmospheric experiences, and combined high/low spatial activities.

East

Shortest Route from Point A to Point B

1

West

Existing Site Circulation (waterway/canal)

Existing Site Circulation (roadway)

Existing Site Circulation (commercial railway)

2

Existing Site Circulation (passenger railway)

Site of Former Berlin Wall

Gradual Vertical Incline

3

Vertical Circulation Cores ('book ends')

4

5

Initial Conceptual Frame Programmed Space ('scewered interior frame')

C i r c u l a t i o n   C o r r i d o r

The circulation corridor spans from the western periphery of the site to the east, creating a framework for which the programmed space can 'skewer' itself around. In this way, it becomes the main procession across the site and through the building.

Pathway

The pathway that develops as a result of the east/west bridging across the site serves primarily to allow circulation where it before did not exist. In creating habitable spaces along this pathway, numerous opportunities exist to allow for a great variation of spaces that focus on certain long and short views through the interior of the space, and outward to the surrounding landscape and communities. These visual connections serve as the primary experiential condition to users of the building, alongside the physical experience of walking from one end to another.
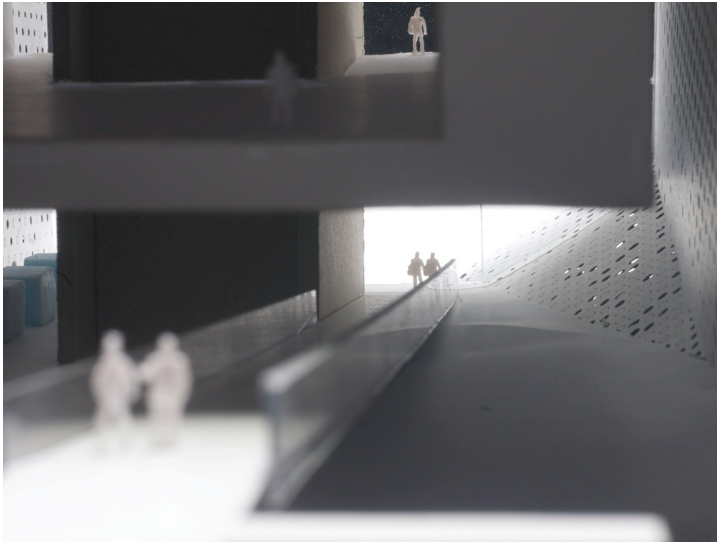
Detail. Views along the pathway to various parts of the building.

Circulation Nodes

Grounding the pathway to the site, the circulation cores within the building position themselves at the ends of each individual pathway segment located at major intersecting circulation routes already existing on-site. Allowing users to enter at various points along the pathway, these circulation nodes allow movement from the site in the vertical direction, both upward into the spatial limits of the building and downward into the below-ground connections, such as the subway system. Beyond circulation, these nodes have the capacity to connect to the city's infrastructural system, contain various building services, as well as isolated programmatic elements.
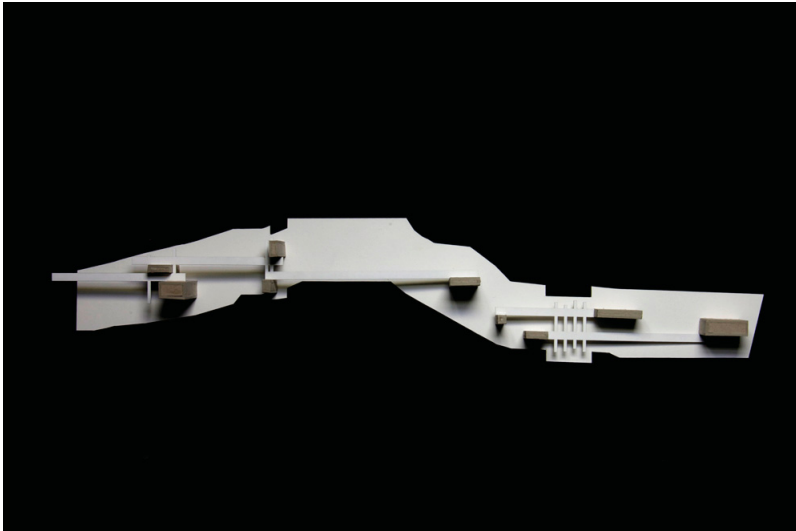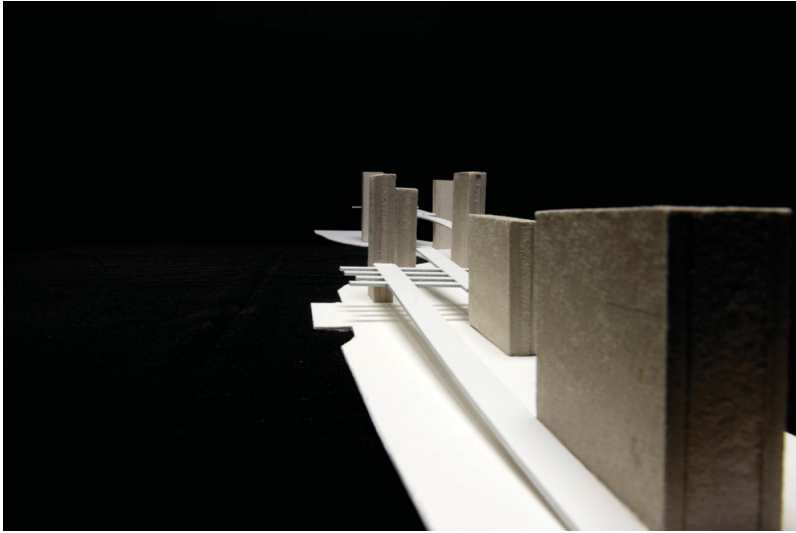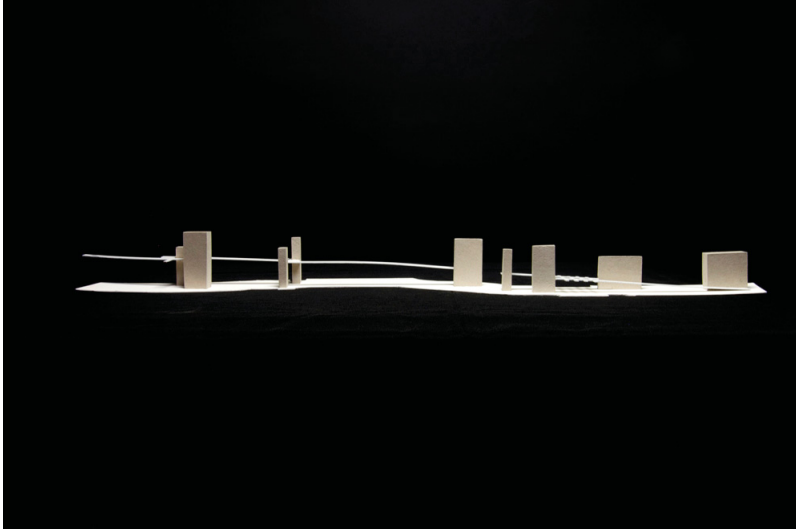
The pathway is supported by circulation nodes (vertical cores) that allow access to various points along the site from the pathway and vice versa. By way of these nodes, the building attaches itself to existing influential points along the site.

Frames

The formal development of the intervention is informed by the historic infrastructural nature of the site, representing its former use as a railway hub for the city. As a physical projection that literally 'slices' the hypothetical bridge running from east to west, the potential to shift the resulting frames allows for the intervention to accommodate for existing site programmes while allowing the possibility for numerous spatial variations. By shifting these frames up or down, the intervention can also accommodate the unobstructed flow of circulation on-site, while touching down to various areas of the site to allow for circulation into and out of the building. By connecting these frames using simple facets, the building takes on a single formal aesthetic, while providing additional potentials to the functioning of the building.

In continuing the dynamic tradition of site, the intervention has the potential to itself become mobile, thereby maintaining the spirit of exchange engrained in the history of the site. As individual frames, the building can function as a series of smaller parts, some of which may become satellite elements scattered across the site. In this way, the site becomes an interstitial space bound by the framing of these individual elements, themselves framing the derived programmed activities.

Formal Logic

1

Programmatic Envelope

2

Programmatic Blocks
Historical Railway Lines

3

Existing Outdoor Events

Horizontal Shifting to
Accommodate
Existing Programme

4

Vertical Shifting to Accom-
modate Open Circulation
Canal Pathway
High Traffic Roadway

Active Railway

5

Faceting Language
-Egress
-Ventilation
-Views
-Studios

6

Outdoor Exhibition Framework

Interstitial Programme Space

Satellite Programme Component

Entry Condition at Roadway

Active Railway Flyover

Formally, the intervention is developed through the physical manifestation of the pathway, and is divided into individual 'frames' by referencing the historical railway infrastructure which it crosses.

Extension

The proposed intervention derives its programmatic and formal characteristics from the nature of the site, in effect itself becoming a built extension of the site. Programmatically, the intervention functions as a device that blends the three-part environment (gardens, exposition grounds, art campus) into a unified experience for inhabitants of the east and west communities. Maintaining these site characteristics along the exterior environment, the intervention transposes these to the interior, establishing spaces that embody the experience of the site while promoting their continued development. As the site adjusts and transforms to the changing nature of the city, the intervention reverberates its character, itself adjusting the internal atmosphere and user experience. In much the same, the formal nature of the intervention becomes a product of this dynamic nature, wholly informed by existing exterior influences, and changeable to the needs of its users.
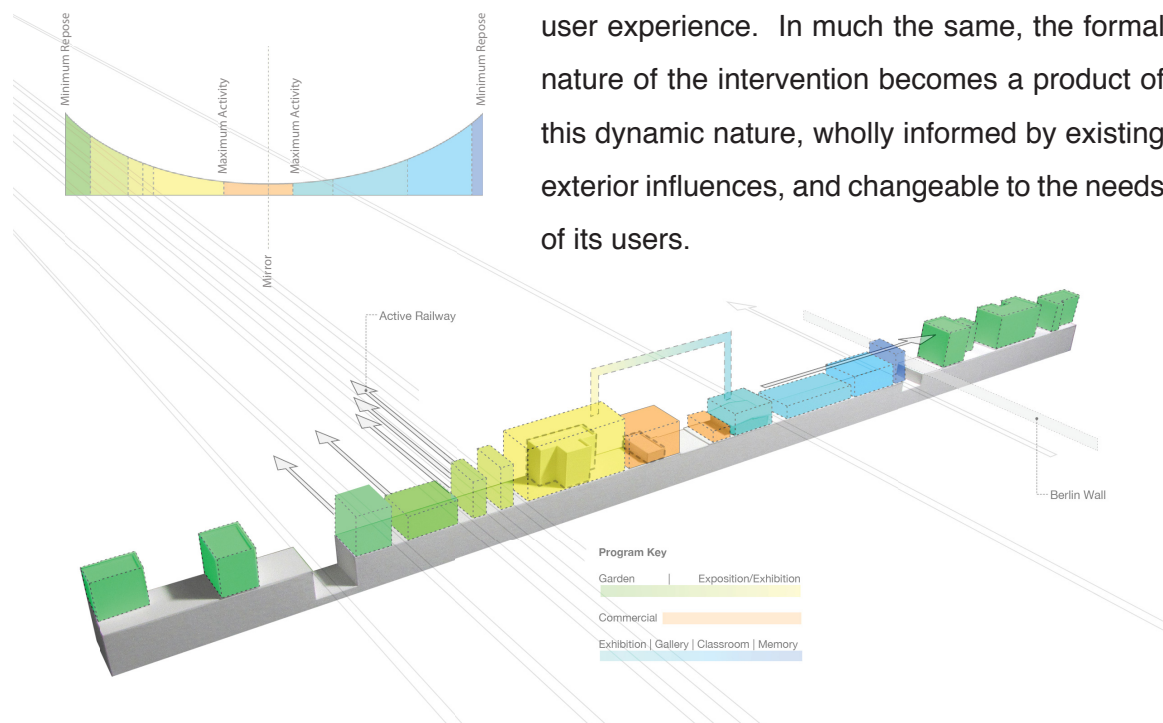
A section through the site shows the programmatic makeup of existing buildings and spaces.

= Changeable Egress

Summer Use for Outdoor
Art Exhibitions

Commercial Use

Exterior Stair is Tangent
to the Nearest Sphere of
Influence

1

Existing Site Influences

Introvertive Programme

2

Light Site Usage

Outdoor Exhibition
Open-Air Gallery

Occasional Use for
Circus and other
Expositions

Large Exposition Event

Community Event

Cultural Centre Event

Exterior Stair May Retain
and create new Spheres
of Influence

3

Heavy Site Usage

Formal Response
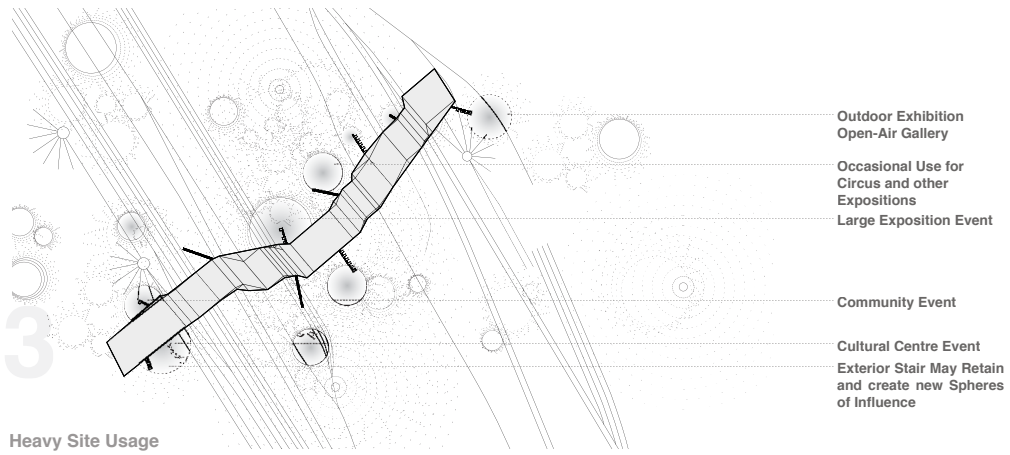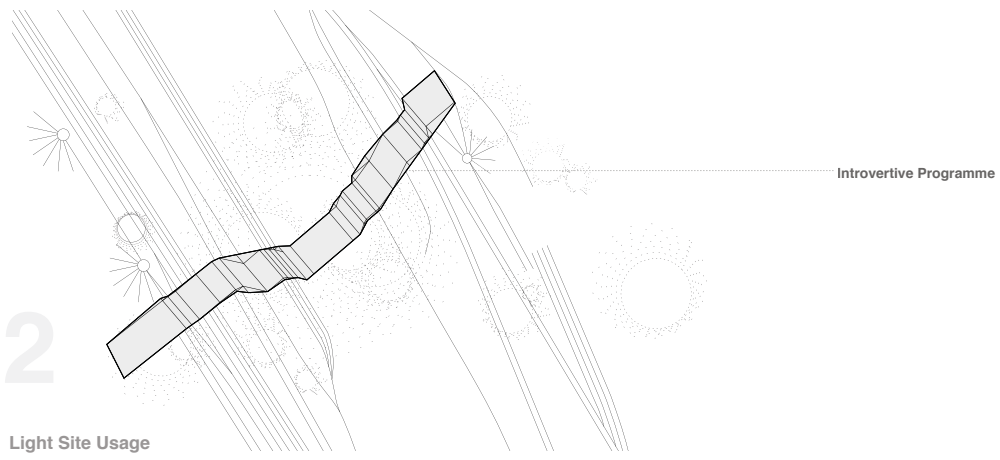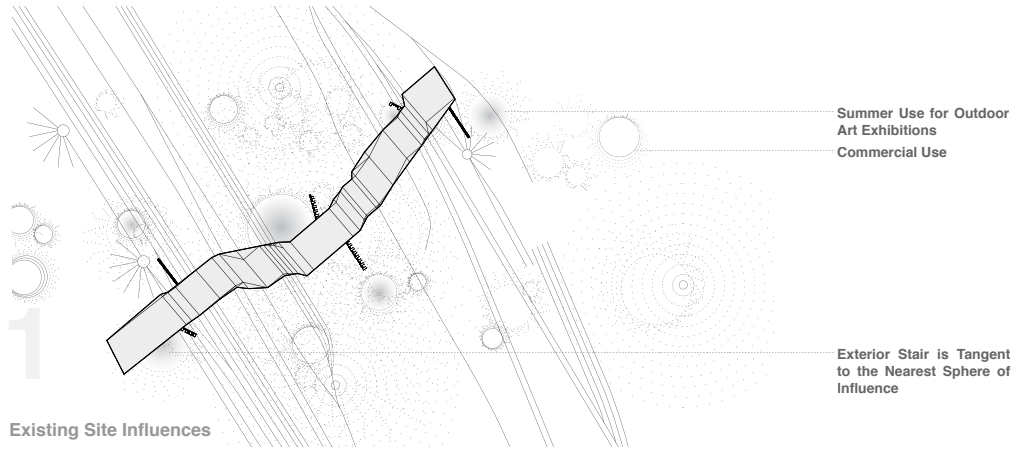
The formal strategy for the building is a reaction to the dynamic nature of site, and occupies the interstitial space between existing programmatic activities.

Arts Campus

Exhibition Framework

Classrooms

Classrooms

Classrooms

Lecture Halls

Main Gallery

Art Campus Foyer + Gallery

Exhibition Hall

Circulation Corridor

Market (Shops)

Circulation Corridor

Auditorium Foyer

Auditorium 'Back-

Auditorium

Auditorium 'Backstage'

Auditorium Foyer

Restaurant

Circulation Corridor

Services

Theatre (Film)

Loading Area (Workroom)

'Open-air' Stage

Offices / Meeting Rooms

Hall 'A'

Restaurant

Information

Entry Foyer (Meeting Hall)

Cultural Centre

The linear nature of the programmatic layout is self-navigating. The colour gradient serves to guide users toward each of the three primary programmatic nodes: Cultural Centre, Exhibition Hall and Arts Campus.

The Bauhaus was intended to forge a new 'unity between the arts', and itself emerged as the new potential for architecture in the early 1900s.

Bauhaus
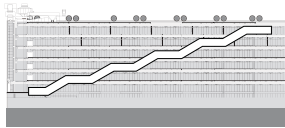
The Pompidou Centre was intended to be a changeable space for exhibition, but quickly emerged as one of Paris' greatest public spaces.

Pompidou Centre

The Jewish Museum was intended to be a memorial space for the murdered Jews of Europe, but quickly became the memorial itself, attracting visitors to its architecture over its exhibits.

Jewish Museum
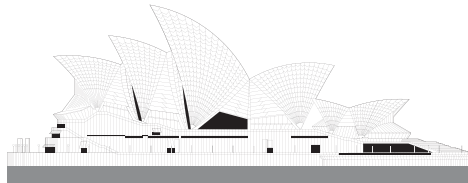
The Sydney Opera House emphasized the potentials of modern construction, and became one of the world's greatest architectural icons visited by vast numbers of people.

Sydney Opera House
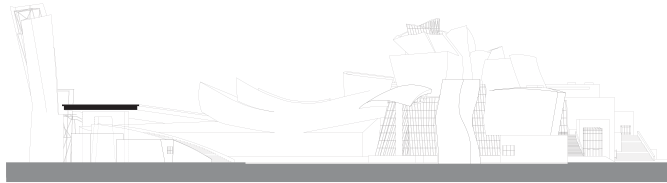
The Bilbao Guggenheim was intended to regenerate the city of Bilbao, and has become one of the most visited architectural projects in the world.

Bilbao Guggenheim

Stephen Holl's 'Horizontal Skyscraper' actively maintains vast open public space while reserving much of the interior programme space for offices.

Vanke Centre

The proposed thesis project develops a cultural and exhibition centre, along with galleries that are intended to build upon the expanding arts campus, to emphasize the cultural developments of the community, and generate public space where industrial complexes have occupied the site for literally hundreds of years.

0	100	200	300	400

m
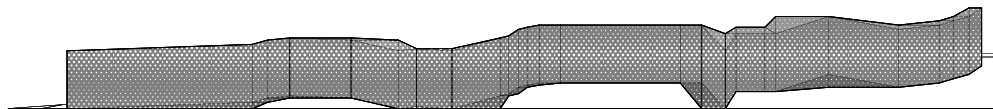
Building with programmatic similarities to the proposed thesis intervention, the following architectural projects represent interventions that have actively influenced the cities they reside in and the communities that they have become an integral part of.
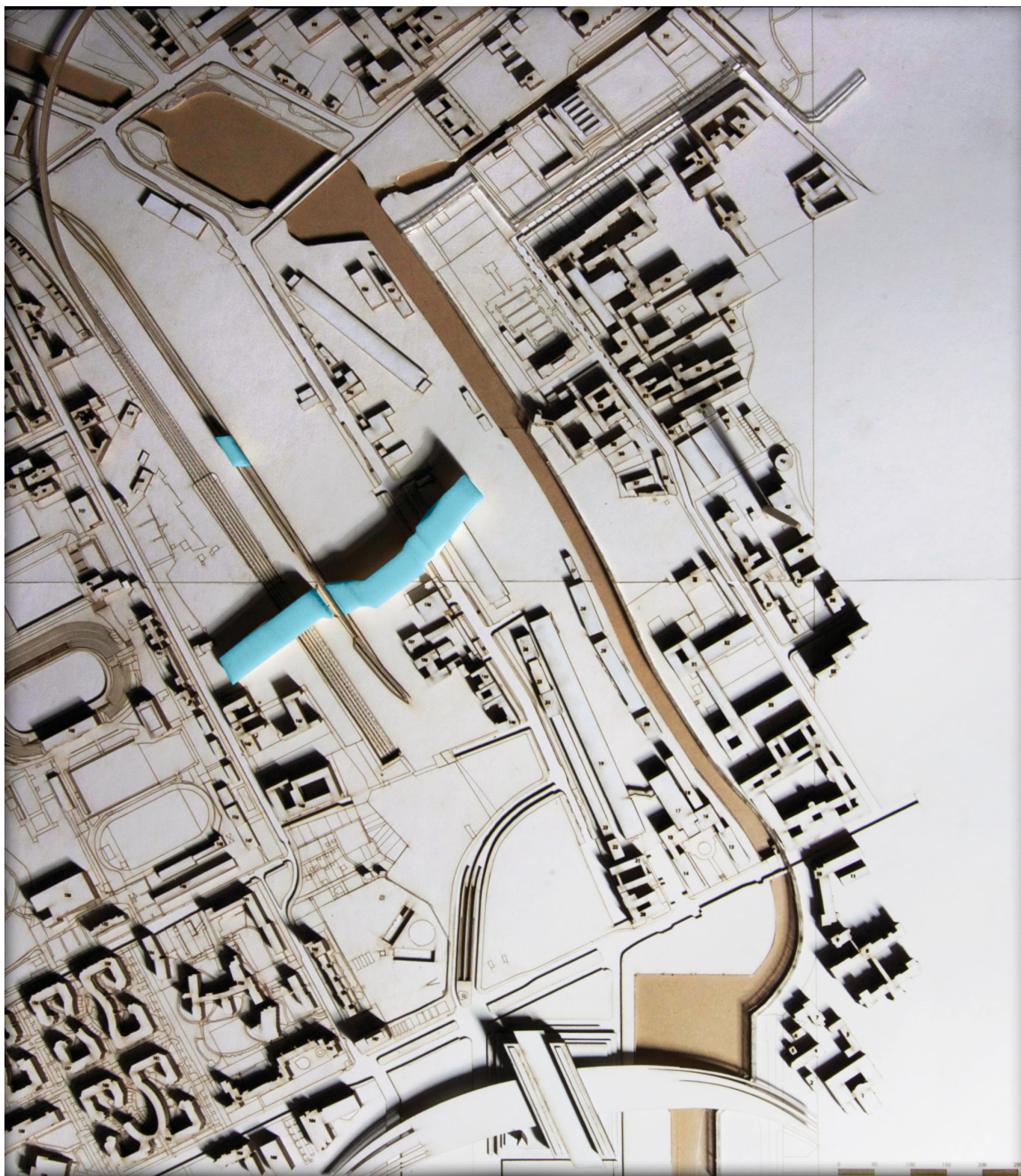
Site model depicting the relative position of the proposed intervention.
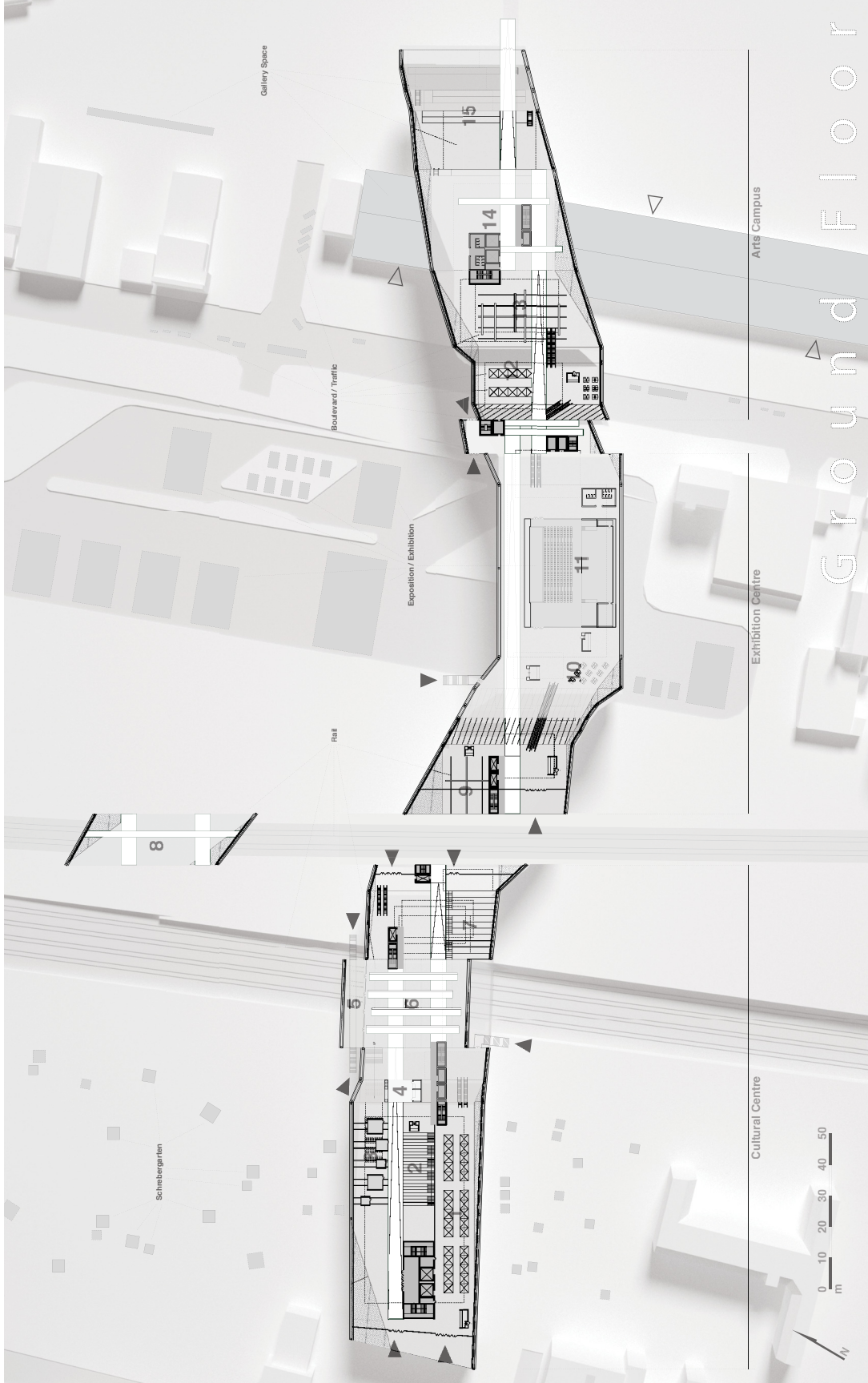
Ground Floor

Ground floor plan illustrating the influences of exterior site on interior spaces.

Parts of the lower floor plan illustrating moveable elements within the building, and the referential physical site characteristics

6

Corridors

Disruptions in the main ramp by the activity and flows of the site a stitched together by moveable corridors that can create various spaces, and connect or disconnect neighboring frames.
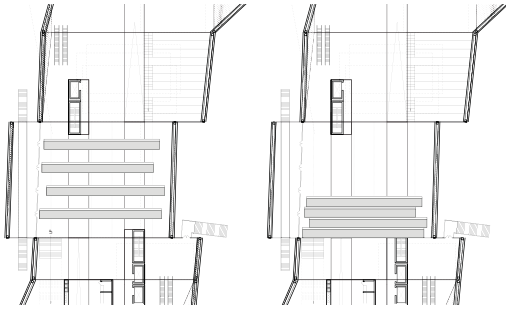
9

Drive-In

The singular active railway leftover from the site's former industrial use divides the building, creating a void between a singular space. A moving cinema screen creates an atmosphere for the adjacent amplitheatre, and to users in the division space.
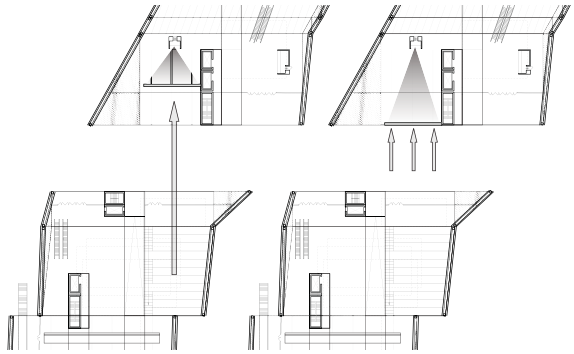
3

Cottages

Smaller spaces connect to the Ramp, and can move on rails to isolate users in a more intimate atmosphere.
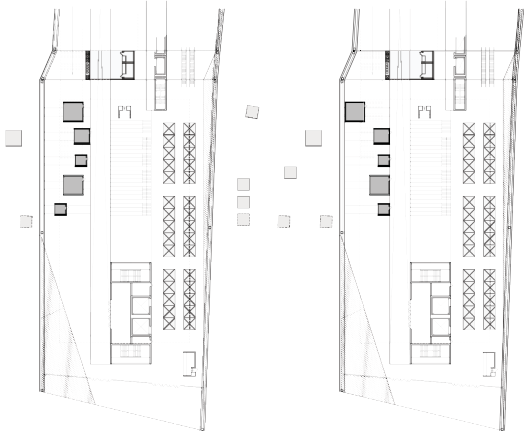
16

Park

In reconstituting a derelict rail line the building can create an additional satellite programme space. Literally 'parking' the framework in various spots along the line, the open-air arts campus plaza can create a moveable exhibition space and sculptural artefact.

Upper Floor
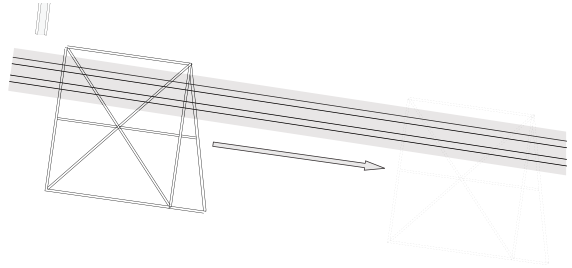
Ground Floor Key

1. Community Markets
2. Performance Stage / Open Seating
3. Moveable Isolating Platforms
4. Information
5. Exterior Crossing Bridge
6. Moveable Multifunction Gallery
7. Theatre Seating
8. Moveable Stage (Existing Unused Rail line)
9. Moveable Theatre Screen
10. Cafe
11. Lower Auditorium
12. Shops
13. Moveable Gallery
14. Core Connection to Existing Building
15. Main Gallery (Ramps)

Programme Floor Key

1. Community Hall
2. Restaurant
3. Breakout Rooms
4. Offices
5. Moveable Stage (Existing Unused Rail line)
6. Lecture Halls
7. Auditorium Backstage / Changerooms
8. Upper Auditorium
9. Auditorium Foyer
10. Auditorium Services (WC)
11. Intermission / Gallery Space (Roof Access)
12. Main Gallery
13. Lecture Room
14. Classrooms
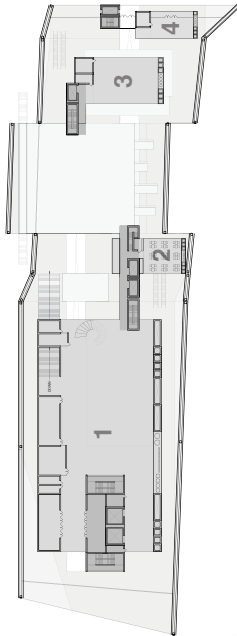
Cultural Centre
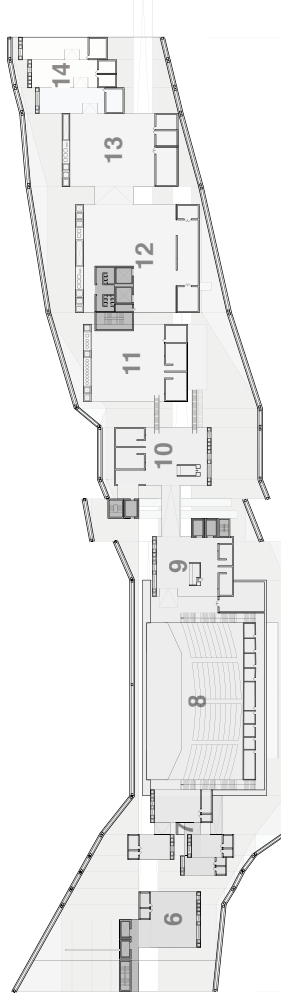
Exhibition Centre

Arts Campus

0 10 20 30 40 50
m

Upper floor plan illustrating the programmed spaces above.

View of the satellite programme frame during an outdoor exhibition.

Opacity

The nature of the proposed intervention presents both a visual and phenomenological transparency that is manifested in the physical form and internal programmatic makeup. When viewed from the south, as from the Berlin Hauptbahnhof, the building may be perceived as a singular envelope mimicking the former Berlin Wall. In this way, the reference to the site's important historical condition is represented antithetically to its actual position along the north/south axis. When viewed from the east or west, as from either neighboring community, the building reveals itself as visually transparent from one side to the other, in part due to its nature as a series of individual frames. In this way, the intervention not only internalizes the historical nature of the site, but creates a blending space that is visually unobstructed between divided communities. Experientially, this not only permits for a variability of activities, but also accommodates for changing programmatic size and density.

Sketch model depicting the transparency of a series of horizontal frames viewed from the open side.
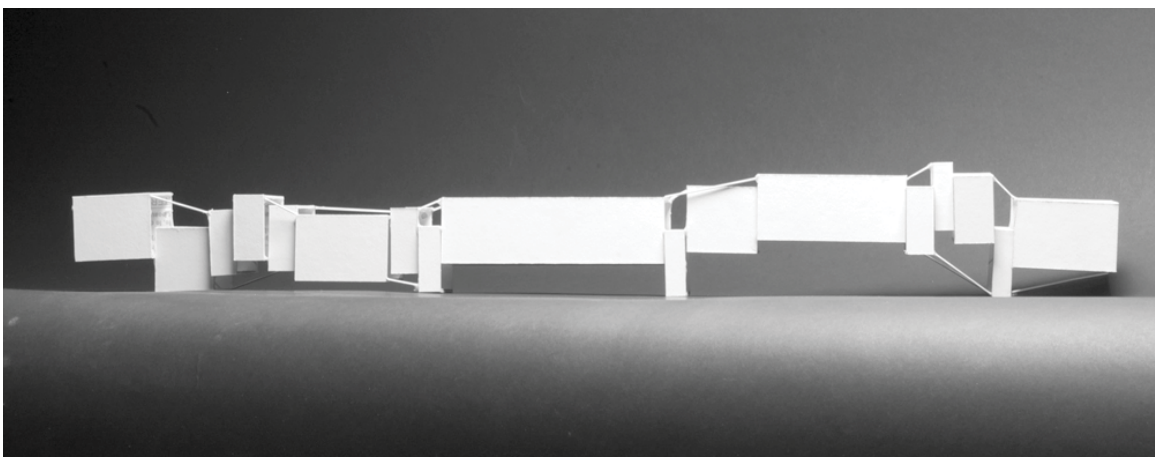
Sketch model depicting the opacity of a series of horizontal frames viewed from the closed side.

Space and Void

Ramp
Procession
Cores
Former Berlin Wall

Circulation

Transparency
Frames (Rooms)

Programme Spaces

Ventilation (Upper)
Egress (Lower)

Folded Envelope
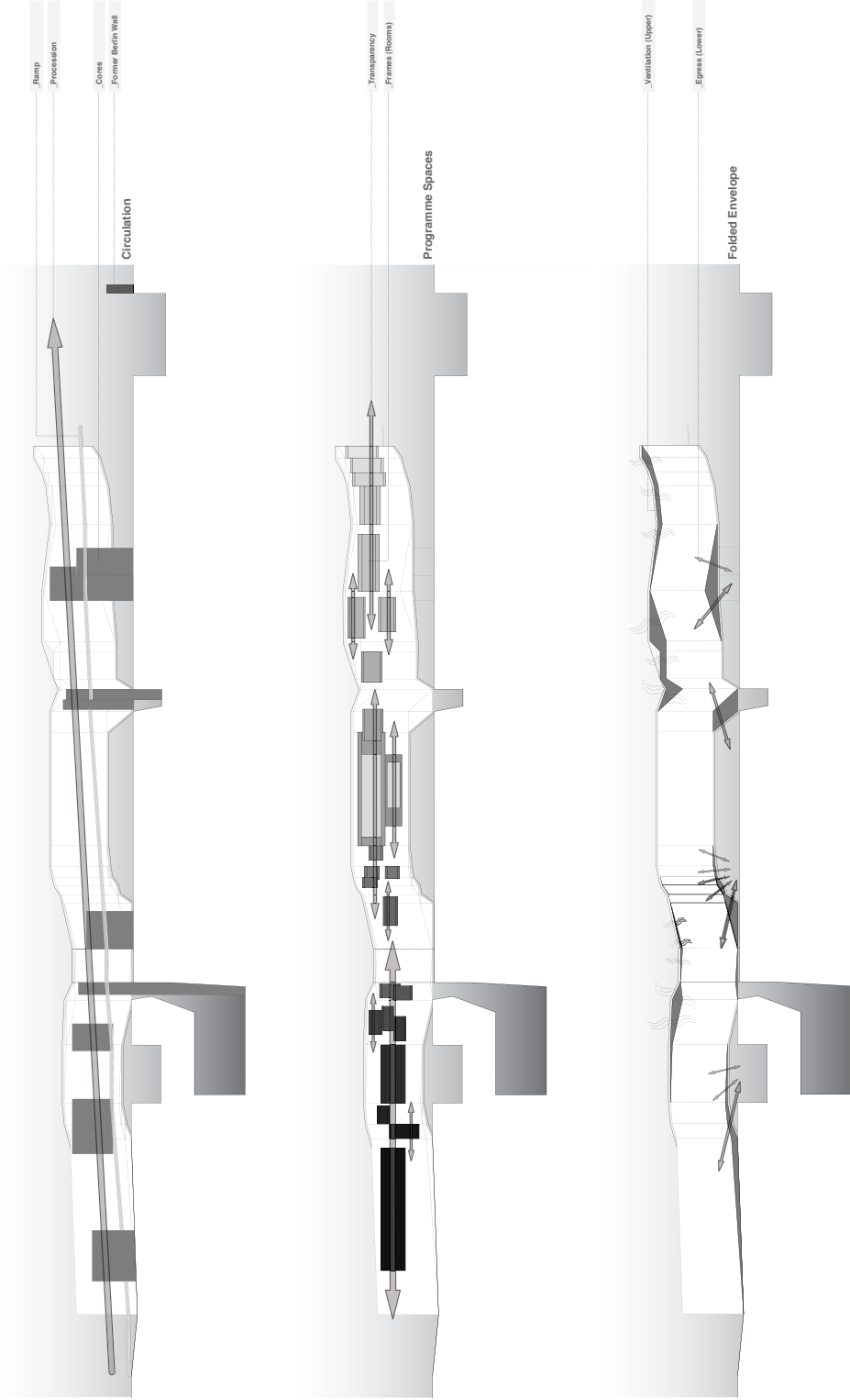
Sectional diagrams illustrating interior experiential transparency, procession, circulation, connection to site, and programme layout.

View from
Hauptbahnhof
north.
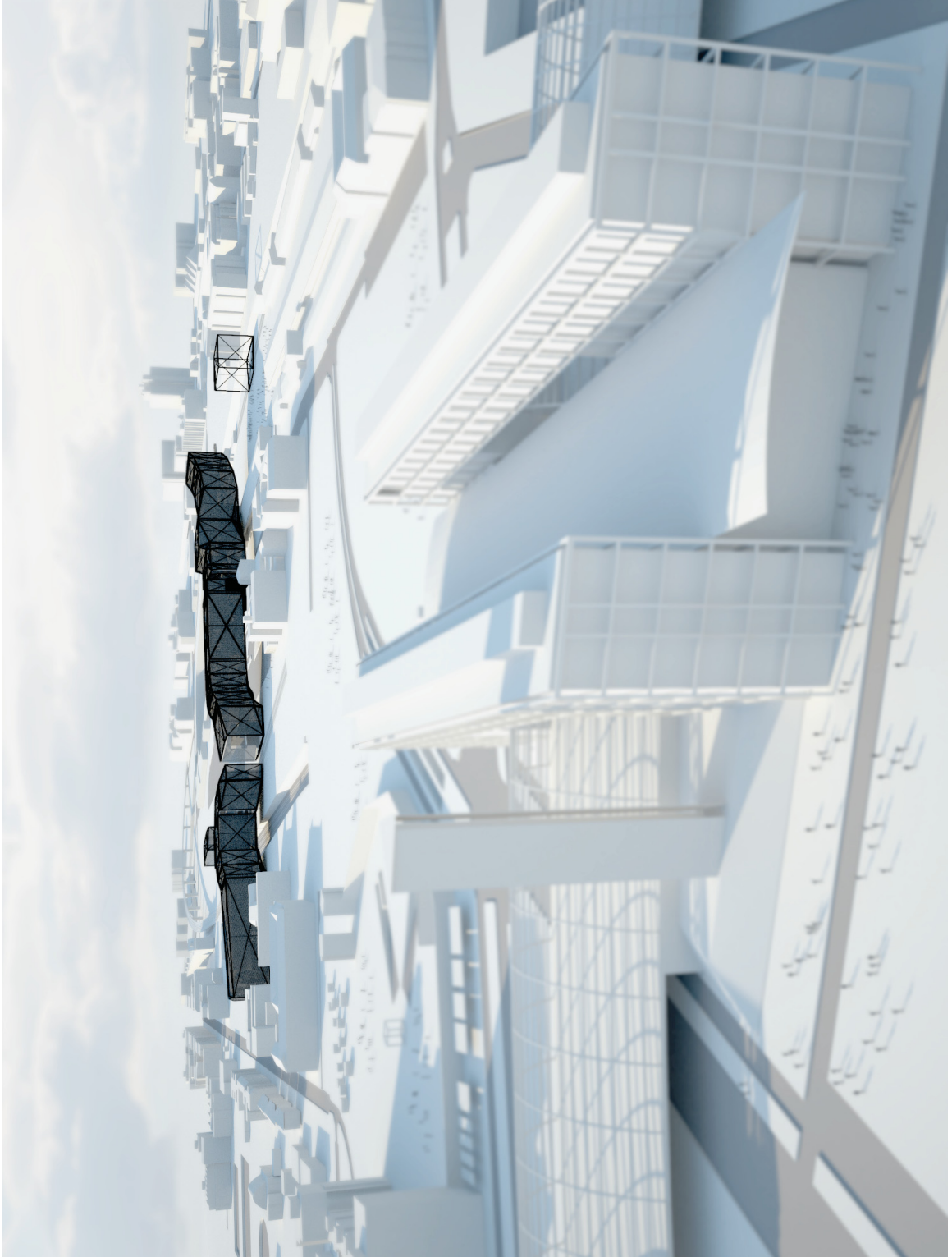
View from pro-
posed building
west.

Insertion

The railway hub that historically defined the area of Heidestrasse was itself an inserted component of the city, developed almost entirely at a single point in history. The nature of the proposed intervention inserts itself into the site in much the same way, effectively developing a similar constructive logic onto the site. In this way, the manner in which the building is grounded into the site and the manner in which it crosses over it is informed entirely by the character of the site, both historically and programmatically. Near the active railway lines, the building plunges underground to connect to the subway system. Near the main roadway and along the grounds of the art campus however, the building ensures adequate clearance to vehicles of varying sizes, as well as the potential for outdoor art exhibitions.
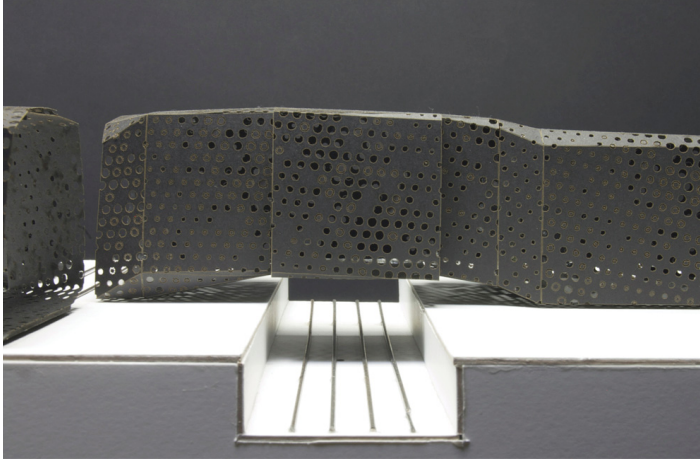
Detail. Active railway crossing.
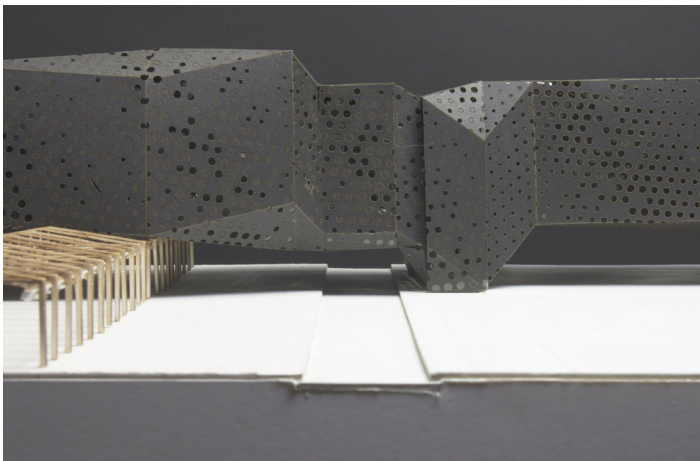
Detail. Primary roadway crossing.

Detail. Existing building crossing.
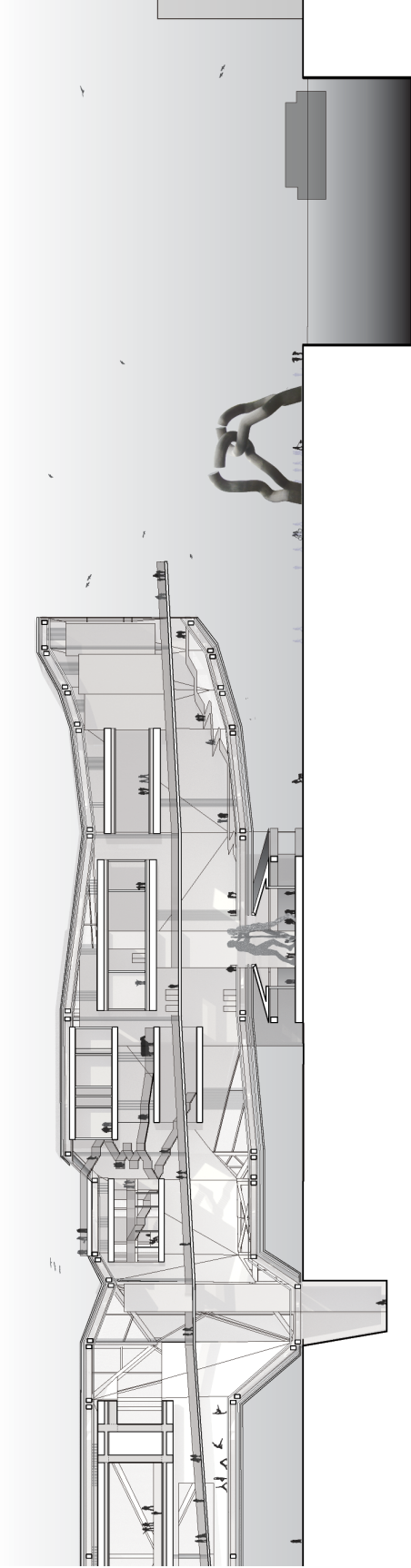
North Section

Section of building (1 of 2).

Site Section (North)

Section of site (1 of 2).
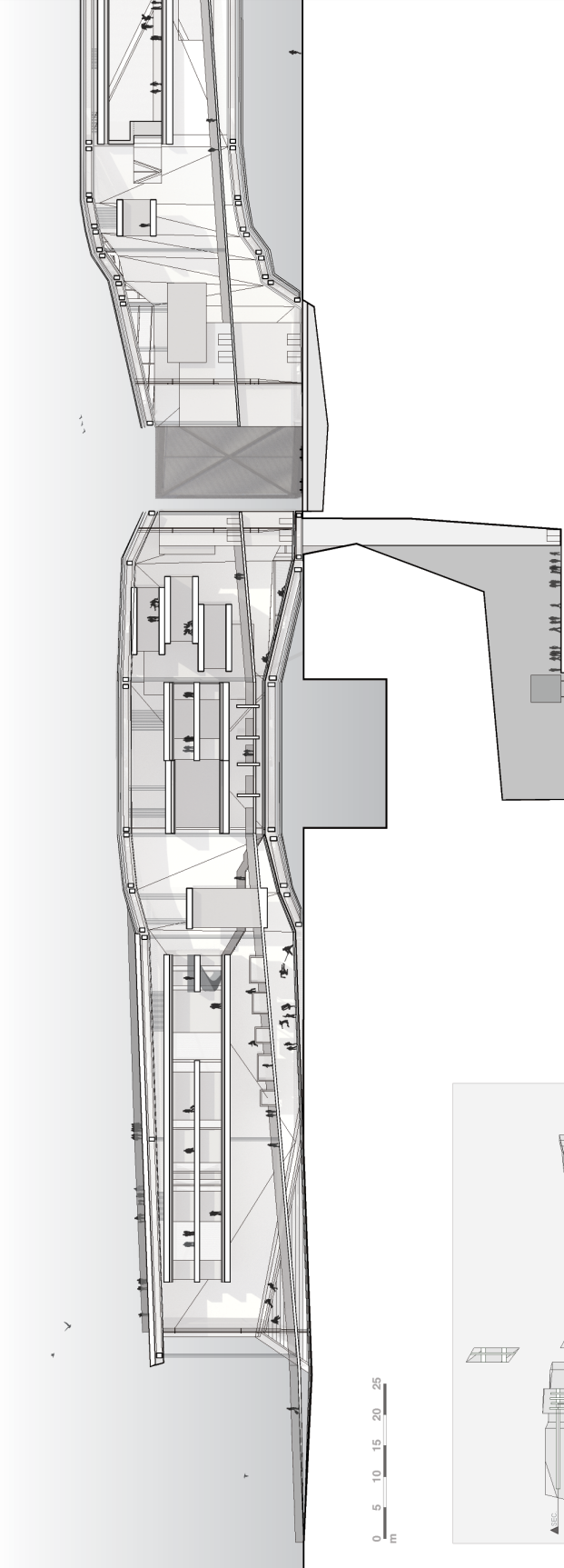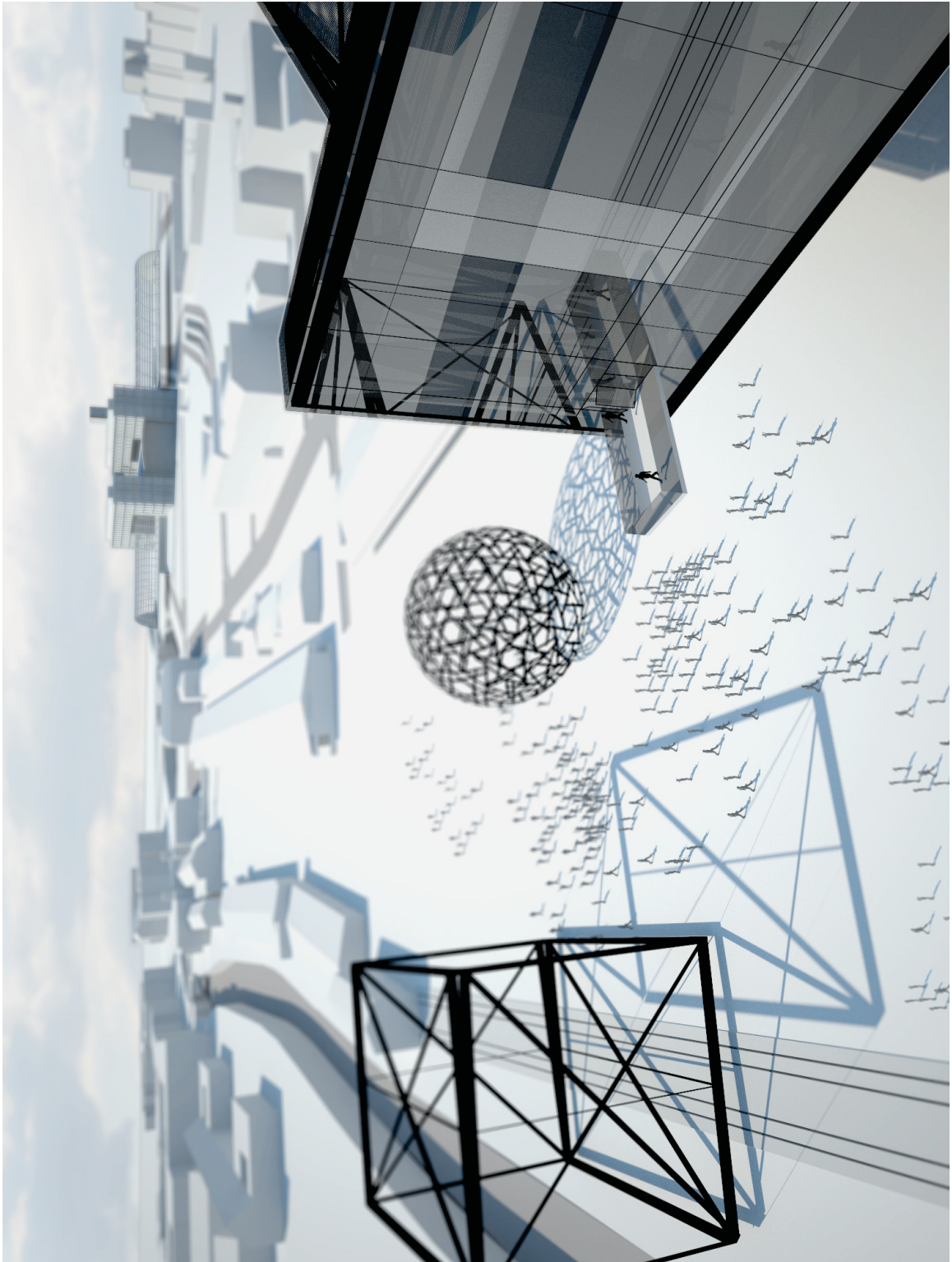
Section of building (2 of 2).

Section of site (2 of 2).

View of the
building at
the roadway
flyover.

View of the building as it crosses over the arts campus with a view to Hauptbahnhof in the south.
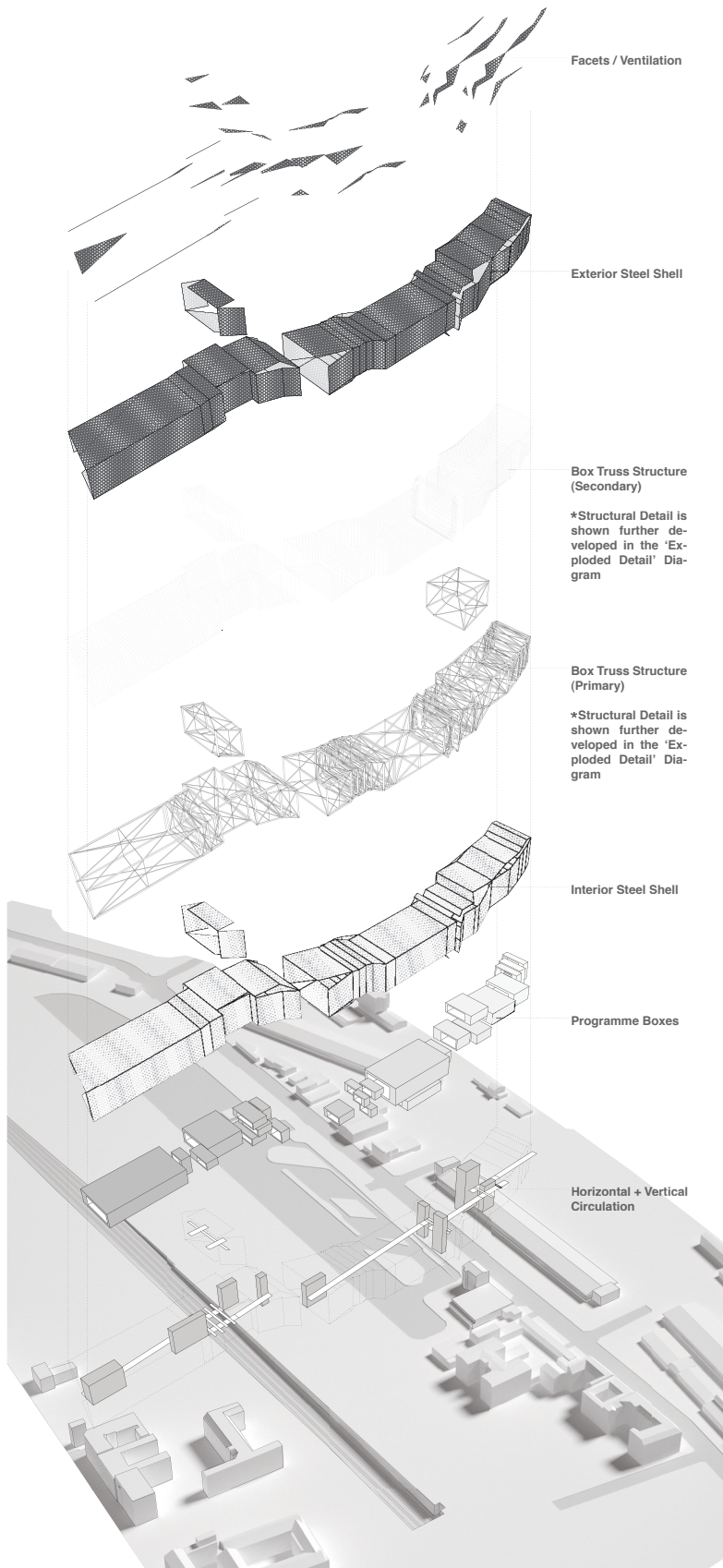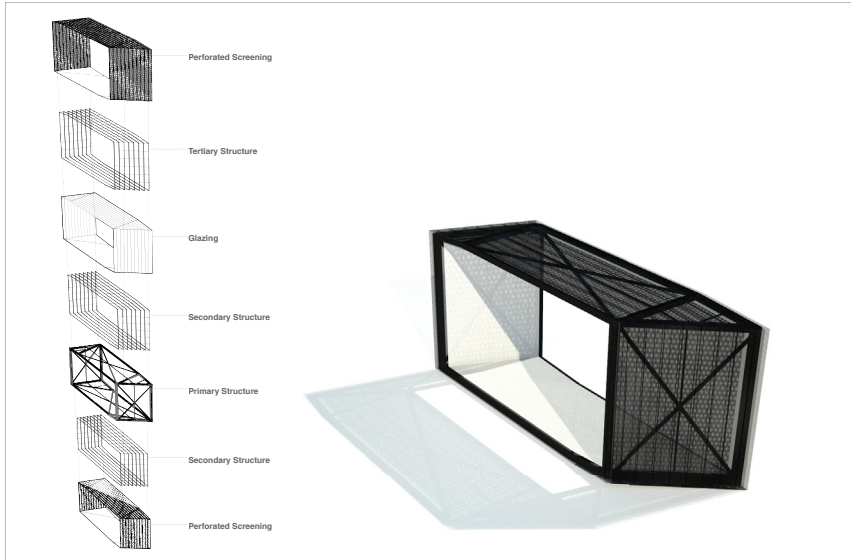
Layer (Experiential)

The nature of the proposed intervention would exist as an additional habitable layer placed on top of the existing activity of the site. In much the same way, the assembly of the building would consist of layers that together compose an array of diverse spatial experiences and programmatic possibilities. The interior atmosphere, consisting of a series of assorted screening elements could potentially generate innumerable atmospheric conditions. The relative transparency resulting through this design not only furthers the antithetical nature of the project in contrast with the former Berlin Wall, but also references the highly industrial nature of site through materiality and construction assembly.
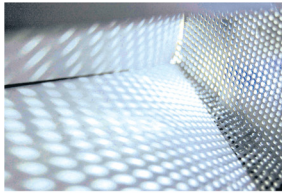
Exploded axonometric illus-
trating building assembly and
connection to site.

Facets / Ventilation

Exterior Steel Shell

Box Truss Structure
(Secondary)

*Structural Detail is
shown further de-
veloped in the 'Ex-
ploded Detail' Dia-
gram

Box Truss Structure
(Primary)

*Structural Detail is
shown further de-
veloped in the 'Ex-
ploded Detail' Dia-
gram

Interior Steel Shell

Programme Boxes

Horizontal + Vertical
Circulation

Exploded axonometric illustrating assembly of the standard building screening system.

Screening: Consistent Perforation
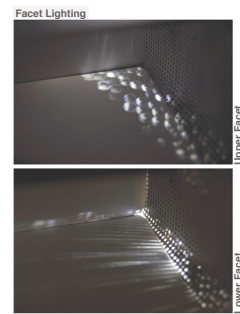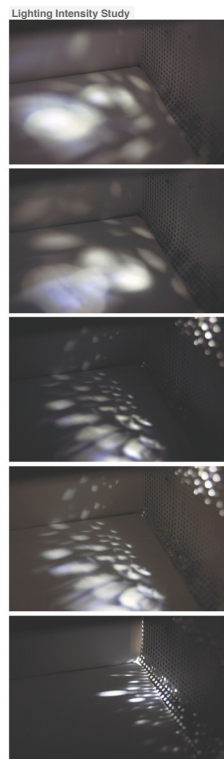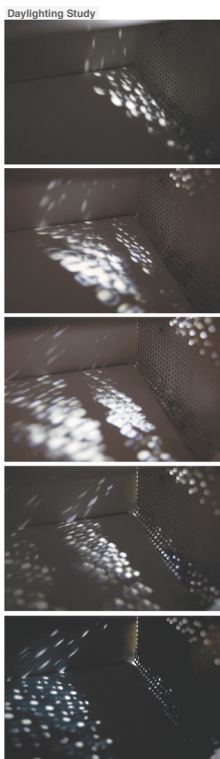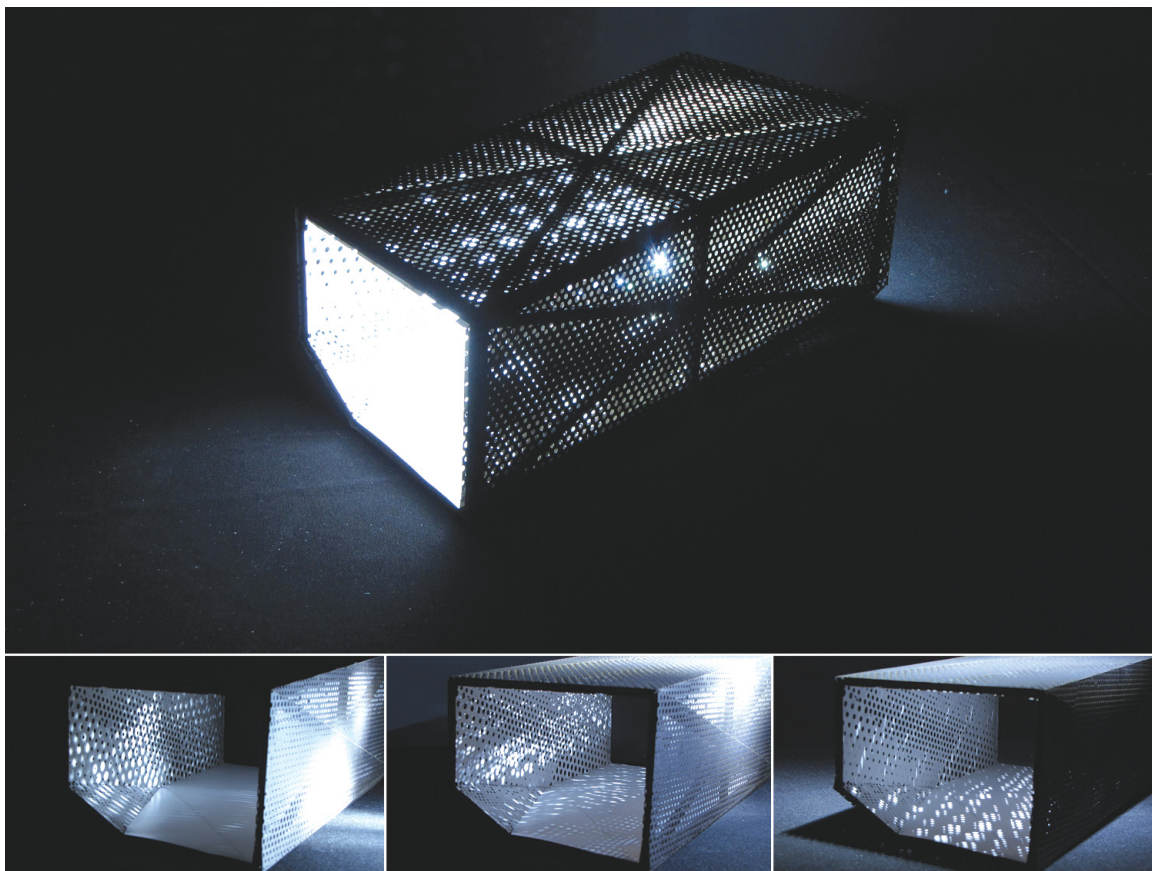**Colour: White (ext.) White (int.)**
Light: Midday
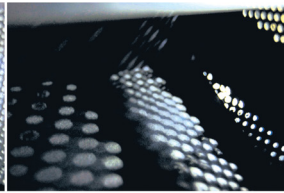
Screening: Fragmented Perforation
Colour: Black (ext.) Black (int.)
Light: Midday
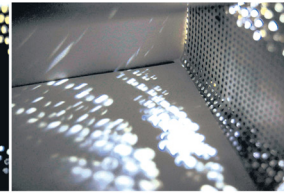
Screening: Consistent + Fragmented Perforation
Colour: Black (ext.) White (int.)
Light: Midday

Photographic study illustrating lighting conditions using various combinations of screening.

Daylighting Study

Lighting Intensity Study

Facet Lighting

Morning

Midday

Evening

Far distance to Light

Close distance to light

Upper Facet

Lower Facet

Photographic study depicting lighting conditions of the Cultural Centre space.

Experien-
tial drawing
depicting the
spatial experi-
ence of the
main auditor-
ium space.

CHAPTER 5: CONCLUSION

The city of Berlin, as a collection of countless individual spheres of influence, maintains a cultural diversity unlike any other city. Within them it is perhaps more apparent the manner in which a site is developed, but it is the interstitial space between them that poses the greatest challenges for architecture. The Berlin Wall disconnected neighboring communities which had developed for decades without consideration of their adjacent condition. As a result, neighbors became strangers, and their conceptions of development diverged from a singular understanding to disparate idealisms of different cultures.

In the city's current condition there still remains this distinct division between neighboring communities. Spaces that once existed as the 'no man's land' are today derelict sites with no defined programme. These sites have developed a nature of their own; places for the potential to become successful social gathering spaces for the communities that surround them. Here, there is opportunity for small-scale functions as well as city-wide events that may occupy the site for any set period of time. This new character of place, an antithetical response to the historical nature of these spaces, are in the same way ideal conditions for a renewed architectural response and infrastructural possibilities. As an opportunity for architecture to mediate this apparent disconnect, this thesis is to begin by developing a

proposal in response. It sets up a methodology that results in an architectural infrastructure that both enables and actively represents this shifting programme and changing activities of the site through time.

Although the issues discussed in this report are vast in scale, the manner in which this thesis attempts to formulate a basis for developing architectural concepts is defined within a more finite scope. Using the Heidestrasse site as an initial departure point, this thesis provides an initial infrastructural framework and programmatic result which could be applied to additional derelict sites within the city. The underlying aim of studying this site specifically is an attempt to resolve physical disconnect by the creation of an urban-scale strategy. Using a similar methodology, the results obtained through the analysis of other derelict sites would only add to the collection of potentials developed here.

An important aim of this thesis has been testing particular ideas of site extrapolation in deriving an architectural synthesis that can develop an appropriate infrastructure at the human scale. Through the analysis of the Heidestrasse area, the proposed methodology extracted an overarching characterization of the nature of the site: the notion of *exchange* developed from the industrial activity of the city's history. Using this, the architecture readily developed a formal and programmatic response that would at the same

time become an antithetical reactivation of the site at a local scale, as well as an infrastructural project aimed at redeveloping a major space within the city. To that extent, the thesis has not only developed a potential infrastructure for the site at Heidestrasse, but also a methodology for architectural development that resists erasing important historical artefacts at a city-scale. By instead creating an addition layer onto the city that is developed locally, the resulting architecture can more readily react to the unrealized potentials of future growth.
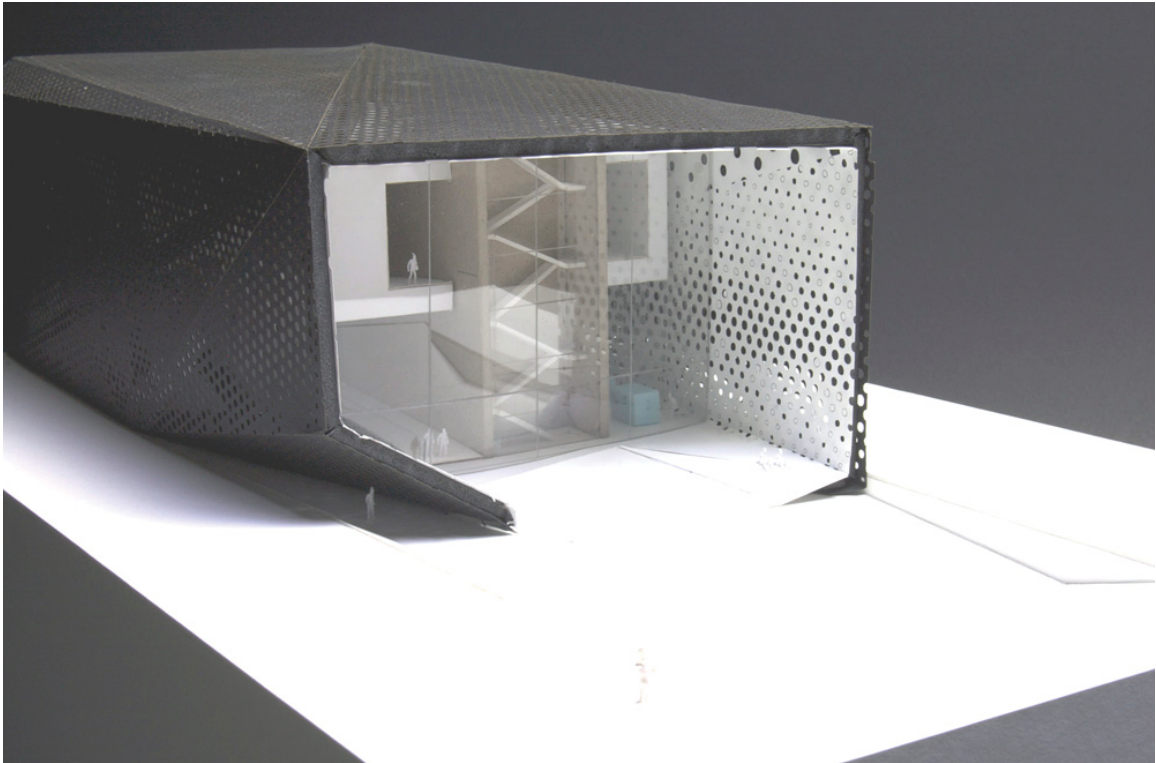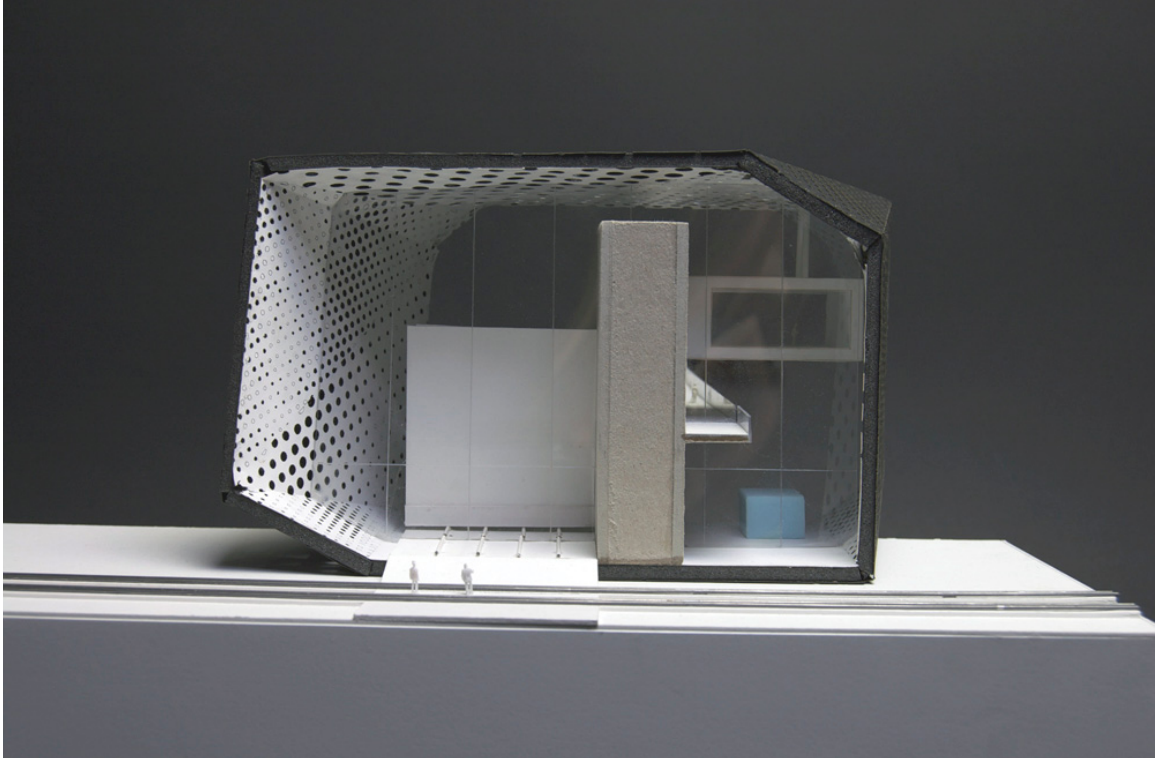
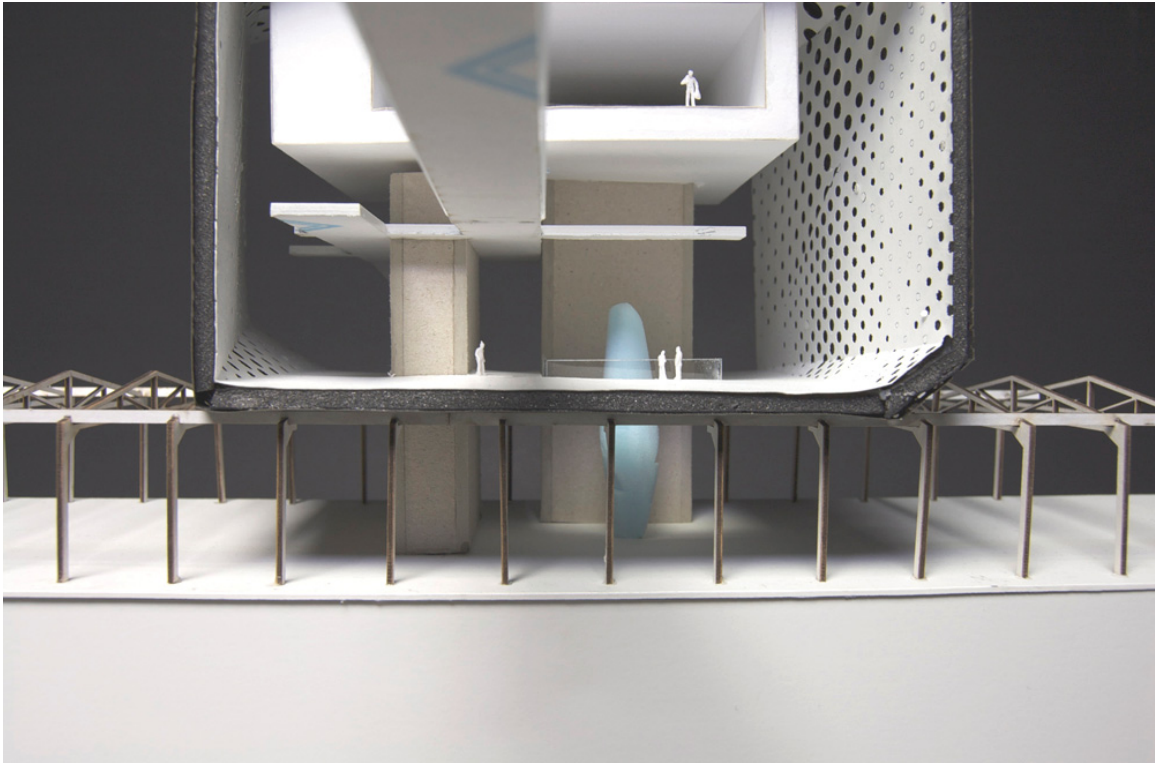Detail model depicting Cultural Centre entrance.
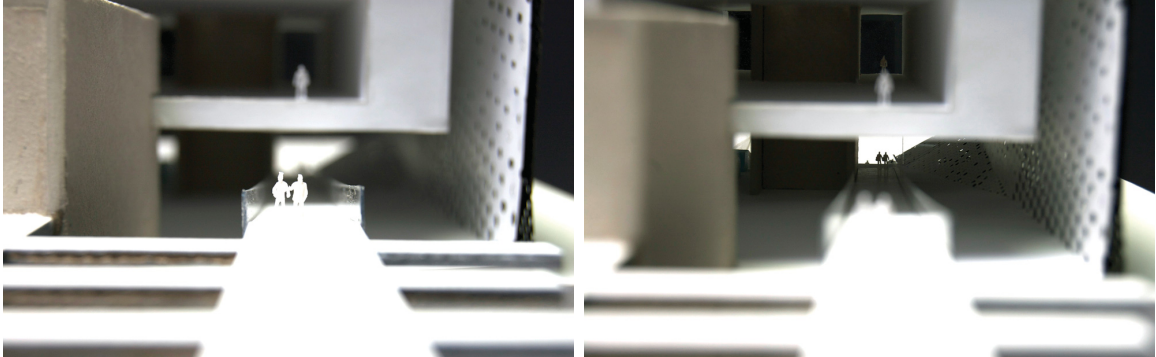
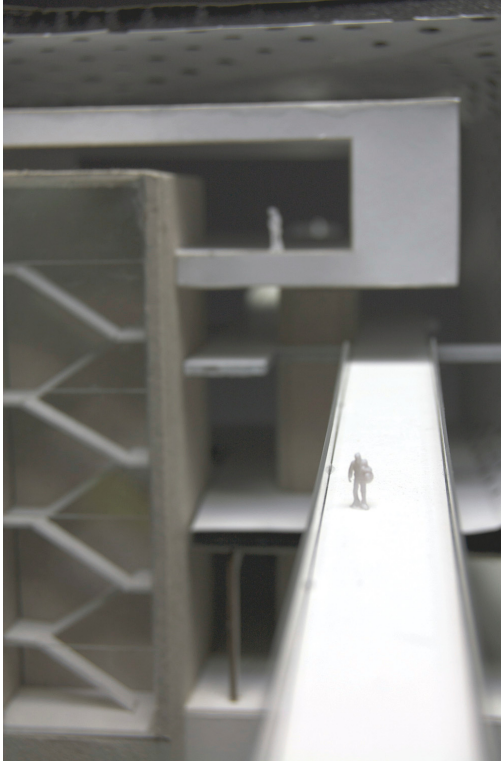Detail model depicting Cultural Centre pathway looking south.
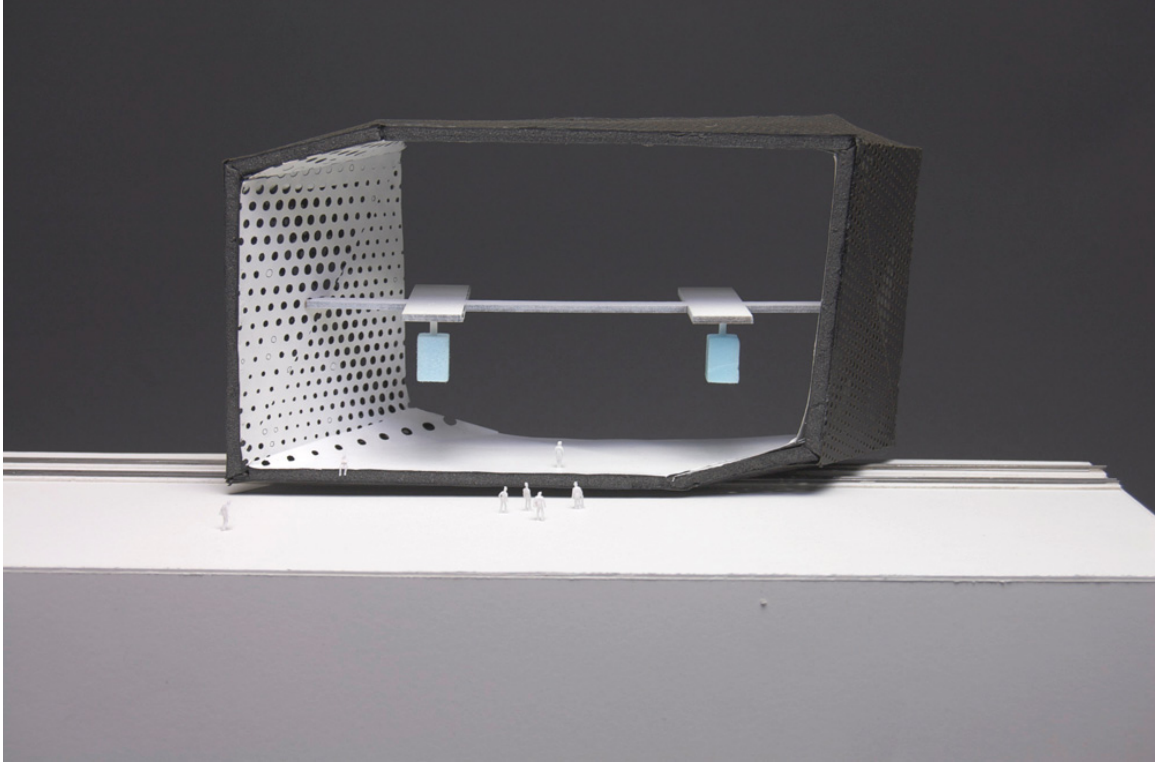
Detail model depicting satellite frame.

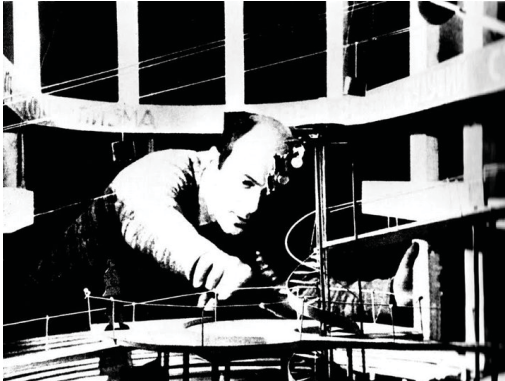Detail model depicting satellite docking frame.

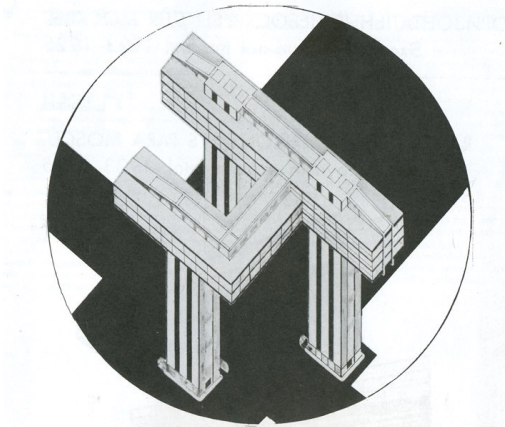Detail model depicting Arts Campus gallery frame to existing storage building.

Detail model depicting Arts Campus pathway.

APPENDIX A: CASE STUDIES

El Lissitzky

Wolkenbügel

El Lissitzky from Dieselpunks, "Horizontal Skyscrapers."

Wolkenbügel from Dieselpunks, "Horizontal Skyscrapers."


Wolkenbügel from Dieselpunks, "Horizontal Skyscrapers."

In 1923, El Lissitzky proposed the idea of horizontal skyscrapers, called Wolkenbügel in attempts at creating an urban typology intended to mark major intersections in Moscow.

Lissitzky argued that since humans are unable to fly, horizontal movement should be naturally preferred to vertical movement. In dense cities requiring development, a new plane created in the air could satisfy additional urban spaces without sacrificing the nature of the city.

Lissitzky's proposal developed during the height of the constructivist movement, which was aimed at created social atmospheres. Physically, it purpose was aimed at maintaining existing buildings and spaces, encouraging free circulation and promoting public spaces. Phenomenologically, its effects on the human psyche could impact our perceptions of three-dimensional space, effectively altering our conception of gravity and the nature of the urban landscape, as well as the characteristics of social culture.
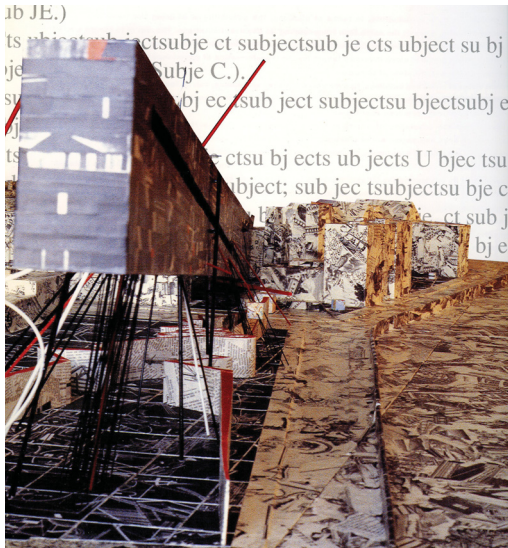
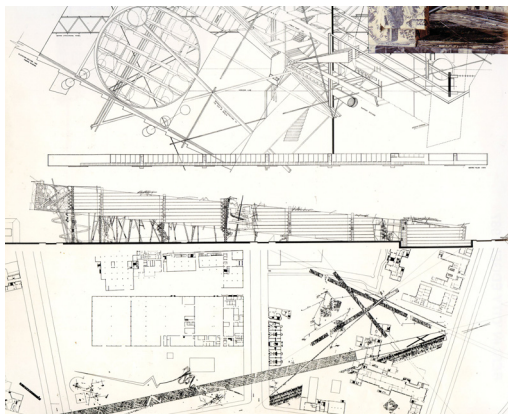Conceptual model from *Countersign*, "Berlin 'City Edge'"

Conceptual axonometric drawing from *Countersign*, "Berlin 'City Edge'"

Conceptual section drawing from *Countersign*, "Berlin 'City Edge'"

Daniel Libeskind

Berlin 'City Edge'

In 1987, Daniel Libeskind designed his 'Berlin City Edge' project in attempts at demonstrating, in terms of planning, the possibility of utilizing the Berlin architectural language while transcending its physical limitations in creating a new type of living for the Berlin of tomorrow. Aligned with the tenets of Constructivism, the project was aimed at developing a social city that would free the country from its authoritarian stronghold.
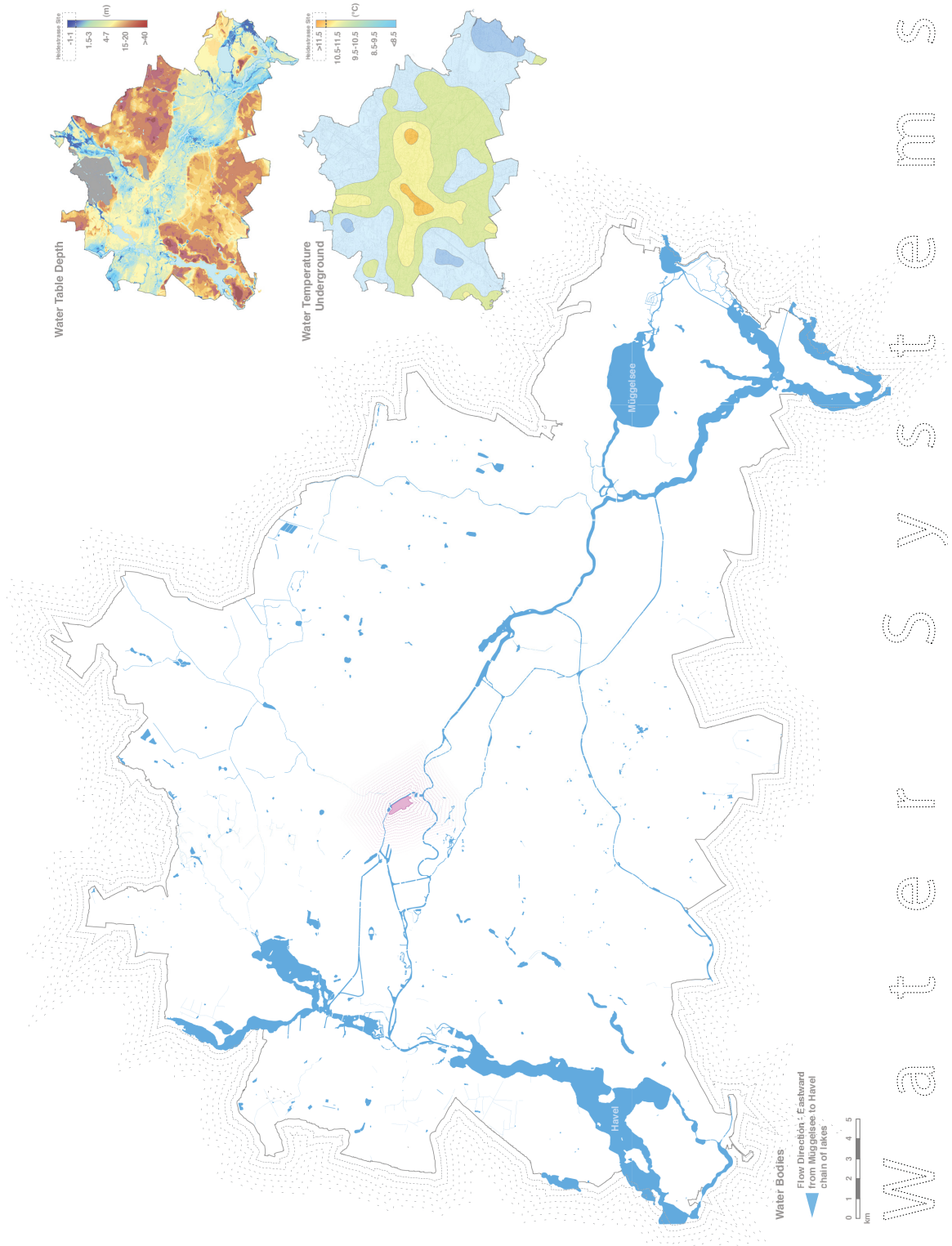
APPENDIX B: CITY SCALE ANALYSIS

Water System

The topography of Berlin is generally quite flat, and is the result of glacial recession in the last 1.5 million years. From this, much of the earth beneath is made up of sand and gravel deposited as glacial by-product. In the same way, all of the lakes within the city and its surrounding environment are the result of glacial movement and deposition.

The flow of water along the Spree River through the city of Berlin is derived from the Müggelsee chain of lakes in the east. Flowing westward, it connects to the Havel chain of lakes in the west, eventually flowing into the north Sea. Along its journey, the Spree River is divided into various canals through the city, most of which were originally used for industrial purposes and commercial transport of goods.

The water table is particularly high in the Heidestrasse region, likely due to its proximity to the Spree River and Schifffahrtskanal. Here, water can be reached at a mere depth of 0.5m.

The temperature of water in this area is also particularly high - the highest in the city. At nearly 12°C the water can potentially be suitable for bathing.

W a t e r   S y s t e m s

Water Table Depth

Heidestrasse Site

(m)

-1-1
1.5-3
4-7
15-20
>40

Water Temperature
Underground

Heidestrasse Site

(°C)

>11.5
10.5-11.5
9.5-10.5
8.5-9.5
<8.5

Müggelsee

Havel

Water Bodies

Flow Direction : Eastward
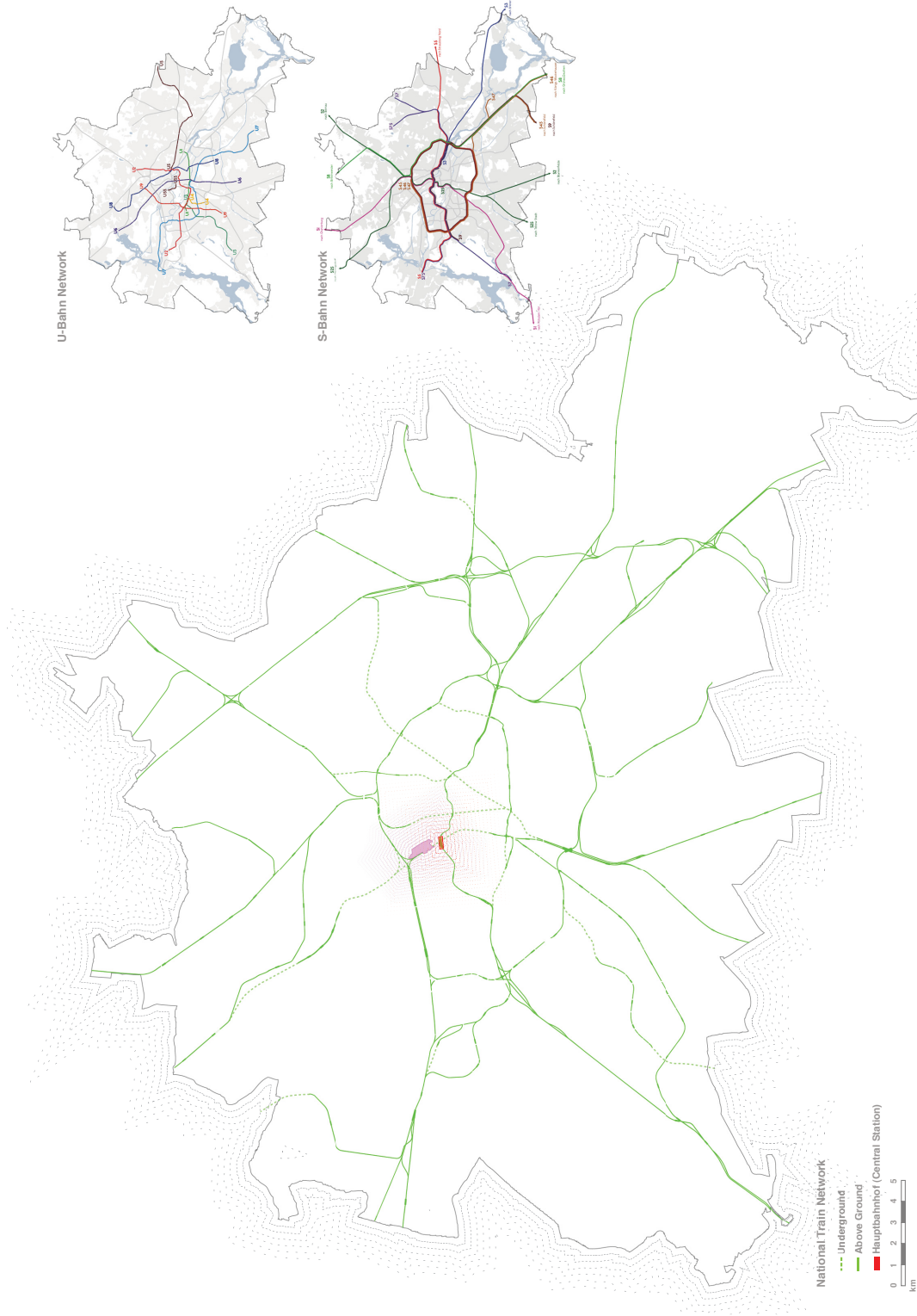from Müggelsee to Havel
chain of lakes

0 1 2 3 4 5
km

Rail Systems

With an extensive collection of railway tracks for both passenger and goods transport, Berlin and its populace are well connected both within the city and into neighboring states within the country.

The U-bahn operates as a light rail transport primarily underground, and connects 173 stations spread across 146 kilometres of rail. Approximately 500 million passengers use the U-Bahn over the course of the year.

The S-Bahn operates within and beyond the borders of the city, and is integrated with the U-bahn in connecting nearly all parts of the city. Beyond the city limits, the S-Bahn reaches into the neighboring states of Brandenburg to the east and Potsdam to the west.

Hauptbahnhof, Berlin's central station operates at the near centre of the city, connecting numerous train lines at its intersection point. Its proximity to the Heidestrasse site is very near, creating a high traffic point and circulation corridor.

U-Bahn Network

S-Bahn Network

National Train Network
- - - - Underground
———— Above Ground
█ Hauptbahnhof (Central Station)

0 1 2 3 4 5
km

Rail systems

Road Systems

With an extensive network of roadways within the city, Berlin has managed not only to develop the associated infrastructure of the historic city, but also to connect this with the expanding contemporary city.

Consisting of over 5000 kilometres of roadway, these thoroughfares cater to public transit and personal vehicles as well as a very large bicycle population. With only approximately 40 percent of the city's inhabitants using personal vehicles, bicycles are a significant contributor to roadway usage.

Roads Systems

Secondary Roads

Primary Roads

0 1 2 3 4 5
km

REFERENCES

".." Heidestrasse. G.Mittelberg. Web Image. Accessed September 24, 2011. <http://www. flickr.com/photos/gm_fdk/3225193950/in/set-72157623548760313/>

Aedes Network Campus Berlin. n.p. Web. Accessed November 20, 2011. <http://www. ancb.de>

"Am Spandaur Schiffahrtskanal Apr 2008." Berlin. Mauerexpedition. Web Image. Accessed September 20, 2011. <http://www.panoramio.com/photo/9621360>

Balfour, Alan, ed. *World Cities Berlin*. Berlin: Ernst & Sohn, 1995.

Bédard, Jean-Francois, ed. *Cities of Artificial Excavation*. Montréal: Canadian Centre for Architecture, 1994.

Beevor, Antony. *Berlin: The Downfall*. London: Penguin, 2003.

Bluestone, Daniel. *Buildings, Landscapes, and Memory: Case Studies in Historic Preservation*. New York: W.W. Norton & Co., 2011.

"Brachland Heidestrasse." Berlin. Web Image. Accessed September 20, 2011. <http://www.panoramio.com/photo/49090847>

"Daten und Fakten." *bahnhof.de*. n.p., May 30, 2011. Web. Accessed February 16, 2012. <http://www.bahnhof.de/site/bahnhoefe/de/ost/berlin__hauptbahnhof/daten__und__fakten/daten__und__fakten.html>

"DE berlijn loopbrug uitbr museum hamburger bahnhof 01 (invalidenstr)." Walkways. Klaas Vermaas. Web Image. Accessed September 24, 2011. <http://www.flickr.com/photos/klaasfotocollectie/4875725379/in/photostream/>

"Ehem. Güterbahnhof nördlich des Hauptbahnhofes in Moabit." Berlin. Web Image. Accessed September 24, 2011. <http://www.panoramio.com/photo/39624937>

Elkins, T. Berlin. *The Spatial Structure of a Divided City*. London, New York: Methuen, 1988.

"Galerien Heidestrasse, Berlin 2009." Berlin 2009. Web Image. Accessed September 22, 2011. <http://www.flickr.com/photos/spiegelneuronen/3766187706/>

"Heidestrasse, Berlin 2009." Berlin 2009. Web Image. Accessed September 22, 2011. <http://www.flickr.com/photos/spiegelneuronen/3700758471/in/set-72157619480676882/>

Hell, Julia, and Andreas Schönle, eds. *Ruins Of Modernity*. Durham: Duke University Press Books, 2012.

Hignett, Kelly. "50 Years On – Commemorating the Construction of the Berlin Wall". *The View East*. n.p., August 11, 2011. Web. Accessed November 18, 2011. <http://thevieweast.wordpress.com/tag/mauer-im-kopf/>

"History." *charite.de*. n.p., 2012. Web. Accessed February 14, 2012. <http://www.charite.de/en/charite/organization/history/>

"Horizontal Skyscrapers." Dieselpunks. Lord_k. Web Image. Accessed January 15, 2012. <http://www.dieselpunks.org/profiles/blogs/horizontal-skyscrapers>

"Hypermedia Berlin." UCLA International Institute. Todd Presner. Web Image. Accessed September 20, 2011. < http://www.berlin.ucla.edu/research/1889.php?hotspot=>

Institute for Urban Strategies at The Mori Memorial Foundation. *Global Power City Index 2009*. Tokyo: The Mori Memorial Foundation, 2009.

James-Chakraborty, Kathleen. *German Architecture for a Mass Audience*. London: Routledge, 2000.

Képes, György. *Language of Vision*. New York: Dover, 1995.

Koolhaas, Rem. "Urban Operations." *D: Columbia Documents of Architecture and Theory* 3 (1993): 25-37.

Kracauer, Siegfried. *Streets in Berlin and Elsewhere*. Oxford: Polity Press, 2006.

"Landschaftspark Duisburg-Nord." *Wikimedia Commons*. Tobias Arnst. Web Image. Accessed February 14, 2012. <http://de.wikipedia.org/wiki/Datei:Landschaftspark_Duisburg-Nord_green-lights.jpg>

Leach, Neil, ed. *Architecture And Revolution, Contemporary Perspectives On Central And Eastern Europe*. New York: Routledge, 1999.

Libeskind, Daniel. *Countersign*. New York: Rizzoli International Publications, Inc., 1991.

"Mauerspechte am Postbahnhof." Berlin. Web Image. Accessed September 24, 2011. <http://www.panoramio.com/photo/37427398>

"Niemandsland bald nicht mehr, Berlin 2009." Berlin 2009. Web Image. Accessed September 22, 2011. <http://www.flickr.com/photos/spiegelneuronen/3758445084/in/set-72157619480676882/>

Nora, Pierre. *Realms of Memory: Rethinking the French Past*. New York: Columbia University Press, 1996.

OMA. n.p. Web. Accessed November 20, 2011. <http://oma.eu/projects/2006/nancy-artem-campus>

"Rampe zur Tunneleinfahrt [04/07]." Berlin. Erik Heller. Web Image. Accessed September 20, 2011. <http://www.panoramio.com/photo/6333933>

"Rental Barracks on Kastanienallee in the Prenzlauer Berg Neighborhood of Berlin (1880s)." *Forging an Empire: Bismarckian Germany (1866-1890)*. n.p. Web Image. Accessed February 8, 2012. <http://germanhistorydocs.ghi-dc.org/sub_image.cfm?image_id=1251>

Rowe, Colin, and Robert Slutzky. *Transparency*. Basel: Birkhäuser, 1997.

"Untitled." Berlin. Berliner Igel. Web Image. Accessed September 21, 2011. <http://www.panoramio.com/photo/3732034>

Von Borries, Friedrich, and Matthias Böttger, eds. *Updating Germany: 100 Projects for a Better Future*. Ostfildern, Germany: Hatje Cantz Verlag, 2008.

Wagstaff, Peter, ed. *Border Crossings: Mapping Identities in Modern Europe*. Oxford and New York: Peter Lang, 2004.